

12.3

Module Overview

Researching Multiple Perspectives to Develop a Position

Texts

12.3.1:

Guns, Germs, and Steel, Jared Diamond

Students also choose from the following model research sources:

- Source #1: “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty
- Source #2: “Poverty Facts and Stats” by Anup Shah
- Source #3: “Evidence For Action: Gender Equality and Economic Growth” by John Ward, Bernice Lee, Simon Baptist, and Helen Jackson
- Source #4: “How Many Americans Live in Poverty?” by Pam Fessler
- Source #5: “Human Capital Investment in the Developing World: An Analysis of Praxis” by Adeyemi O. Ogunade
- Source #6: “The Case for Universal Basic Education for the World’s Poorest Boys and Girls” by Gene B. Sperling
- Source #7: “2005 EFA Global Monitoring Report. Education for All: The Quality Imperative” by UNESCO
- Source #8: “Bridging the Gender Divide: How Technology Can Advance Women Economically” by Kirrin Gill, Kim Brooks, James McDougall, Payal Patel, and Aslihan Kes
- Source #9: “Investing in Development: A Practical Plan to Achieve the Millennium Development Goals” by Jeffrey D. Sachs, et al.
- Source #10: “Economic Impacts of Broadband” by Christine Zhen-Wei Qiang and Carlo M. Rossotto with Kaoru Kimura in *Information and Communications for Development 2009: Extending Reach and Increasing Impact* by World Bank Publications

12.3.2:

Student research sources vary. By 12.3.2, students have chosen texts for research based on their individual problem-based questions.

**Number of
Lessons in
Module**

41 (including Module 12.3 Performance Assessment)

Introduction

In Module 12.3, students engage in an inquiry-based, iterative research process that serves as the basis of a culminating research-based argument paper. Building on work with evidence-based analysis in Modules 12.1 and 12.2, students use a seed text to surface and explore issues that lend themselves to multiple positions and perspectives. Module 12.3 fosters students' independent learning by decreasing scaffolds in key research lessons as students gather and analyze research based on vetted sources to establish a position of their own. Students first generate a written evidence-based perspective, which serves as the early foundation of what will ultimately become their research-based argument paper.

In 12.3.1, students read closely excerpts of *Guns, Germs, and Steel* by Jared Diamond, which explores the ultimate causes for resource and wealth inequity across the globe. While analyzing the text, students consider Diamond's purpose and how he structures ideas in his complex research to support his various claims. Additionally, in preparation for their own argument writing students evaluate Diamond's claims, evidence, and reasoning about the causes and explanations of inequality of resources across societies throughout history to the modern-day. The text serves as a springboard to research, as students surface and track potential research issues that emerge from the text.

In the second half of 12.3.1, students' focus turns more heavily toward the research process. Students engage in this iterative process by pursuing self-selected areas of investigation as they gather, assess, read, and analyze sources. Students also begin to organize and synthesize research findings to establish a perspective about a specific problem-based question.

In 12.3.2, students engage in the writing process with the goal of articulating and supporting their evidence-based research perspective. The end product of 12.3.2 is a final draft of a research-based argument paper that synthesizes and supports several claims using relevant and sufficient evidence and valid reasoning. The writing cycle, in which students self-edit, peer review, and continually revise their work, serves as the primary framework for 12.3.2.

Literacy Skills & Habits

- Read closely for textual details.
- Annotate texts to support comprehension and analysis.
- Engage in productive, evidence-based conversations about texts.
- Conduct independent searches and assess sources for credibility, relevance, and accessibility.
- Develop, refine, and select inquiry questions for independent research.
- Collect and organize evidence from research to support analysis in writing.
- Identify and evaluate arguments and claims in texts.
- Generate an evidence-based perspective from research.
- Revise writing.

- Utilize rubrics for self-assessment and peer review of writing.
- Craft a research-based argument paper.

English Language Arts Outcomes

Yearlong Target Standards

These standards embody the pedagogical shifts required by the Common Core State Standards and are a strong focus in every English Language Arts module and unit in grades 9–12.

| CCS Standards: Reading—Literature | |
|---|---|
| RL.11-12.1 | Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain. |
| RL.11-12.4 | Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.) |
| RL.11-12.10 | By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 11–CCR text complexity band and proficiently. |
| CCS Standards: Reading—Informational Text | |
| RI.11-12.1.a | Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain. a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s). |
| RI.11-12.4 | Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines <i>faction</i> in <i>Federalist</i> No. 10). |
| RI.11-12.10 | By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11–CCR text complexity band independently and proficiently. |

| CCS Standards: Writing | |
|-------------------------------------|---|
| W.11-12.9.a,b | <p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <ul style="list-style-type: none"> a. Apply <i>grades 11–12 Reading standards</i> to literature (e.g., “Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics”). b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i>, presidential addresses]”). |
| W.11-12.10 | Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. |
| CCS Standards: Speaking & Listening | |
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others’ ideas and expressing their own clearly and persuasively. |
| CCS Standards: Language | |
| L.11-12.4.a-d | <p>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i>, choosing flexibly from a range of strategies.</p> <ul style="list-style-type: none"> a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word’s position or function in a sentence) as a clue to the meaning of a word or phrase. b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., <i>conceive, conception, conceivable</i>). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary). |

Module-Specific Standards

Assessed Standards

These standards are the specific focus of instruction and assessment, based on the texts studied and proficiencies developed in Module 12.3.

| College and Career Readiness Anchor Standards for Reading | |
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| CCRA.8 | Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. |
| CCS Standards: Reading – Literature | |
| None. | |
| CCS Standards: Reading – Informational Text | |
| RI.11-12.1.a | Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain. a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s). |
| RI.11-12.3 | Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text. |
| RI.11-12.6 | Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text. |
| CCS Standards: Writing | |
| W.11-12.1.a-e | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of |

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| | <p>the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.</p> <p>d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.</p> <p>e. Provide a concluding statement or section that follows from and supports the argument presented.</p> |
| W.11-12.2.a-f | <p>Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.</p> <p>a. Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.</p> <p>b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.</p> <p>c. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.</p> <p>d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.</p> <p>e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.</p> <p>f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).</p> |
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| W.11-12.5 | Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in |

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| | terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
| W.11-12.9 | Draw evidence from literary or informational texts to support analysis, reflection, and research. |
| CCS Standards: Speaking & Listening | |
| SL.11-12.1.d | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task. |
| SL.11-12.4 | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. |
| SL.11-12.5 | Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. |
| SL.11-12.6 | Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. |
| CCS Standards: Language | |
| L.11-12.1 | Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. |
| L.11-12.2 | Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. |
| L.11-12.3 | Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. |

Addressed Standards

These standards will be addressed at the unit or module level, and may be considered in assessment, but will not be the focus of extended instruction in Module 12.3.

| CCS Standards: Reading – Literature | |
|---|---|
| None. | |
| CCS Standards: Reading – Informational Text | |
| None. | |
| CCS Standards: Writing | |
| W.11-12.9.b | <p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., "Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i>, presidential addresses]").</p> |
| CCS Standards: Speaking & Listening | |
| SL.11-12.1.a,c | <p>Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i>, building on others' ideas and expressing their own clearly and persuasively.</p> <p>a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</p> <p>c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.</p> |
| SL.11-12.3 | Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used. |
| CCS Standards: Language | |
| L.11-12.1.b | <p>Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p> <p>b. Resolve issues of complex or contested usage, consulting references (e.g., <i>Merriam-Webster's Dictionary of English Usage</i>, <i>Garner's Modern American Usage</i>) as needed.</p> |

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| L.11-12.2.a,b | Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Observe hyphenation conventions. b. Spell correctly. |
| L.11-12.3.a | Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. a. Vary syntax for effect, consulting references (e.g., Tufte's <i>Artful Sentences</i>) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading. |
| L.11-12.4.a,c | Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i> , choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. |
| L.11-12.6 | Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. |

Module 12.3 Performance Assessment

Prompt

In this three-lesson Performance Assessment, students complete their multimedia research journals by crafting a single 5–10 minute multimedia narrative that includes elements of their individual research processes and findings. After responding to a final retrospective prompt in the previous lesson's homework, students spend the first two lessons editing and synthesizing the multimedia journal entries they created over the course of Module 12.3 into a succinct, cohesive narrative, adding effects, narration, and other stylistic elements as needed to enhance the final product. In the third and final lesson of this Performance Assessment, students present their multimedia narratives to an audience and respond to questions.

Prompt:

Over the course of Module 12.3, you have analyzed an issue in response to your problem-based question. You have developed your understanding of the issue through research and arrived at your own perspective. You have presented your central claim, supporting claims, counterclaims, reasoning, and evidence in a formal research-based argument paper. You have also documented this process by responding periodically to multimedia journal prompts.

To answer the prompt, begin by reflecting on the work you have done over the course of Module 12.3 and the progression of your research process as reflected in your multimedia journal entries. Build on your research and analysis by crafting a single 5–10 minute multimedia narrative that conveys how your research process led you to your findings. Using relevant excerpts from the multimedia journal entries you completed over the course of this module, your final product should depict cohesively the evolution of your research. Your final product should present a cohesive story of the research process that led you to your final central claim, and should therefore include your final central claim, several supporting claims, reasoning, and evidence. The final product should draw clear connections between early research and the final claims, as this project documents that development. Edit, delete, paste together, and add voiceover, interviews, and effects where appropriate in order to achieve this goal.

Finally, present your multimedia narratives to an audience, with whom you will engage in a question and answer session following your presentation. The audience comprises peers, community members, teachers, alumni, and/or other students.

Lesson 1

In lesson 1, students form pairs and respond briefly to the previous lesson's homework question: How are your multimedia journal entries different from or similar to Alex Blumberg's podcasts? Students then begin the process of editing all of their multimedia journal entries into final 5–10 minute narratives. Students account for and reflect on their entire research process as they select highlights for their final narratives, making sure to include details about how they arrived at their final central claims, supporting claims, evidence, and reasoning.

Lesson 2

In lesson 2, students finish editing their 5–10 minute multimedia narrative presentations, making strategic use of multimedia to convey a firsthand experience of the research process and findings. Students use voiceover techniques, volume manipulation, and various other multimedia techniques in order to create a polished and cohesive final product.

Lesson 3

In lesson 3, students present their final multimedia narratives to an audience by playing their audio or

video presentation. Students also engage in a brief question and answer session following each presentation. Students respond thoughtfully to audience questions and comments, clarifying, verifying, or challenging ideas if necessary.

Texts

12.3.1: Using a Seed Text as a Springboard to Engage in Inquiry-Based Research

- Diamond, Jared. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: W. W. Norton & Company, 1999.
- Students also choose from the following model research sources:
 - Source #1: “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty
 - Source #2: “Poverty Facts and Stats” by Anup Shah
 - Source #3: “Evidence For Action: Gender Equality and Economic Growth” by John Ward, Bernice Lee, Simon Baptist, and Helen Jackson
 - Source #4: “How Many Americans Live in Poverty?” by Pam Fessler
 - Source #5: “Human Capital Investment in the Developing World: An Analysis of Praxis” by Adeyemi O. Ogunade
 - Source #6: “The Case for Universal Basic Education for the World’s Poorest Boys and Girls” by Gene B. Sperling
 - Source #7: “2005 EFA Global Monitoring Report. Education For All: The Quality Imperative” by UNESCO
 - Source #8: “Bridging the Gender Divide: How Technology Can Advance Women Economically” by Kirrin Gill, Kim Brooks, James McDougall, Payal Patel, and Aslihan Kes
 - Source #9: “Investing in Development: A Practical Plan to Achieve the Millennium Development Goals” by Jeffrey D. Sachs, et al.
 - Source #10: “Economic Impacts of Broadband” by Christine Zhen-Wei Qiang and Carlo M. Rossotto with Kaoru Kimura in *Information and Communications for Development 2009: Extending Reach and Increasing Impact* by World Bank Publications

12.3.2: Synthesizing Research and Argument Through the Writing Process

Student research sources vary. By 12.3.2, students have chosen texts for research based on their individual problem-based questions.

Module-at-a-Glance Calendar

| Text | Lessons in the Unit | Literacy Skills and Habits | Assessed and Addressed CCSS | Assessments |
|---|---------------------|--|---|--|
| 12.3.1: Using a Seed Text as a Springboard to Engage in Inquiry-Based Research | | | | |
| <p><i>Guns, Germs, and Steel</i> (Jared Diamond)</p> <p>Students also choose from the following model research sources:</p> <ol style="list-style-type: none"> 1. “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty 2. “Poverty Facts and Stats” by Anup Shah 3. “Evidence For Action: Gender Equality and Economic Growth” by John Ward, Bernice Lee, Simon Baptist, and Helen Jackson 4. “How Many Americans Live in Poverty?” by Pam Fessler 5. “Human Capital | 27 | <ul style="list-style-type: none"> • Read closely for textual details. • Annotate texts to support comprehension and analysis. • Engage in productive, evidence-based discussions about texts. • Collect and organize evidence from texts to support analysis in writing. • Collect and organize evidence from texts to support claims made in writing. • Use vocabulary strategies to define unknown words. • Identify potential issues for research within texts. • Conduct pre-searches to validate sufficiency of information for exploring potential issues. • Delineate | <p>CCRA.R.8</p> <p>RI.11-12.1.a</p> <p>RI.11-12.3</p> <p>RI.11-12.6</p> <p>W.11-12.1.a,b</p> <p>W.11-12.2.a-f</p> <p>W.11-12.4</p> <p>W.11-12.7</p> <p>W.11-12.8</p> <p>W.11-12.9.b</p> <p>SL.11-12.1.a,c,d</p> <p>SL.11-12.3</p> <p>SL.11-12.4</p> <p>L.11-12.1</p> <p>L.11-12.2</p> <p>L.11-12.4.a,c</p> | <p>Mid-Unit: Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text: Choose an excerpt from <i>Guns, Germs, and Steel</i>. Identify one of Diamond’s supporting claims; evaluate whether the evidence is relevant and sufficient and the reasoning is valid to support that claim.</p> <p>End-of-Unit:</p> <p>Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from their sources: Write a two-page synthesis of your conclusions and perspective derived from your research. Draw on your research evidence to express your perspective on your problem-based question.</p> |

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| Investment in the Developing World: An Analysis of Praxis” by Adeyemi O. Ogunade | | arguments and explain relevant and sufficient evidence and valid reasoning. | | |
| 6. “The Case for Universal Basic Education for the World’s Poorest Boys and Girls” by Gene B. Sperling | | <ul style="list-style-type: none"> Analyze perspectives in potential research texts. Assess sources for credibility, relevance, and accessibility. Conduct independent searches using research processes including planning for searches, assessing sources, annotating sources, recording notes, and evaluating arguments. | | |
| 7. “Education for All Global Monitoring Report, 2005” by UNESCO | | | | |
| 8. “Bridging the Gender Divide: How Technology Can Advance Women Economically” by Kirrin Gill, Kim Brooks, James McDougall, Payal Patel, and Aslihan Kes | | <ul style="list-style-type: none"> Develop, refine, and select inquiry questions to guide research. Develop and continually assess a research frame to guide independent searches. | | |
| 9. “Investing in Development: A Practical Plan to Achieve the Millennium Development Goals” by Jeffrey D. | | <ul style="list-style-type: none"> Craft claims about inquiry questions, inquiry paths, and a problem-based question using specific textual | | |

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| <p>Sachs, et al.</p> <p>10. “Economic Impacts of Broadband” by Christine Zhen-Wei Qiang and Carlo M. Rossotto with Kaoru Kimura in <i>Information and Communications for Development 2009: Extending Reach and Increasing Impact</i> by World Bank Publications</p> | | <p>evidence from the research.</p> <ul style="list-style-type: none"> • Develop counterclaims in opposition to claims. • Create oral presentations, keeping in mind the audience’s concerns, values, and potential biases. | | |
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| 12.3.2: Synthesizing Research and Argument Through the Writing Process | | | | |
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| Student research sources vary. By 12.3.2, students have chosen texts for research based on their individual problem-based questions. | 11 | <ul style="list-style-type: none"> • Create an outline to organize evidence collected. • Analyze, synthesize, and organize evidence-based claims. • Write effective introduction, body, and conclusion paragraphs for a research-based argument paper. • Use proper MLA citation methods in writing. • Edit for a variety of language conventions, including hyphens and correct punctuation, capitalization, and spelling. • Use formal style and objective tone in writing. • Demonstrate clarity and cohesion in writing. • Vary syntax for effect, consulting references when needed. | W.11-12.1.a-e W.11-12.4 W.11-12.5 W.11-12.7 W.11-12.8 W.11-12.9 SL.11-12.1 SL.11-12.4 SL.11-12.5 SL.11-12.6 L.11-12.1.b L.11-12.2.a,b L.11-12.3.a L.11-12.6 | End-of-Unit: Students are assessed on their final drafts of their research-based argument papers. The final draft should present a precise claim supported by relevant and sufficient evidence and valid reasoning. The draft should be well organized, distinguish claims from alternate and opposing claims, and use transitional language that clearly links the major sections of the text and clarifies relationships among the claims, counterclaims, evidence, and reasoning. Finally, the draft should demonstrate control of the conventions of written language and maintain a formal style and objective tone. |

Note: Bold text indicates targeted standards that will be assessed in the module.

12.3.1

Unit Overview

Using a Seed Text as a Springboard to Engage in Inquiry-Based Research

Texts

Guns, Germs, and Steel by Jared Diamond

Students choose from the following model research sources:

- Source #1: “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty
- Source #2: “Poverty Facts and Stats” by Anup Shah
- Source #3: “Evidence For Action: Gender Equality and Economic Growth” by John Ward, Bernice Lee, Simon Baptist, and Helen Jackson
- Source #4: “How Many Americans Live in Poverty?” by Pam Fessler
- Source #5: “Human Capital Investment in the Developing World: An Analysis of Praxis” by Adeyemi O. Ogunade
- Source #6: “The Case for Universal Basic Education for the World’s Poorest Boys and Girls” by Gene B. Sperling
- Source #7: “Education for All Global Monitoring Report, 2005” by UNESCO
- Source #8: “Bridging the Gender Divide: How Technology Can Advance Women Economically” by Kirrin Gill, Kim Brooks, James McDougall, Payal Patel, and Aslihan Kes
- Source #9: “Investing in Development: A Practical Plan to Achieve the Millennium Development Goals” by Jeffrey D. Sachs, et al.
- Source #10: “Economic Impacts of Broadband” by Christine Zhen-Wei Qiang and Carlo M. Rossotto with Kaoru Kimura in *2009 Information and Communications for Development: Extending Reach and Increasing Impact* by World Bank Publications

Number of Lessons in Unit

27

Introduction

In the first unit of Module 12.3, students build on the skills, practices, and routines introduced in Modules 12.1 and 12.2 by closely reading a seed text that leads into an inquiry-based research process. In the first half of 12.3.1, students continue to practice text analysis skills, including close reading, annotating text, and evidence-based discussion and writing. In the second half of 12.3.1, students engage in an iterative, non-linear research process with the goal of deepening understanding of issues that may lend themselves to argument.

In the first half of 12.3.1, students also read *Guns, Germs, and Steel* by Jared Diamond, which explores the ultimate causes for resource and wealth inequities across the globe. Students analyze the text to determine how Diamond unfolds the ideas in his complex research while also delineating and evaluating his claims, evidence, and reasoning. Students also use the content of the text to surface and explore potential research issues. Students identify and track these issues, which become springboards to the inquiry-based research process that continues in the second half of 12.3.1. Additionally, students are introduced to posing and refining inquiry questions about their issue to guide their initial research. Finally, in this early research stage, students begin to analyze different perspectives and arguments that arise in possible sources, which help them to develop their own areas of investigation.

For the Mid-Unit Assessment, students select a claim from *Guns, Germs, and Steel* and analyze whether the evidence is relevant and sufficient and the reasoning is valid to support the claim

After the Mid-Unit Assessment, students engage more deeply in the research process, vetting their areas of investigation to focus on a specific area of investigation. Students then learn how to develop specific inquiry questions and identify credible, relevant, and accessible sources. From these inquiry questions and sources, students craft a problem-based question and an initial research frame to guide their independent searches. Students continually revisit their research frame to analyze their research direction and focus, making changes as necessary. Finally, students begin to organize and synthesize their research, make claims about inquiry paths, and eventually develop possible answers to their problem-based question.

At the end of 12.3.1, students engage in a formal assessment. The End-of-Unit Assessment asks students to develop an evidence-based perspective by writing a two-page synthesis of their personal conclusions and perspective derived from the research. Students use this evidence-based perspective as a foundation for writing their research-based argument paper in the following unit, 12.3.2.

Note: Accountable Independent Reading (AIR) is suspended in 12.3.1. Students are held accountable for volume of independent reading as they read multiple sources throughout the research process.

Literacy Skills and Habits

- Read closely for textual details.
- Annotate texts to support comprehension and analysis.
- Engage in productive, evidence-based discussions about texts.
- Collect and organize evidence from texts to support analysis in writing.
- Collect and organize evidence from texts to support claims made in writing.
- Use vocabulary strategies to define unknown words.
- Identify potential issues for research within a text.
- Conduct pre-searches to confirm that the research is sufficient for exploration.
- Delineate arguments and explain relevant and sufficient evidence and valid reasoning.
- Analyze perspectives in potential research texts.
- Assess sources for credibility, relevance, and accessibility.
- Conduct independent searches using research processes including planning for searches, assessing sources, annotating sources, recording notes, and evaluating argument.
- Develop, refine, and select inquiry questions to guide research.
- Develop and continually assess a research frame to guide independent searches.
- Craft claims about inquiry questions, inquiry paths, and a problem-based question using specific textual evidence from the research.
- Develop counterclaims in opposition to claims.
- Create oral presentations, keeping in mind audience's concerns, values, and potential biases.

Standards for This Unit

| College and Career Readiness Anchor Standards for Reading | |
|---|---|
| CCRA.R.8 | Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. |
| CCS Standards: Reading — Literature | |
| None. | |
| CCS Standards: Reading — Informational Text | |
| RI.11-12.1.a | Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain. |

| | |
|-------------------------------|---|
| | a. Develop factual, interpretive, and evaluative questions for further exploration of topics. |
| RI.11-12.3 | Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text. |
| RI.11-12.6 | Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text. |
| CCS Standards: Writing | |
| W.11-12.1.a,b | <p>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <p>a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.</p> <p>b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.</p> |
| W.11-12.2.a-f | <p>Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.</p> <p>a. Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.</p> <p>b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.</p> <p>c. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.</p> <p>d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.</p> <p>e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.</p> |

| | |
|--|---|
| | f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). |
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
| W.11-12.9 | Draw evidence from literary or informational texts to support analysis, reflection, and research. |
| W.11-12.9.b | <p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i>, presidential addresses]”).</p> |
| CCS Standards: Speaking & Listening | |
| SL.11-12.1.a,c,d | <p>Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i>, building on others’ ideas and expressing their own clearly and persuasively.</p> <p>a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</p> <p>c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and</p> |

| | |
|--------------------------------|---|
| | <p>creative perspectives.</p> <p>d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.</p> |
| SL.11-12.3 | Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used. |
| SL.11-12.4 | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. |
| CCS Standards: Language | |
| L.11-12.1 | Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. |
| L.11-12.2 | Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. |
| L.11-12.4.a,c | <p>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i>, choosing flexibly from a range of strategies.</p> <ul style="list-style-type: none"> a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. |

Note: Bold text indicates targeted standards that will be assessed in the unit.

Unit Assessments

| Ongoing Assessment | |
|---------------------------|---|
| Standards Assessed | CCRA.R.8, RI.11-12.1.a, RI.11-12.3, RI.11-12.6, W.11-12.1.b, W.11-12.7, W.11-12.8, W.11-12.9, SL.11-12.1.d, SL.11-12.4 |
| Description of Assessment | Varies by lesson but may include short written responses to questions focused on how the author unfolds events or ideas; delineates his claims, evidence, and reasoning; or advances his purpose. Additionally, may include completed research tools or responses to Quick Write prompts focused on developing research skills. |

| Mid-Unit Assessment | |
|---------------------------|---|
| Standards Assessed | CCRA.R.8, W.11-12.2.a-f |
| Description of Assessment | Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text. Choose an excerpt from <i>Guns, Germs, and Steel</i> . Identify one of Diamond's supporting claims; evaluate whether the evidence is relevant and sufficient and the reasoning is valid to support that claim. |

| End-of-Unit Assessment | |
|---------------------------|---|
| Standards Assessed | W.11-12.7, W.11-12.9 |
| Description of Assessment | Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from their sources. Write a two-page synthesis of your conclusions and perspective derived from your research. Draw on your research evidence to express your perspective on your problem-based question. |

Unit-at-a-Glance Calendar

| Lesson | Text | Learning Outcomes/Goals |
|--------|---|---|
| 1 | <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 13–17 | In this first lesson of the unit and module, students are introduced to Module 12.3’s focus: building evidence-based arguments through inquiry-based research. In this lesson, students read and analyze pages 13–17 of <i>Guns, Germs, and Steel</i> . In this excerpt, students are introduced to Yali, the New Guinean man who, with a simple question, sparked Diamond’s quest to explain historical and modern global disparities in wealth and power. Students analyze how Diamond broadens Yali’s question, shifting the focus from its localized origin to the global stage, and in so doing considers the relationship between the question and the “subject” (p. 16) of the book. |
| 2 | <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 17–21 | In this lesson, students continue to read and analyze pages 17–21 of <i>Guns, Germs, and Steel</i> . In this excerpt, Diamond continues to explain his ideas concerning disparities of wealth and power in relation to human development by exposing flaws in commonly held explanations for the economic and social contrasts between various nations and groups. Students pay particular attention to the way in which the author establishes his reasoning for why Yali’s question should be investigated. |

| Lesson | Text | Learning Outcomes/Goals |
|--------|---|--|
| 3 | <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 21–25 | In this lesson, students continue to read and analyze pages 21–25 of <i>Guns, Germs, and Steel</i> . In this excerpt, Diamond continues to examine and debunk possible answers to Yali’s question regarding wealth and power disparities in relation to human development. Diamond also begins to lay the groundwork for his research or answer to Yali’s question. At the beginning of the lesson, students participate in a Pre-Discussion Quick Write, in which they consider the Quick Write prompt and the ways in which the author’s ideas in this excerpt refine his purpose. Students then participate in a whole-class discussion of the Quick Write, during which they make connections to their previous analyses of the author’s research purpose or the “subject” of his book (p. 16). Students then revisit the Quick Write to close the lesson. |
| 4 | <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 65–71 | In this lesson, students read and analyze <i>Guns, Germs, and Steel</i> , pages 65–71. In this passage, Diamond uses a patchwork of eyewitness accounts to reconstruct “the encounter between the Inca emperor Atahualpa and the Spanish conquistador Francisco Pizarro,” which he calls “the decisive moment in the greatest collision of modern history” (p. 66). Additionally, students learn how to generate inquiry questions from their surfaced issues to prepare for independent research. |
| 5 | <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 71–78 | In this lesson, students read and analyze <i>Guns, Germs, and Steel</i> , pages 71–78. In this passage, Diamond analyzes the proximate causes that contribute to Pizarro’s extraordinary capture of Atahualpa. Students consider how the events and ideas in this passage develop “proximate causation” (p. 78). |

| Lesson | Text | Learning Outcomes/Goals |
|--------|---|---|
| 6 | <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 229–237 | In this lesson, students continue to read and analyze <i>Guns, Germs, and Steel</i> , pages 229–237. In this excerpt, Diamond challenges the claim that “[n]ecessity is the mother of invention” (p. 232) and “heroic theory of invention” (p. 231). Instead, Diamond claims that innovation often precedes the necessity for an invention. Additionally, students begin their exploration of arguments by learning how to delineate the author’s supporting claims and evidence. |
| 7 | <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 237–243 | In this lesson, students read and analyze pages 237–243 of <i>Guns, Germs, and Steel</i> , in which Diamond discusses many factors that inform the acceptance of a new technology into a particular society. Students analyze how ideas in this excerpt interact to develop the concept of receptivity to innovation within and across societies. Additionally, students continue to surface potential research issues and develop potential inquiry questions. |
| 8 | <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 243–249 | In this lesson, students read and analyze <i>Guns, Germs, and Steel</i> , pages 243–249. In this excerpt, the author explores the roles of different factors in the diffusion of technology. Students continue to explore elements of argument by identifying Diamond’s claims in this lesson’s excerpt and discussing how he uses evidence and reasoning to support his claims. |
| 9 | Students choose texts for research based on their 2–3 areas of investigation. | In this lesson, students pause in their reading of <i>Guns, Germs, and Steel</i> , and begin to focus on specific aspects of an issue to craft areas of investigation. Students then engage in a pre-search activity to begin gathering sources for further research. This work develops students’ proficiency for posing general and specific questions, finding relevant sources, navigating a wide pool of potential sources, and validating the depth of and their interest in their proposed issues. Students use the Pre-Search Tool to record relevant information about the sources they find, including the author’s name, issue, source, location, publication date, and general content/key ideas. |

| Lesson | Text | Learning Outcomes/Goals |
|--------|---|---|
| 10 | <i>Guns, Germs, and Steel</i> , by Jared Diamond, pages 439–446 | In this lesson, students continue to read and analyze pages 439–446 of <i>Guns, Germs, and Steel</i> . In this excerpt, Diamond extends several of the principles he has observed over the course of the book to present-day questions of business productivity and innovation. Students consider how Diamond further develops ideas previously explored in the text and apply their analysis independently in a written response at the beginning of the lesson. This response informs students' participation in a whole-class discussion that follows. |
| 11 | <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 13–25, 65–78, 229–249, and 439–446 | In this lesson, students prepare for the Mid-Unit Assessment in 12.3.1 Lesson 12 by engaging in a discussion of Diamond's claims in key excerpts from <i>Guns, Germs, and Steel</i> , analyzing whether his evidence is relevant and sufficient, and whether his reasoning is valid. |
| 12 | <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 13–25, 65–78, 229–249, and 439–446 | In this lesson, the Mid-Unit Assessment, students use textual evidence from Jared Diamond's <i>Guns, Germs, and Steel</i> and the Evaluating Evidence and Reasoning Tool from 12.3.1 Lesson 11 to craft a formal, multi-paragraph response to the following prompt: Choose an excerpt from <i>Guns, Germs, and Steel</i> . Identify one of Diamond's supporting claims; evaluate whether the evidence is relevant and sufficient and the reasoning is valid to support that claim. |
| 13 | <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 13–25, 65–78, 229–249, and 439–446. | In this lesson, students continue to analyze <i>Guns, Germs, and Steel</i> , taking all excerpts into consideration in order to examine the author's counterclaims. Students first examine the role of counterclaims in argument and then work to identify Diamond's counterclaims and the evidence and reasoning that supports those counterclaims. Students then identify limitations of the counterclaims. Students pay particular attention to the way Diamond's counterclaims contribute to the persuasiveness of the text. |

| Lesson | Text | Learning Outcomes/Goals |
|--------|---|---|
| 14 | Students choose texts for research based on their individual area of investigation. | In this lesson, students transition from analyzing the seed text, <i>Guns Germs and Steel</i> , to focusing solely on the research process begun in earlier lessons. Students begin the lesson by learning more about the research process. Students discuss possible ways to organize the materials they will gather during 12.3.1, and select one method of organization to support their research process. Next, using the Area Evaluation Checklist, students vet their 2–3 possible areas of investigation and independently select an area of investigation to research. |
| 15 | Students choose texts for research based on their individual area of investigation. | In this lesson, students learn how to generate more specific inquiry questions to frame their research. In the beginning of the lesson, students engage in a research process check-in, during which they review the Student Research Plan Handout. This plan serves as a guide to the research process and a place to reflect on next steps. Next, students review inquiry questions from previous lessons and help generate inquiry questions for their peers' areas of investigation. Individually, students use a Specific Inquiry Questions Checklist to vet the inquiry questions brainstormed by their peers and finalize a list of at least 5 specific inquiry questions that guide their research. |
| 16 | Students choose texts for research based on their individual area of investigation. | In this lesson, students continue to refine inquiry questions as they begin to frame their research by planning for independent searches. Students learn how to select inquiry questions, plan search locations, and use key words and phrases to conduct effective and efficient research. Additionally, students learn how to assess sources formally for credibility, accessibility, and relevance. |

| Lesson | Text | Learning Outcomes/Goals |
|--------|--|---|
| 17 | Students choose texts for research based on their individual area of investigation. | In this lesson, students continue to develop their research skills as they learn how to read important sources closely for selected inquiry questions using annotation and note taking. This key step in the research process enables students to deepen their understanding of their research by showing them how to begin making connections to an area of investigation, as well as how to synthesize their understanding of the information. |
| 18 | Students choose texts for research based on their individual area of investigation. | In this lesson, students learn how to evaluate an evidence-based argument. Students learn to identify and assess the necessary components of an effective argument. This work prepares students to begin forming their own evidence-based arguments in 12.3.2. |
| 19 | Students choose texts for research based on their individual problem-based question. | In this lesson, students construct a research frame to guide their research. Students begin the lesson by refining inquiry questions from 12.3.1 Lesson 15, based on search results from 12.3.1 Lessons 16–18. Students learn to group their inquiry questions thematically to develop inquiry paths. Using the thematically grouped inquiry questions, students learn how to create a research frame, which serves as a springboard and reference for future research. |
| 20 | Students choose texts for research based on their individual problem-based question. | In this lesson, students begin to conduct searches independently using the research frame created in 12.3.1 Lesson 19. This lesson is the first of two lessons in which students conduct sustained, independent research during class, using a Conducting Independent Searches Checklist. While researching, students consider how to use inquiry questions to drive research and continually assess sources for credibility and usefulness in answering inquiry questions. |

| Lesson | Text | Learning Outcomes/Goals |
|--------|--|---|
| 21 | Students choose texts for research based on their individual problem-based question. | In this lesson, students continue to conduct searches independently using the research frame as a guide. This is the second and final lesson of the independent search process; it builds on the previous lesson by asking students to determine whether the research surfaced is sufficient to address their inquiry paths and questions, and adjust their searches accordingly. Additionally, students read sources closely, analyze details and ideas, evaluate a source's argument, and take notes for each source to determine how it addresses inquiry questions and paths. |
| 22 | Students choose texts for research based on their individual problem-based question. | In this lesson, students analyze and synthesize their research to begin making claims about inquiry questions within an inquiry path. Students use at least two Forming Evidence-Based Claims Tools to develop claims about all inquiry paths on the research frame. |
| 23 | Students choose texts for research based on their individual problem-based question. | In this lesson, students organize, analyze, and synthesize their claims using their Forming Evidence-Based Claims Tools from the previous lesson to develop comprehensive claims about each inquiry path in the research frame. This work directly prepares students to develop and write an evidence-based perspective for the End-of-Unit Assessment (12.3.1 Lesson 27). Students build on the claims created in the previous lesson to develop comprehensive claims that reflect a deeper understanding of the inquiry paths and the problem-based question itself, and begin to develop a perspective on their issue. |
| 24 | Students choose texts for research based on their individual problem-based question. | In this lesson, students select one of their claims from the previous lesson and develop a claim that counters this original claim. First, students discuss the claim and possible counterclaims with peers. Students then identify evidence to support the selected counterclaim and record that information on the Forming Counterclaims Tool before engaging in a peer review. |

| Lesson | Text | Learning Outcomes/Goals |
|--------|--|---|
| 25 | Students choose texts for research based on their individual problem-based question. | In this lesson, students refine and synthesize their claims and evidence from the previous lessons by preparing a brief presentation to share with their peers in the following lesson. This presentation helps students prepare for the End-of-Unit Assessment in 12.3.1 Lesson 27 by providing peer feedback on the effectiveness of their claims and evidence while also supporting the development of each student's research-based perspective on their individual problem-based question. |
| 26 | Students choose texts for research based on their individual problem-based question. | In this lesson, students build on their work from the previous lesson and deliver a 2–3 minute presentation of one of their research-based claims, supported by evidence and reasoning. During the small group presentations, students listen to their peers' presentations before using the Presentation Checklist to provide feedback about the presenter's perspective, claim, evidence, organization, and audience considerations. |
| 27 | Students choose texts for research based on their individual problem-based question. | In this final lesson of the unit, the 12.3.1 End-of-Unit Assessment, students write an evidence-based perspective that synthesizes the evidence collection and research work completed in 12.3.1. This lesson asks students to apply standards W.11-12.7 and W.11-12.9 as they craft a response that demonstrates understanding of their problem-based question as well as their ability to draw evidence from their sources to support research analysis. |

Preparation, Materials, and Resources

Preparation

- Read and annotate excerpts from *Guns, Germs, and Steel*.
- Read and annotate model sources listed on page 1.
- Review the Short Response Rubric and Checklist (optional).
- Review the 12.3 Speaking and Listening Rubric and Checklist.
- Review the 12.3.1 Research Rubric and Checklist.

- Review the 12.3.1 Mid-Unit Text Analysis Rubric and Checklist.
- Review all unit standards and post in classroom.
- Consider creating a word wall of the vocabulary provided in all lessons.
- Identify and contact the media specialist/librarian/person best positioned to assist students with conducting research.
- Reserve a computer lab or classroom with technology and Internet access for all students.

Materials and Resources

- Copies of the text *Guns, Germs, and Steel*
- Chart paper
- Writing utensils including pencils, pens, markers, and highlighters
- Methods for collecting student work: student notebooks, folders, etc.
- Access to technology (if possible): computers with Internet connection, interactive whiteboard, document camera, and LCD projector
- Copies of handouts and tools for each student: see Materials list in individual lesson plans
- Copies of the 12.3.1 Mid-Unit Text Analysis Rubric and Checklist
- Copies of the 12.3.1 Research Rubric and Checklist
- Copies of the 12.3 Speaking and Listening Rubric and Checklist
- Copies of the Short Response Rubric and Checklist (optional)
- Self-stick notes for students (optional)
- Binders or electronic folders (optional, to house research materials if necessary)

12.3.1

Lesson 1

Introduction

In this first lesson of the unit and module, students are introduced to Module 12.3's focus: building evidence-based arguments through inquiry-based research. Module 12.3 addresses research as an iterative, non-linear process, through which students build knowledge and gather evidence to support the development of arguments about issues of interest. 12.3.1 uses *Guns, Germs, and Steel* by Jared Diamond, a rich, complex seed text, as a model for how to initiate the inquiry process. The text also provides examples of claims, counterclaims, reasoning, and evidence, which serve as the basis for instruction on writing arguments.

In 12.3.1, excerpts of Diamond's book function to spark inquiry into areas of economic, social, geopolitical, and ethical issues related to wealth and power in "human development" (p. 16). The seed text provides multiple entry points through which students may engage in the research process.

In this lesson, students read and analyze pages 13–17 of *Guns, Germs, and Steel* (from "We all know that history has proceeded very differently" to "the different historical trajectories implicit in Yali's question"). In this excerpt, students are introduced to Yali, the New Guinean man who, with a simple question, sparked Diamond's quest to explain historical and modern global disparities in wealth and power. Students analyze how Diamond broadens Yali's question, shifting the focus from its localized origin to the global stage, and in so doing considers the relationship between the question and the "subject" (p. 16) of the book. Student learning is assessed via a Quick Write at the end of the lesson: What is Diamond's purpose in "push[ing] this question back one step" (p. 15) and then "one step further" (p. 16)?

For homework, students read and annotate *Guns, Germs, and Steel*, pages 17–21, boxing any unfamiliar words and looking up their definitions.

Standards

| Assessed Standard(s) | |
|----------------------|---|
| RI.11-12.6 | Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text. |

| Addressed Standard(s) | |
|-----------------------|--|
| W.11-12.9.b | <p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i>, presidential addresses]”).</p> |
| L.11-12.4.a,c | <p>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i>, choosing flexibly from a range of strategies.</p> <p>a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word’s position or function in a sentence) as a clue to the meaning of a word or phrase.</p> <p>c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage.</p> |

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.</p> <ul style="list-style-type: none"> What is Diamond’s purpose in “push[ing] this question back one step” (p. 15) and then “one step further” (p. 16)? |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Analyze Diamond’s purpose in “push[ing] this question back one step” (p. 15) and then “one step further” (p. 16) (e.g., Diamond begins with Yali’s question that is specific to New Guinea, and reframes the question twice, looking further back in history each time for patterns of “wealth and power distribut[ion]” (p. 15). By establishing these patterns, Diamond demonstrates the global implications for his research and the subject of his book: the “disparate rates” of “human development” (p. 16).). |

Vocabulary

Vocabulary to provide directly (will not include extended instruction)

- superseded (v.) – replaced in power, authority, effectiveness, acceptance, or use by another person or thing
- aboriginal (adj.) – original or earliest known; native
- decimated (v.) – destroyed a great number of or proportion of
- subjugated (v.) – brought under complete control; conquered
- metallurgy (n.) – the technique or science of working or heating metals so as to give them certain desired shapes or properties
- reverberations (n.) – effects or results that are not wanted
- guerrilla warfare (n.) – the use of hit-and-run tactics by small, mobile groups of irregular forces operating in territory controlled by a hostile, regular force.
- indigenous (adj.) – originating in and characteristic of a particular region or country; native
- impending (adj.) – about to happen
- trajectories (n.) – paths, progressions, or lines of development

Vocabulary to teach (may include direct word work and/or questions)

- disparities (n.) – lack of similarities or equality; differences
- implicit (adj.) – suggested without being directly or explicitly stated

Additional vocabulary to support English Language Learners (to provide directly)

- literate (adj.) – able to read and write
- hunter-gatherers (n.) – members of a culture in which people hunt animals and look for plants to eat instead of growing crops and raising animals
- constitute (v.) – to make up or form something
- evolution (n.) – a theory that the differences between modern plants and animals are because of changes that happened by a natural process over a very long time
- charisma (n.) – a special charm or appeal that causes people to feel attracted and excited by someone
- centralized (adj.) – under the control of one authority
- standard of living (n.) – the amount of wealth, comfort, and possessions that a person or group has
- potent (adj.) – very effective or strong

- dominate (v.) – to have control or power over (someone or something)
- archaeological (adj.) – related to a science that deals with past human life and activities by studying the bones, tools, etc. of ancient people
- genocide (n.) – the deliberate killing of people who belong to a particular national, racial, political, or cultural group
- legacies (n.) – things that come from or are given by someone from the past
- descendants (n.) – those who are related to a person or group of people who lived in the past
- civil war (n.) – a war between groups of people in the same country
- asserting (v.) – demanding that other people accept or respect

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|---|---|
| Standards & Text: <ul style="list-style-type: none"> • Standards: RI.11-12.6, W.11-12.9.b, L.11-12.4.a,c • Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 13–17 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Reading and Discussion 4. Quick Write 5. Closing | <ol style="list-style-type: none"> 1. 10% 2. 10% 3. 65% 4. 10% 5. 5% |

Materials

- Copies of *Guns, Germs, and Steel* for each student
- Copies of the Short Response Rubric and Checklist for each student (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ▶ | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

10%

Begin by reviewing the goals for Module 12.3. Explain that in this module, students analyze text excerpts from *Guns, Germs, and Steel* by Jared Diamond. In addition to serving as the focal point of student reading and analysis, *Guns, Germs, and Steel* functions as a seed text to spark inquiry into areas of economic, social, geopolitical, and ethical issues related to the development of global wealth and power. Explain to students that they will construct their own evidence-based perspective through research, and ultimately write a research-based argument paper.

12.3.1, the first unit of Module 12.3, focuses on analysis of Diamond’s purpose and the interaction of ideas he presents, as well as the development of claims, counterclaims, reasoning, and evidence through specific textual details. Additionally, students begin the research process by surfacing and tracking issues, generating inquiry questions, examining central and supporting claims, and identifying areas of investigation, assessing sources, crafting a research frame, and conducting independent searches.

- ▶ Students listen.

Review the agenda and the assessed standard for this lesson: RI.11-12.6. In this lesson, students read and analyze pages 13–17 of *Guns, Germs, and Steel*, in which Diamond retraces the origins of his research on global human development and explains the “subject” (p. 16) of his book.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Read and annotate pages 13–17 of *Guns, Germs, and Steel* by Jared Diamond (from “We all know that history has proceeded very differently” to “the different historical trajectories implicit in Yali’s question”).) Instruct students to form pairs to discuss their annotations (W.11-12.9.b).

💬 Student annotations may include:

- An exclamation point beside “Those historical inequalities have cast long shadows on the modern world, because the literate societies with metal tools have conquered or exterminated the other societies” (p. 13), because this statement summarizes one of the important reasons why some societies succeed and others do not.
- A question mark by “as a biologist I study bird evolution” (p. 13), because it seems odd that someone who studies bird evolution would write a book about the impact of guns, germs, and steel on human history.
- A star next to Yali’s question “Why is it that you white people developed so much cargo and brought it to New Guinea, but we black people had little cargo of our own” (p. 14), because this question seems so basic, but Diamond says the question is “difficult ... to answer” (p. 14).
- An arrow beside the question “Why did wealth and power become distributed as they now are, rather than in some other way?” (p. 15), because this question refines Yali’s question by making it more globally applicable.
- A vertical line beside the section of text from “The history of interactions among disparate peoples” to “some of the world’s most troubled areas today” (p. 16), because this section seems to summarize several major points of the text.

Instruct student pairs to share and discuss the vocabulary words they identified and defined in the previous lesson's homework (L.11-12.4.c).

- ▶ Students may identify the following words: *superseded, aboriginal, decimated, subjugated, metallurgy, reverberations, guerrilla warfare, indigenous, impending, and trajectories.*

① **Differentiation Consideration:** Students may also identify the following words: *literate, hunter-gatherers, constitute, evolution, charisma, centralized, standard of living, potent, dominate, archaeological, genocide, legacies, descendants, civil war, and asserting.*

① Definitions are provided in the Vocabulary box in this lesson.

Activity 3: Reading and Discussion

65%

Instruct students to stay in their pairs from the previous activity. Post or project each set of questions below for students to discuss. Instruct students to continue to annotate the text as they read and discuss (W.11-12.9.b).

Instruct student pairs to read pages 13–17 (from “We all know that history has proceeded very differently” to “the different historical trajectories implicit in Yali’s question”) and answer the following questions before sharing out with the class.

- ① If necessary to support comprehension and fluency, consider using a masterful reading of the focus excerpt for the lesson.
- ① **Differentiation Consideration:** Consider posting or projecting the following guiding question to support students in their reading throughout this lesson:

How does Diamond “extend[]” (p. 15) Yali’s question in this excerpt?

What historical factors prompt Yali to ask his question about “cargo” (p. 14)?

- 💬 Before the arrival of colonialists, New Guineans “still used stone tools” and “dwelt in villages not organized under any centralized political authority” (p. 14). Once the colonialists arrived, New Guineans became aware of the differences between themselves and the “whites” (p. 14). Yali asks the question because he recognizes “huge disparities” in the goods and technology of his people as compared to the “material goods” brought by “white colonialists” “whose value New Guineans instantly recognized” (p. 14).

- ① **Differentiation Consideration:** Consider posting Yali’s question for reference throughout 12.3.1.

Based on Diamond’s explanation of Yali’s question, what might “disparities” (p. 14) mean? (L.11-12.4.a)

- 💬 Diamond discusses the fact that “huge differences between the lifestyle of the average New Guinean and ... the average European or American” (p. 14) exist. He goes on to explain that “[c]omparable differences” (p. 14) are present in other places in the world as well, before stating that these “huge disparities must have potent causes” (p. 14), so *disparities* might mean “differences or inequalities.”

- ① Consider providing students with the definition for *disparities*.
 - ▶ Students write the definition of *disparities* on their copies of the text or in a vocabulary journal.

How is Yali’s question on page 14 relevant to a “larger set of contrasts within the modern world” (p. 15)?

- Yali's original question about "white people" having "developed so much cargo" and "black people" having "little cargo of [their] own" (p. 14) is specific to Yali's experience in New Guinea. Diamond "extend[s]" the original question "to a larger set of contrasts" (p. 15) because the pattern is repeated elsewhere in the world. Diamond states, "Peoples of Eurasian origin ... dominate the modern world in wealth and power" (p. 15). He further explains that "[o]ther peoples, including most Africans ... remain far behind in wealth and power" (p. 15). By identifying patterns similar to those experienced by Yali in New Guinea, Diamond demonstrates the relevance of Yali's question to places and people beyond New Guinea.

- ① **Differentiation Consideration:** If students struggle, consider asking the following scaffolding question:

How does Diamond explain the phrase "a larger set of contrasts" on page 15?

- By detailing patterns of "dominat[ion]" of "wealth and power" in Eurasia, North America, Africa, and Australia as similar to those witnessed by Yali, Diamond demonstrates that Yali's question can be "extended to a larger set of contrasts," or expanded to include other parts of the world where similar contrasts exist.
- ① Consider providing students with a map of the world with which to examine the location of countries and regions Diamond references on page 15 with the paragraph that begins "We can easily push this question back one step."

Lead a brief whole-class discussion of student responses.

Instruct student pairs to form small groups with another pair for a brief jigsaw activity. One pair in the small group should reread and summarize pages 15–16 (from "We can easily push this question back one step" to "the way it was in A.D. 1500?"). Instruct the other pair to reread and summarize page 16 (from "Once again, we can easily push this question back one step further" to "in parts of Upper Paleolithic Europe tens of thousands of years earlier"). When finished, instruct the small groups to share their summaries with each other.

- Student responses may include:
 - In the first excerpt, Diamond discusses the fact that technological and political differences among people already existed at the beginning of colonial worldwide expansion in A.D. 1500. He then provides a brief overview of the levels of technological and political advancement in various regions of the world, before describing those differences as the cause of the world's inequality. Finally, Diamond wonders how the world became the way it was in A.D. 1500.

- In the second excerpt, Diamond looks to written history and archaeology to broaden his question about inequality. He reaches further back in history to 11,000 B.C. when all people were hunter-gatherers, and notes that after this time up until A.D. 1500, differences in development created political and technological inequality. Diamond then summarizes the status of development in different areas of the world.

After the completion of the jigsaw activity, instruct students to return to their original pairs to discuss the following questions.

How does Diamond determine the “subject” of *Guns, Germs, and Steel* (p. 16)?

- 💬 Diamond begins the text by retelling a very specific encounter he had with Yali, and sharing Yali’s question: “Why is it that you white people developed so much cargo and brought it to New Guinea, but we black people had little cargo of our own?” (p. 14). In his “attempt[] to answer Yali” (p. 15), Diamond then poses his “reformulated” version of Yali’s question, followed by a “rephrase[d]” (p. 16) version that expands the focus of “wealth and power” into a generalized inquiry about “rates” of “human development” throughout the world (p. 16). Diamond breaks down the rephrased question, “[W]hy did human development proceed at such different rates on different continents?” to arrive at the subject of his book: the “disparate rates” of “human development” on “different continents” (p. 16).

① **Differentiation Consideration:** If students struggle, consider asking the following scaffolding question:

According to Diamond, what is the “subject” (p. 16) or purpose of *Guns, Germs, and Steel*?

- 💬 Diamond states that the “subject” or purpose of his inquiry is to explore the “disparate rates” of “human development,” which “constitute history’s broadest pattern” (p. 16).

How are “problems of the modern world” (p. 17) related to Yali’s original question?

- 💬 Student responses may include:
 - Diamond explains that “much of Africa is still struggling with its legacies from recent colonialism” (p. 16), just as Yali’s question refers to differences between New Guineans and those who colonized them. Diamond goes on to cite several other parts of the world, including “Central America, Mexico, Peru, New Caledonia, the former Soviet Union, and parts of Indonesia” where “indigenous populations” struggle with the domination of their conquerors’ descendants or their past “collisions” (p. 16).
 - Diamond explains that because so many groups of people have been subject to colonization similar to that which Yali refers, “most of the modern world’s 6,000 surviving languages” are

“disappear[ing]” and are being “replaced by English, Chinese, Russian, and a few other languages” (p. 17).

What might Diamond mean when he uses the word *implicit* on page 17 in relation to Yali’s question? (L.11-12.4.c)

- 💬 Diamond explains that “different historical trajectories” are “implicit” in Yali’s question, meaning that Yali’s question relates indirectly to circumstances in other countries. Therefore, *implicit* may mean that a statement is understood rather than directly stated.

① Consider providing students with the definition of *implicit*.

- ▶ Students write the definition of *implicit* on their copies of the text or in a vocabulary journal.

Lead a brief whole-class discussion of student responses.

Activity 4: Quick Write

10%

Instruct students to respond briefly in writing to the following prompt:

What is Diamond’s purpose in “push[ing] this question back one step” (p. 15) and then “one step further” (p. 16)?

Instruct students to look at their annotations to find evidence. Ask students to use this lesson’s vocabulary wherever possible in their written responses.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from the text.

- 💬 See the High Performance Response at the beginning of this lesson.

① Consider using the Short Response Rubric to assess students’ writing. Students may use the Short Response Rubric and Checklist to guide their written responses.

Activity 5: Closing

5%

Explain to students that the Accountable Independent Reading (AIR) requirement is suspended during Module 12.3. Instead, for 12.3.1 homework, students read and annotate *Guns, Germs, and Steel* and

begin their research by surfacing issues, posing inquiry questions, and independently reading possible sources for a variety of issues surfaced in the text.

- ▶ Students listen.

Display and distribute the homework assignment. For homework, instruct students to read and annotate pages 17–21 of *Guns, Germs, and Steel* (from “Before seeking answers to Yali’s question, we should pause” to “despite what I believe to be their superior intelligence”) (W.11-12.9.b). Direct students to box any unfamiliar words and look up their definitions. Instruct them to choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text (L.11-12.4.c).

- ▶ Students follow along.

Homework

Read and annotate pages 17–21 of *Guns, Germs, and Steel* (from “Before seeking answers to Yali’s question, we should pause” to “despite what I believe to be their superior intelligence”). Box any unfamiliar words and look up their definitions. Choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text.

Short Response Rubric

Assessed Standard: _____

| | 2-Point Response | 1-Point response | 0-Point Response |
|-------------------|---|--|--|
| Inferences/Claims | Includes valid inferences or claims from the text. Fully and directly responds to the prompt. | Includes inferences or claims that are loosely based on the text. Responds partially to the prompt or does not address all elements of the prompt. | Does not address any of the requirements of the prompt or is totally inaccurate. |
| Analysis | Includes evidence of reflection and analysis of the text. | A mostly literal recounting of events or details from the text(s). | The response is blank. |
| Evidence | Includes the most relevant and sufficient textual evidence, facts, or details to develop a response according to the requirements of the Quick Write. | Includes some relevant facts, definitions, concrete details and/or other information from the text(s) to develop an analysis of the text according to the requirements of the Quick Write. | The response includes no evidence from the text. |
| Conventions | Uses complete sentences where errors do not impact readability. | Includes incomplete sentences or bullets. | The response is unintelligible or indecipherable. |

Short Response Checklist

Assessed Standard: _____

| Does my writing... | Did I... | <input type="checkbox"/> |
|--|---|--------------------------|
| Include valid inferences and/or claims from the text(s)? | Closely read the prompt and address the whole prompt in my response? | <input type="checkbox"/> |
| | Clearly state a text-based claim I want the reader to consider? | <input type="checkbox"/> |
| | Confirm that my claim is directly supported by what I read in the text? | <input type="checkbox"/> |
| Develop an analysis of the text(s)? | Consider the author's choices, impact of word choices, the text's central ideas, etc.? | <input type="checkbox"/> |
| Include evidence from the text(s)? | Directly quote or paraphrase evidence from the text? | <input type="checkbox"/> |
| | Arrange my evidence in an order that makes sense and supports my claim? | <input type="checkbox"/> |
| | Reflect on the text to ensure the evidence I used is the most relevant and sufficient evidence to support my claim? | <input type="checkbox"/> |
| Use complete sentences, correct punctuation, and spelling? | Reread my writing to ensure it means exactly what I want it to mean? | <input type="checkbox"/> |
| | Review my writing for correct grammar, spelling, and punctuation? | <input type="checkbox"/> |

12.3.1

Lesson 2

Introduction

In this lesson, students continue to read and analyze pages 17–21 of *Guns, Germs, and Steel* (from “Before seeking answers to Yali’s question, we should pause” to “despite what I believe to be their superior intelligence”). In this excerpt, Diamond continues to explain his ideas concerning disparities of wealth and power in relation to human development by exposing flaws in commonly held explanations for the economic and social contrasts between various nations and groups. Students pay particular attention to the way in which the author establishes his reasoning for why Yali’s question should be investigated. Student learning is assessed via a Quick Write at the end of the lesson: How does Diamond demonstrate the validity of researching Yali’s question in this excerpt? Additionally, students begin the research process by learning how to use the text to surface possible issues for research.

For homework, students read and annotate pages 21–25 of *Guns, Germs, and Steel*, boxing unfamiliar words and looking up their definitions. Additionally, students continue to surface issues related to the text and come to the next lesson prepared to share 2–3 additional issues.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| RI.11-12.3 | Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text. |
| Addressed Standard(s) | |
| W.11-12.9.b | <p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i>, presidential addresses]”).</p> |
| L.11-12.4.a,c | Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i> , choosing flexibly from a range of |

| | |
|--|--|
| | <p>strategies.</p> <ol style="list-style-type: none"> Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. |
|--|--|

Assessment

| Assessment(s) |
|--|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text:</p> <ul style="list-style-type: none"> How does Diamond demonstrate the validity of researching Yali's question in this excerpt? |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Explain how Diamond demonstrates the validity of researching Yali's question in this excerpt (e.g., In this excerpt, Diamond explains several reasons why researching "Yali's question" (p. 17) is valid. First, Diamond counters three common "objections" (p. 17) to investigating "Yali's question" (p. 18). In doing so, he shows that he seeks to "interrupt the chain" (p. 17) that causes groups of people to dominate each other, that his research is not "Eurocentric" (p. 17), and that he does not view "civilize[d]" (p. 18) cultures to be superior to "hunter-gatherer" cultures (p. 18). Diamond then contradicts a typical answer to Yali's question with a discussion of the "commonest explanation" (p. 18) that incorrectly presumes "genetic differences" (p. 20) in "intelligence" (p. 19). Diamond roots his opposition to this explanation in facts, such as "[s]ound evidence for the existence of human differences in intelligence that parallel human differences in technology is lacking" (p. 19) and "tests of cognitive ability ... have not succeeded in convincingly establishing the postulated genetic deficiency in IQs of nonwhite peoples" (p. 20). Diamond's various ideas about why objections to answering Yali's question are unnecessary and why a typical answer to Yali's question is incorrect work together to demonstrate the validity of Diamond's research into Yali's question.). |

Vocabulary

Vocabulary to provide directly (will not include extended instruction)

- perpetuate (v.) – to cause to continue
- ephemeral (adj.) – lasting a very short time; short-lived
- vestiges (n.) – marks, traces, or visible evidence of something that is no longer present or in existence
- repudiate (v.) – to reject with disapproval or condemnation
- loathsome (adj.) – disgusting, revolting, repulsive
- postulated (v.) – assumed without proof, or as self-evident; taken for granted
- conversely (adv.) – in a contrary or opposite way; on the other hand
- mortality (n.) – the frequency of deaths that occur in a particular time or place
- procuring (v.) – getting (something) by some action or effort

Vocabulary to teach (may include direct word work and/or questions)

- innate (adj.) – existing in one from birth; inborn; native

Additional vocabulary to support English Language Learners (to provide directly)

- futile (adj.) – having no result of effect; pointless or useless
- prominence (n.) – the state of being important, well-known, or noticeable
- phenomenon (n.) – something (such as an interesting fact or event) that can be observed and studied and that typically is unusual or difficult to understand or explain fully
- genetic (adj.) – of, relating to, or involving genes
- subconsciously (adv.) – existing in the part of the mind that a person is not aware of
- hypothesis (n.) – an idea or theory that is not proven but that leads to further study or discussion
- discern (v.) – to come to know, recognize, or understand (something)
- intact (adj.) – not broken or damaged; having every part
- densely (adv.) – being crowded with people
- chronic (adj.) – happening or existing frequently or most of the time
- passively (adv.) – not participating readily or actively; inactive
- irreversible (adj.) – impossible to change back to a previous condition or state
- stunting (v.) – stopping (someone or something) from growing or developing
- turned on its head (idiom) – turned something upside down or reversed it

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards & Text: <ul style="list-style-type: none"> Standards: RI.11-12.3, W.11-12.9.b, L.11-12.4.a,c Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 17–21 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Reading and Discussion Quick Write Surfacing Issues Closing | <ol style="list-style-type: none"> 5% 10% 50% 10% 20% 5% |

Materials

- Student copies of the Short Response Rubric and Checklist (refer 12.3.1 Lesson 1) (optional)
- Copies of the Surfacing Issues Tool for each student (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ▶ | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| 📘 | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: RI.11-12.3. In this lesson, students read pages 17–21 of *Guns, Germs, and Steel* and analyze the way in which Diamond demonstrates the validity of his research. Students also begin the research process by surfacing potential research issues after their reading and discussion of the text.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Read and annotate pages 17–21 of *Guns, Germs, and Steel* (from “Before seeking answers to Yali’s question, we should pause” to “despite what I believe to be their superior intelligence”) (W.11-12.9.b).) Instruct students to form pairs to discuss their responses.

🗨 Student annotations may include:

- Numbers 1–3 in the margin by the author’s “reasons” for “posing ... the question” (p. 17), because he explains a sequence of ideas. A “1” beside “One objection goes as follows” (p. 17); a “2” beside “Second, doesn’t addressing Yali’s question automatically involve” (p. 17); and a “3” beside “Third, don’t words such as ‘civilization,’ and phrases such as ‘rise of civilization’” (p. 18).
- An exclamation point near the sentence “Yet many (perhaps most!) Westerners continue to accept racist explanations privately or subconsciously” (p. 18), because it is surprising to hear Diamond say that most people accept racist explanations for the differences among societies.
- A star next to the sentence “Sound evidence for the existence of human differences in intelligence that parallel human differences in technology is lacking” (p. 19), because it is important to note that there is no basis for people’s racist explanations.
- A question mark beside the paragraph that begins “Intelligent people are likelier than less intelligent ones to escape” and ends “where natural selection for body chemistry was instead more potent” (pp. 20–21), because the author’s reasoning here seems questionable. How does he know that smart people are less likely to be murdered, but just as likely to die from disease?

- ① Consider explaining to students that they should use the new annotation code of numbering in the margin to denote a sequence of ideas in the text.

Instruct student pairs to share and discuss the vocabulary words they identified and defined in the previous lesson's homework (L.11-12.4.c).

- ▶ Students may identify the following words: *perpetuate, ephemeral, vestiges, repudiate, loathsome, postulated, conversely, mortality, and procuring.*
- ① **Differentiation Consideration:** Students may also identify the following words: *futile, prominence, phenomenon, genetic, subconsciously, hypothesis, discern, intact, densely, chronic, passively, irreversible, stunting, and turned on its head.*
- ① Definitions are provided in the Vocabulary box in this lesson.

Activity 3: Reading and Discussion

50%

Instruct students to stay in their pairs from the previous activity. Post or project each set of questions below for students to discuss. Instruct students to continue to annotate the text as they read and discuss (W.11-12.9.b).

- ① If necessary to support comprehension and fluency, consider using a masterful reading of the focus excerpt for the lesson.
- ① **Differentiation Consideration:** Consider posting or projecting the following guiding question to support students in their reading throughout this lesson:

In this excerpt, what reasons does Diamond identify that demonstrate the need for his research?

Instruct student pairs to read pages 17–18 of *Guns, Germs, and Steel* (from “Before seeking answers to Yali’s question, we should pause” to “simply to understand what happened in history”) and answer the following questions before sharing out with the class.

- ① **Differentiation Consideration:** Consider providing the following terms to students: “Darwinian theory” (p. 18) is the theory of the origin of animal and plant species by evolution through a process of natural selection, and “natural selection” (p. 18) is the process by which forms of life having traits that better enable them to adapt to specific environmental pressures, as predators, changes in climate, or competition for food or mates, tend to survive and reproduce in greater numbers than others of their kind, thus ensuring the perpetuation of those favorable traits in succeeding generations.

What is Diamond’s purpose in asking readers to “pause to consider some objections” before discussing Yali’s question (p. 17)?

- Diamond wants to “pause to consider some objections” so he can demonstrate that investigating “Yali’s question” is necessary and not “offens[ive],” as “[s]ome people” may think (p. 17).

How does Diamond’s response to the first “objection” on page 17 support his decision to research Yali’s question?

- Diamond explains that some people may “confuse an explanation of causes with a justification or acceptance of results” (p. 17), which means that seeking answers for Yali’s question might suggest approval or “acceptance” of the inequalities present in the modern world. However, Diamond shows this objection to be faulty by comparing the purpose of his book with the work of “psychologists ... social historians ... and ... physicians” who investigate to “understand[] ... a chain of causes to interrupt the chain” (p. 17) and not “justify” the results.

Why might an answer to Yali’s question “automatically involve a Eurocentric approach to history” (p. 17)?

- An answer to Yali’s question might “involve a Eurocentric approach to history” (p. 17) because his question involves the contrasts between “white people” who “developed so much cargo” and “black people” who “had little cargo of [their] own” (p. 14). Understanding that the “white people” Yali referred to were European might cause an investigation of the question to focus on and “glorif[y]” (p. 17) how western Europeans developed and ultimately dominated other parts of the world at different points in history.

① **Differentiation Consideration:** Consider explaining that the term *Eurocentric* refers to the practice of considering Europe and Europeans as the focal point of world culture, history, and economics.

How does Diamond use the “blessings of civilization” to counter the “third” objection to researching Yali’s question (p. 18)?

- Diamond disagrees with the objection that questions such as Yali’s are inherently discriminatory because they presume that “civilization is good” and that “hunter-gatherer” societies are inferior (p. 18). By explaining that life is not necessarily better in “civilization” due to lower levels of “social support,” or in “hunter-gatherer” cultures due to lower-quality “medical care” and higher “risk of death by homicide,” Diamond establishes that he does not view either lifestyle as better than the other (p. 18). He emphasizes his research is simply motivated by a desire to “understand what happened in history” (p. 18).

Lead a brief whole-class discussion of student responses.

Instruct student pairs to read pages 18–21 (from “Does Yali’s question really need another book” to “despite what I believe to be their superior intelligence”) and answer the following questions before sharing out with the class.

- ① **Differentiation Consideration:** Consider explaining that the *Aborigines* Diamond discusses in this excerpt refers to a group of people who were the earliest inhabitants of Australia.

How is “racism” connected to the “commonest explanation” for the differences in human development concerning wealth and power (p. 18)?

- 💬 The “commonest explanation,” or most widespread answer to Yali’s question “assume[s] biological differences among peoples” which are “innate” and “genetic,” and in so doing assumes people of one race to be superior to those of other races (p. 18).

Considering Diamond’s discussion of the “commonest explanation,” what might *innate* mean (p. 18)? (L.11-12.4.a)

- 💬 Diamond explains that early explanations for the differences in human development focused on “innate ability” and later on “evolutionary descent,” and finally on “genetics” (p. 18). These explanations have to do with aspects of human beings that have nothing to do with choice, but instead refer to the way a person is born; therefore, *innate* could refer to qualities with which a person is born.

Explain how the following statement is relevant to Yali’s question and Diamond’s research: “Sound evidence for the existence of human differences in intelligence that parallel human differences in technology is lacking” (p. 19).

- 💬 This statement explains that despite the fact that there are stark “differences in technology” (p. 19) throughout the world, those differences are not rooted in the intellectual superiority of one race or group over another. With this statement, Diamond counters the claim that “we already know the answer” to Yali’s question using the “commonest explanation” and do not “need another book to answer it” (p. 18).

- ① **Differentiation Consideration:** If students struggle, consider asking the following scaffolding question:

According to Diamond, why are “tests of cognitive ability” (p. 20) unreliable as evidence to explain “technological differences” (p. 19)?

- 💬 Cognitive tests are unreliable because they “measure cultural learning and not pure innate intelligence” (p. 20). “[C]ultural learning” reflects the “effects of childhood environment and

learned knowledge” (p. 20), and because this research is based on individual upbringing and is difficult to assess, it is not a meaningful way to measure or explain differences between people.

Explain the connections Diamond makes between murder, disease, and intelligence among “Westerners” and New Guineans on pages 20–21.

- Diamond explains that Westerners are more likely than New Guineans to die of “infectious epidemic diseases” (p. 20) because Westerners live in more “densely populated societies” (p. 20) where such diseases can rapidly spread. He also explains that New Guineans are more likely than Westerners to be murdered or die from “chronic tribal warfare, accidents, and [lack of] food” (p. 20). He then reasons that because it takes more intelligence to avoid “causes of high mortality in ... New Guinea” (p. 20) than it does to survive the type of death more typical for Westerners (disease) then “natural selection promoting genes for intelligence” (p. 21) over time has possibly made New Guineans “smarter than Westerners” (p. 21).

How does Diamond’s point of view affect his claim that “New Guineans are smarter than Westerners” (p. 20)?

- In this section of text, Diamond uses many opinions, rooted in his personal experience rather than his research, to explain his reasoning, which creates uncertainty about his claim that “New Guineans are smarter than Westerners” (p. 20). Words and phrases that underscore his personal observations and experience, such as “[m]y perspective” (p. 20), “my impression” (p. 20), “probably” (p. 21), “[t]his effect surely contributes” (p. 21), and “what I believe” (p. 21) emphasize his opinion rather than fact, and therefore undermine his claim.
- ① **Differentiation Consideration:** Consider explaining to students that while Diamond presents rational claims in this section of text, his argument is not based on fact but rather is conjecture. Explain that *conjecture* is the formation or expression of an opinion or theory without sufficient evidence or proof.

Lead a brief whole-class discussion of student responses.

Activity 4: Quick Write

10%

Instruct students to respond briefly in writing to the following prompt:

How does Diamond demonstrate the validity of researching Yali's question in this excerpt?

Instruct students to look at their annotations to find evidence. Ask students to use this lesson’s vocabulary wherever possible in their written responses.

- ▶ Students listen and read the Quick Write prompt

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from the text.

🗨 See the High Performance Response at the beginning of this lesson.

① Consider using the Short Response Rubric to assess students' writing. Students may use the Short Response Rubric and Checklist to guide their written responses.

Activity 5: Surfacing Issues

20%

Inform students that they have been reading and analyzing texts (in Module 12.3 and previous modules) for several purposes, including developing skills for discussion and writing. Explain that this type of reading and writing also fosters skills necessary to build evidence-based arguments around a problem-based question for research.

Inform students that *Guns, Germs, and Steel* will be used to generate sample issues for research in Module 12.3. Explain to students that the term *issue* can be defined as an important aspect of human society for which there are many different opinions about what to think or do. Many issues can be framed as areas of investigation, and later, problem-based questions ("Odell Education Building Evidence-Based Arguments Unit Plan," p. 9). Explain that Diamond mentions many issues within his text, but it is up to the students to investigate the viability of a surfaced issue through further research. Explain that identifying these initial issues is the beginning of the inquiry process. During the inquiry process, students develop their understanding of different aspects of the issues, and pose and refine questions as they do their pre-search work.

- ▶ Students listen.

① Students will learn about *areas of investigation* in 12.3.1 Lesson 9.

Instruct student pairs to brainstorm and discuss 3–4 issues that they have surfaced in pages 13–21 of *Guns, Germs, and Steel*.

① **Differentiation Consideration:** For additional support, consider providing students with copies of the Surfacing Issues Tool.

🗨 Student responses may include:

- Human development disparities concerning wealth and power
- Patterns of historical cultural dominance
- Errors in theories of intelligence

- ① Explain to students that a *topic* is any subject that can be researched, while an *issue* is a topic that can be debated. The term *issue* is used in the context of argumentation.

Lead a brief whole-class discussion about the issues students surfaced. Instruct students to record the page number location of the issue in the text and a description of key information related to the *issue* in their notes.

- ① Explain to students that they are not required to use a specific method of organization to track materials. Instead, students are encouraged to adhere to a system of organization that suits their personal preferences, be it a file system, a notebook, or an electronic repository.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to read and annotate pages 21–25 of *Guns, Germs, and Steel* (from “A genetic explanation isn’t the only possible answer to Yali’s question” to “That seems to me the strongest argument for writing this book”) (W.11-12.9.b). Direct students to box any unfamiliar words and look up their definitions. Instruct students to choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text (L.11-12.4.c).

Also, instruct students to continue to surface issues related to the text and come to the next lesson prepared to share 2–3 additional issues.

- ▶ Students follow along.

Homework

Read and annotate pages 21–25 of *Guns, Germs, and Steel* (from “A genetic explanation isn’t the only possible answer to Yali’s question” to “That seems to me the strongest argument for writing this book”). Box any unfamiliar words and look up their definitions. Choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text.

Additionally, continue to surface issues related to the text and come to the next class prepared to share 2–3 additional issues.

Surfacing Issues Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: As you read, look for issues that are suggested in the text. Remember that an issue is an important aspect of human society for which there are many different opinions about what to think or do. Summarize the issue succinctly, and note the page number and what the text says about the issue in the correct columns.

| Issue | Page(s) | Key information about the issue from the text |
|-------|---------|---|
| | | |
| | | |
| | | |
| | | |
| | | |

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Model Surfacing Issues Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: As you read, look for issues that are suggested in the text. Remember that an issue is an important aspect of human society for which there are many different opinions about what to think or do. Summarize the issue succinctly, and note the page number and what the text says about the issue in the correct columns.

| Issue | Page(s) | Key information about the issue from the text |
|--|---------|---|
| The reasons for historical and modern inequalities | 13 | Although inequalities between societies are easily seen in contemporary history, there are no easy answers as to what originally caused these differences. We know that “literate societies with metal tools have conquered or exterminated the other societies. While those differences constitute the most basic fact of world history, the reasons for them remain uncertain and controversial” (p. 13). |
| Global wealth and power distribution | 15 | Diamond acknowledges the differences in global wealth and power distribution but wonders, “Why did wealth and power become distributed as they now are, rather than in some other way?” (p. 15). |

| | | |
|----------------------------|--------|---|
| History's broadest pattern | 16 | Diamond looks at Yali's original question and "rephrase[s]" (p. 16) it, changing it from a specific question about New Guineans lack of "cargo" (p. 14) and crafting a global question about differences in the rate of "human development" (p. 16). |
| Eurocentric history | 17 | Diamond ensures readers that his approach to answering Yali does not "automatically involve a Eurocentric approach to history, a glorification of western Europeans, and an obsession with the prominence of western Europe and Europeanized America in the modern world?" (p. 17). He assures that "most of [his] book will deal with peoples other than Europeans" (p. 17). |
| Biological differences | 18, 19 | Diamond explains that although others may answer Yali's question "assuming biological differences" (p. 18) that are "innate" (p. 18), such attempts to answer Yali are "loathsome" and "wrong" (p. 19). |
| Measuring intelligence | 19, 20 | Intelligence is difficult to measure because adults' "cognitive abilities ... are heavily influenced by the social environment ... experienced during childhood" (p. 19). "Tests of cognitive ability (like IQ tests) tend to measure cultural learning and not pure innate intelligence." (p. 20) |

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12.3.1

Lesson 3

Introduction

In this lesson, students continue to read and analyze pages 21–25 of *Guns, Germs, and Steel* by Jared Diamond (from “A genetic explanation isn’t the only possible answer to Yali’s question” to “That seems to me the strongest argument for writing this book”). In this excerpt, Diamond continues to examine and debunk possible answers to Yali’s question regarding wealth and power disparities in relation to human development. Diamond also begins to lay the groundwork for his research or answer to Yali’s question. At the beginning of the lesson, students participate in a Pre-Discussion Quick Write, in which they consider the Quick Write prompt and the ways in which the author’s ideas in this excerpt refine his purpose. Students then participate in a whole-class discussion of the Quick Write, during which they make connections to their previous analyses of the author’s research purpose or the “subject” of his book (p. 16). Students then revisit the Quick Write to close the lesson. Student learning is assessed via a Quick Write at the end of the lesson: How do the interaction and development of ideas in this excerpt refine the author’s purpose?

For homework, students read and annotate *Guns, Germs, and Steel*, pages 65–71, boxing any unfamiliar words and looking up their definitions. Students also continue to surface issues related to the text for research purposes and come to the next lesson prepared to share 2–3 additional issues.

Standards

| Assessed Standard(s) | |
|-----------------------|---|
| RI.11-12.3 | Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text. |
| RI.11-12.6 | Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text. |
| Addressed Standard(s) | |
| W.11-12.9.b | Draw evidence from literary or informational texts to support analysis, reflection, and research. b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., “Delineate and |

| | |
|--------------------|--|
| | <p>evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i>, presidential addresses]).</p> |
| SL.11-12.1.a, c, d | <p>Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i>, building on others’ ideas and expressing their own clearly and persuasively.</p> <p>a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</p> <p>c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.</p> <p>d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.</p> |
| L.11-12.4.c | <p>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i>, choosing flexibly from a range of strategies.</p> <p>c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage.</p> |

Assessment

| Assessment(s) |
|--|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.</p> <ul style="list-style-type: none"> How do the interaction and development of ideas in this excerpt refine the author’s purpose? |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> |

- Identify the author’s purpose (e.g., Diamond’s purpose is to more accurately answer Yali’s question about the inequality of global wealth and power distribution because the “ultimate causes” (p. 23) have yet to be explained and he does not want people to accept a racist biological explanation instead).
- Identify the ideas that interact and develop in this excerpt (e.g., the “stimulatory effects” and “inhibitory effects” (p. 22) of climate, the connection of “lowland river valleys” to “productive agriculture” (p. 22), “biological differences” (p. 18), and “European guns, infectious diseases, steel tools, and manufactured products” (p. 23)).
- Analyze how ideas interact and develop to refine the author’s purpose in this excerpt (e.g., Diamond explains that ideas, such as the “stimulatory effects” and “inhibitory effects” (p. 22) of climate, and the idea that “lowland river valleys” were key to “productive agriculture” (p. 22) are invalid as explanations for human development disparities because historical and archaeological evidence proves otherwise. Diamond also acknowledges that while other researchers have made “some progress” (p. 23) in their investigations, “we’re not told what the correct explanation” (p. 25) to Yali’s question is. He explains that the “immediate factors” that “enabled Europeans to kill or conquer other peoples” included “European guns, infectious diseases, steel tools, and manufactured products” (p. 23), and says that this idea is “on the right track” to answering Yali, but is an “incomplete” “hypothesis” (p. 23). By proving that other potential answers to Yali’s question are either false or incomplete because they address “proximate ... explanation[s]” (p. 23) only, instead of searching for the “ultimate causes” (p. 23), Diamond demonstrates a need for a more accurate answer to Yali’s question, which he intends to provide in his book.).

Vocabulary

Vocabulary to provide directly (will not include extended instruction)

- inhibitory (adj.) – acting to prevent or slow down an activity or occurrence of (something)
- scrutiny (n.) – a close examination or investigation
- backwater (n.) – a place or state of stagnant backwardness
- bureaucracies (n.) – bodies of officials and administrators, especially of a government or government department
- proximate (adj.) – next; nearest; immediately before or after in order, place, occurrence, etc.
- causation (n.) – the relationship between an event or situation and a possible reason or cause
- intractable (adj.) – not easily managed, controlled, or solved
- conferring (v.) – giving (as a property or characteristic) to someone or something

| |
|--|
| <ul style="list-style-type: none"> inexorable (adj.) – unyielding, unalterable |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None. |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> stimulatory (adj.) – causing or encouraging (something) to happen or develop crucial (adj.) – extremely important preceding (v.) – happening, going, or coming before (something or someone) ultimate (adj.) – happening or coming at the end of a process, series of events, etc. immediate (adj.) – coming straight from a cause or reason underclass (n.) – a social class made up of people who are very poor and have very little power or chance to improve their lives |

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards & Text: <ul style="list-style-type: none"> Standards: RI.11-12.3, RI.11-12.6, W.11-12.9.b, SL.11-12.1.a,c,d, L.11-12.4.c Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 21–25 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Pre-Discussion Quick Write Whole-Class Discussion Quick Write Closing | <ol style="list-style-type: none"> 5% 15% 15% 45% 15% 5% |

Materials

- Copies of the 12.3 Common Core Learning Standards Tool for each student (optional)
- Copies of the 12.3 Speaking and Listening Rubric and Checklist for each student

- Student copies of the Surfacing Issues Tool (refer to 12.3.1 Lesson 2) (optional)—students may need additional blank copies
- Student copies of the Short Response Rubric and Checklist (refer to 12.3.1 Lesson 1) (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standards for this lesson: RI.11-12.3 and RI.11-12.6. In this lesson, students prepare an independently written response to the Quick Write prompt at the beginning of the lesson that considers the ways in which the author's ideas in this excerpt refine his purpose. Students then participate in a whole-class discussion before returning to the Quick Write to refine their responses.

- Students look at the agenda.

❗ **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard SL.11-12.1.d. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

💬 Student responses should include:

- Students should respond to others without criticizing their perspectives.
- Students should resolve arguments that arise during the discussion.
- Students should determine what new information is needed to advance the argument.

Activity 2: Homework Accountability

15%

Instruct students to take out their responses to the first part of the previous lesson's homework assignment. (Read and annotate pages 21–25 of *Guns, Germs, and Steel* (from “A genetic explanation isn’t the only possible answer to Yali’s question” to “That seems to me the strongest argument for writing this book”) (W.11-12.9.b).) Instruct students to form pairs to discuss their responses.

💬 Student annotation may include:

- An exclamation point beside the statement “the peoples of northern Europe contributed nothing of fundamental importance to Eurasian civilization until the last thousand years” (p. 22), because this detail seems to go against generally accepted knowledge about Europe.
- A star beside “detailed archaeological studies have shown that complex irrigation systems did not accompany the rise of centralized bureaucracies but followed after a considerable lag” (p. 22), because this seems like an important fact about human development.
- A star beside the question “why were Europeans, rather than Africans or Native Americans, the ones to end up with guns, the nastiest germs, and steel?” (p. 23), because it begins to explore the possible causes of power and wealth distribution, which is Diamond’s research focus.
- Underline the sentence “Yet the roots of inequality in the modern world lie far back in prehistory” (p. 23), because this seems to be a major point in the book that connects the ideas of “proximate (first stage) explanation[s]” to the author’s search for “ultimate causes” (p. 23).
- A question mark beside the sentence “Modern Europe is not a society molded by sub-Saharan black Africans who brought millions of Native Americans as slaves” (p. 24), because the relevance of this statement is unclear.

Instruct student pairs to share and discuss the vocabulary words they identified and defined in the previous lesson’s homework (L.11-12.4.c).

- ▶ Students may identify the following words: *inhibitory*, *scrutiny*, *backwater*, *bureaucracies*, *proximate*, *causation*, *intractable*, *conferring*, and *inexorable*.

① **Differentiation Consideration:** Students may also identify the following words: *stimulatory*, *crucial*, *preceding*, *ultimate*, *immediate*, and *underclass*.

① Definitions are provided in the Vocabulary box in this lesson.

Instruct students to take out their responses to the second part of the previous lesson's homework assignment. (Continue to surface issues related to the text and come to the next class prepared to share 2–3 additional issues.) Instruct student pairs to discuss the issues they surfaced during their homework.

💬 Student responses may include:

- Climate's effects on human development
- Irrigation and centralized bureaucracies
- Immediate, proximate (first stage) explanations vs. ultimate causes

Activity 3: Pre-Discussion Quick Write

15%

Inform students that their analysis in this lesson begins with a Quick Write in response to the prompt below. Students then use their independently generated responses to inform the following discussion, and have the opportunity to review or expand their Quick Write responses after the discussion.

- ① **Differentiation Consideration:** If necessary, consider providing time for students to reread the lesson's excerpt before they respond in writing to the following prompt.
- ① **Differentiation Consideration:** Encourage students to reference their 12.3.1 Lessons 1 and 2 Quick Writes as resources when completing this Pre-Discussion Quick Write.
- ① This activity differs from previous lessons' Reading and Discussion activities by allowing students more independence in analyzing the text before the lesson assessment. For the reading and text analysis in this lesson, students first work independently to respond to a text-based prompt regarding how ideas interact and develop over the course of the excerpt to refine the author's purpose. Students then discuss their independent responses in small groups. Later, they re-evaluate their initial responses and consider how their original opinions were challenged or verified through discussion, or whether they made new connections in light of the evidence and reasoning presented.

Instruct students to read the following prompt:

How does the interaction and development of ideas in this excerpt refine the author's purpose?

- ▶ Students listen and read the Quick Write prompt.

- ① **Differentiation Consideration:** Consider posting or projecting the following guiding question to support students in their reading throughout this lesson:

How do different ideas in this excerpt show the author's purpose?

- ① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from the text.

🗣️ See the High Performance Response at the beginning of this lesson.

- ① This initial Quick Write is intended to demonstrate students' first thoughts and observations in response to the prompt. Students will have additional time to develop their analysis in this lesson, and return to this Quick Write after a whole-class discussion.

Activity 4: Whole-Class Discussion

45%

Display or distribute the 12.3 Speaking and Listening Rubric and Checklist. Explain to students that they should refer to the 12.3 Speaking and Listening Rubric and Checklist for standards SL.11-12.1.a,c,d during the following discussion.

- ▶ Students independently review the relevant portions of the 12.3 Speaking and Listening Rubric and Checklist.

Remind students to continue to record issues for research as they participate in the whole-class discussion.

- ① **Differentiation Consideration:** For additional support, consider providing students with copies of the Surfacing Issues Tool.

Facilitate a whole-class discussion of student responses and observations based on their Quick Write responses. Encourage students to consider points of agreement or disagreement with other students and how the evidence and reasoning presented by other students can help qualify or justify the observations they generated independently.

- ▶ Students share their observations and evidence generated during the Quick Write with the whole class.
- 🗣️ Student responses may include:
 - Diamond's analysis of incorrect answers to Yali's question further refines his purpose by paving the way for the answer he will provide to Yali's question. According to Diamond, ideas such as the "stimulatory effects" and "inhibitory effects" of climate upon "human creativity and energy" (p. 22) "fail[] to survive [the] scrutiny" (p. 22) of history. "[D]etailed archaeological studies" (p. 22) also help Diamond prove false the idea that "lowland river valleys" in dry climates were where "large-scale irrigation systems" for agriculture and "centralized bureaucracies" developed (p. 22). Both of these ideas, combined with the idea

- of “biological differences” (p. 18) from the previous excerpt, work together to support the author’s claim that Yali’s question has not been correctly answered.
- The development and interaction of the concepts of proximate and ultimate causes further refines Diamond’s purpose by demonstrating the need for a “correct explanation” (p. 25) to Yali’s question. Diamond explains that the “immediate factors” that “enabled Europeans to kill or conquer other peoples” included “European guns, infectious diseases, steel tools, and manufactured products” (p. 23). He states that this idea “is on the right track” (p. 23) to answering Yali, but that it is an “incomplete” “hypothesis” because it offers only “proximate,” or “first stage,” “explanation[s]” and does not provide “ultimate” explanations (p. 23). Diamond uses this idea as a springboard to demonstrate the “incomplete” (p. 23) nature of the answer, thereby establishing the need for the research he provides. Through this reasoning, Diamond refines the purpose of his book as “a search for ultimate causes” (p. 23) because no one else has offered a “generally accepted answer to Yali’s question” (p. 24).
 - A lack of acceptable answers to Yali’s question and Diamond’s rejection of the “genetic explanation” (p. 21) further refine Diamond’s purpose. Diamond states that there is “no generally accepted answer to Yali’s question” (p. 24) and offers further that the “lack of such ultimate explanations leaves a big intellectual gap” (p. 24). He recognizes that given this “gap” people “will continue to suspect that the racist biological explanation” for “differences in peoples’ status” “is correct after all” (p. 25). Diamond acknowledges his purpose and desire to have a “convincing, detailed, agreed-upon explanation for the broad pattern of history” (p. 25) to refute the racist explanation as “the strongest argument for writing [*Guns, Germs, and Steel*]” (p. 25).

① **Differentiation Consideration:** If students struggle, consider asking the following scaffolding questions:

How does Diamond’s acknowledgement of other research contribute to his purpose in the text?

- ① Consider instructing students to form small groups and having each group elect a spokesperson to share their observations, or allowing students to volunteer to discuss the observations and evidence generated during their Quick Write.
- ① Consider reminding students of their previous work with SL.11-12.1.a, which requires that students have come to class having read the material and asks them to explicitly draw on evidence from the text to support their discussion.
- ① Consider reminding students of their previous work with SL.11-12.1.c, which requires that students ask and respond to questions and qualify or justify their own points of agreement and disagreement with other students.

- ① Consider reminding students that this is an opportunity to practice standard SL.11-12.1.d, which requires that students seek to understand and respond thoughtfully to diverse perspectives in order to deepen the investigation of their position and observations.
-

Instruct students to form pairs and briefly discuss how their opinions were challenged or verified through discussion, or whether they made new connections in light of the evidence and reasoning presented during the discussions.

- ▶ Student pairs discuss how their opinions were challenged or verified through discussion, and identify any new connections they made during the discussion.

Lead a brief whole-class discussion of student observations.

Activity 5: Quick Write

15%

Instruct students to return to their Pre-Discussion Quick Writes. Instruct students to independently revise or expand their Quick Write responses in light of the whole-class discussion, adding any new connections, and strengthening or revising any verified or challenged opinions.

How do the interaction and development of ideas in this excerpt refine the author’s purpose?

Instruct students to look at their annotations to find evidence. Ask students to use this lesson’s vocabulary wherever possible in their written responses.

- ▶ Students listen and read the Quick Write prompt.

- ① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students revise or expand their Pre-Discussion Quick Write responses.

- 🗨 See the High Performance Response at the beginning of this lesson.

- ① Consider using the Short Response Rubric to assess students’ writing. Students may use the Short Response Rubric and Checklist to guide their written responses.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to read and annotate pages 65–71 of *Guns, Germs, and Steel* (from “The biggest population shift of modern times has been” to “no Indian should be able to offend a Christian”) (W.11-12.9.b).

Direct students to box any unfamiliar words and look up their definitions. Instruct them to choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text (L.11-12.4.c).

Also, instruct students to continue to surface issues related to the text for research purposes and come to the next lesson prepared to share 2–3 additional issues.

- ▶ Students follow along.

Homework

Read and annotate pages 65–71 of *Guns, Germs, and Steel* (from “The biggest population shift of modern times has been” to “no Indian should be able to offend a Christian”). Box any unfamiliar words and look up their definitions. Choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text.

Also, continue to surface issues related to the text for research purposes and come to the next lesson prepared to share 2–3 additional issues.

12.3 Common Core Learning Standards Tool

| CCS Standards: Reading—Informational Text | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|---|--|---|---|---------------------------------------|
| RI.11-12.1.a | <p>Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.</p> <p>a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s).</p> | | | |

| CCS Standards: Writing | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|------------------------|---|---|---|---------------------------------------|
| W.11-12.1 | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. | | | |
| W.11-12.1.a | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. | | | |

| CCS Standards: Writing | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|------------------------|--|---|---|---------------------------------------|
| W.11-12.1.b | <p>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <p>b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values and possible biases.</p> | | | |

| CCS Standards: Writing | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|------------------------|---|---|---|---------------------------------------|
| W.11-12.1.c | <p>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <p>c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.</p> | | | |

| CCS Standards: Writing | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|------------------------|--|---|---|---------------------------------------|
| W.11-12.1.d | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. | | | |
| W.11-12.1.e | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. e. Provide a concluding statement or section that follows from and supports the argument presented. | | | |

| CCS Standards: Writing | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|------------------------|--|---|---|---------------------------------------|
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. | | | |

| CCS Standards: Writing | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|------------------------|--|---|---|---------------------------------------|
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. | | | |

| CCS Standards: Speaking & Listening | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|-------------------------------------|---|---|---|---------------------------------------|
| SL.11-12.1.d | <p>Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.</p> <p>d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.</p> | | | |

| CCS Standards: Speaking & Listening | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|-------------------------------------|---|---|---|---------------------------------------|
| SL.11-12.3 | Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used. | | | |
| SL.11-12.5 | Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. | | | |

| CCS Standards: Language | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|-------------------------|--|---|---|---------------------------------------|
| L.11-12.1.b | <p>Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p> <p>b. Resolve issues of complex or contested usage, consulting references (e.g., <i>Merriam-Webster's Dictionary of English Usage</i>, <i>Garner's Modern American Usage</i>) as needed.</p> | | | |

| CCS Standards: Language | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|-------------------------|--|---|---|---------------------------------------|
| L.11-12.3.a | <p>Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.</p> <p>Vary syntax for effect, consulting references (e.g., <i>Tufte's Artful Sentences</i>) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.</p> | | | |

| CCS Standards: Language | | I know what this is asking and I can do this. | This standard has familiar language, but I haven't mastered it. | I am not familiar with this standard. |
|-------------------------|---|---|---|---------------------------------------|
| L.11-12.6 | Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. | | | |

12.3 Speaking and Listening Rubric

____ / ____ (Total points)

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|--|---|--|---|---|
| <p>Command of Evidence and Reasoning</p> <p>The extent to which the speaker demonstrates preparation for the discussion by explicitly drawing on evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</p> <p>CCSS.ELA-Literacy.SL.11-12.1</p> <p>Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i>, building on others' ideas and expressing their own clearly and persuasively.</p> <p>CCSS.ELA-Literacy.SL.11-12.1.a</p> <p>Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</p> <p>The extent to which the speaker propels conversations by posing and responding to questions that probe reasoning and evidence; ensures a hearing for a full range of positions on a topic or issue;</p> | <p>Demonstrate thorough preparation for the discussion by explicitly drawing on precise and sufficient evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. (SL.11-12.1.a)</p> <p>Skillfully propel conversations by consistently posing and responding to questions that probe reasoning and evidence; actively ensure a hearing for a full range of positions on a topic or issue; consistently clarify, verify, or challenge ideas and conclusions; and actively promote divergent and creative perspectives. (SL.11-12.1.c)</p> | <p>Demonstrate preparation for the discussion by explicitly drawing on relevant and sufficient evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. (SL.11-12.1.a)</p> <p>Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives. (SL.11-12.1.c)</p> | <p>Demonstrate partial preparation for the discussion by inconsistently drawing on relevant or sufficient evidence from texts and other research on the topic or issue, occasionally stimulating a thoughtful, well-reasoned exchange of ideas. (SL.11-12.1.a)</p> <p>Somewhat effectively propel conversations by inconsistently posing and responding to questions that probe reasoning and evidence; occasionally ensure a hearing for a full range of positions on a topic or issue; inconsistently clarify, verify, or challenge ideas and conclusions; and occasionally promote divergent and creative perspectives. (SL.11-12.1.c)</p> | <p>Demonstrate a lack of preparation for the discussion by rarely drawing on relevant or sufficient evidence from texts or other research on the topic or issue, rarely stimulating a thoughtful or well-reasoned exchange of ideas. (SL.11-12.1.a)</p> <p>Ineffectively propel conversations by rarely posing or responding to questions that probe reasoning and evidence; rarely ensure a hearing for a full range of positions on a topic or issue; rarely clarify, verify, or challenge ideas and conclusions; and prevent divergent and creative perspectives. (SL.11-12.1.c)</p> |

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|--|---|--|---|---|
| clarifies, verifies, or challenges ideas and conclusions; and promotes divergent and creative perspectives. CCSS.ELA-Literacy.SL.11-12.1.c Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives. | | | | |
| Collaboration and Presentation The extent to which the speaker responds to diverse perspectives; synthesizes comments, claims, and evidence made on all sides of an issue; resolves contradictions when possible; and determines what additional information or research is required to deepen the investigation or complete the task. CCSS.ELA-Literacy.SL.11-12.1.d Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task. | Skillfully respond to diverse perspectives; skillfully synthesize comments, claims, and evidence made on all sides of an issue; frequently resolve contradictions when possible; and precisely determine what additional information or research is required to deepen the investigation or complete the task. (SL.11-12.1.d) | Effectively respond to diverse perspectives; accurately synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and accurately determine what additional information or research is required to deepen the investigation or complete the task. (SL.11-12.1.d) | Somewhat effectively respond to diverse perspectives; with partial accuracy, synthesize comments, claims, and evidence made on all sides of an issue; occasionally resolve contradictions when possible; and determine with partial accuracy what additional information or research is required to deepen the investigation or complete the task. (SL.11-12.1.d) | Ineffectively respond to diverse perspectives; inaccurately synthesize comments, claims, and evidence made on all sides of an issue; rarely resolve contradictions when possible; and inaccurately determine what additional information or research is required to deepen the investigation or complete the task. (SL.11-12.1.d) |

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|---|---|---|--|---|
| Collaboration and Presentation The extent to which the response presents information, findings, and evidence, conveying a clear perspective, such that listeners can follow the line of reasoning; and address alternative or opposing perspectives. The extent to which the response demonstrates organization, development, substance, and style appropriate to the purpose, audience, and task. CCSS.ELA-Literacy.SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. | Skillfully present information, findings, and evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning; skillfully address alternative or opposing perspectives. Demonstrate skillful organization, development, substance, and style appropriate to the purpose, audience, and task. | Present information, findings, and evidence, conveying a clear perspective, such that listeners can follow the line of reasoning; address alternative or opposing perspectives. Demonstrate organization, development, substance, and style appropriate to the purpose, audience, and task. | Somewhat effectively present information, findings, and evidence, conveying an indistinct perspective, such that listeners struggle to follow the line of reasoning; insufficiently address alternative or opposing perspectives. Demonstrate organization, development, substance, and style somewhat appropriate to the purpose, audience, and task. | Ineffectively present information, findings, and evidence with an unclear perspective, failing to establish a clear line of reasoning or address alternative or opposing perspectives. Rarely demonstrate organization, development, substance, and style appropriate to the purpose, audience, and task. |
| Collaboration and Presentation The extent to which the presentation makes strategic use of digital media to enhance understanding of findings, reasoning, and evidence and to add interest. | Skillfully make strategic use of digital media in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. | Make strategic use of digital media in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. | Somewhat effectively make use of digital media in presentations to partially enhance understanding of findings, reasoning, and evidence and to add interest. | Ineffectively make use of digital media in presentations, failing to enhance understanding of findings, reasoning, and evidence and failing to add interest. |

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|---|---|--|--|---|
| CCSS.ELA-Literacy.SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. | | | | |
| Collaboration and Presentation The extent to which the response adapts speech to the specific context and task, demonstrating a command of formal English. CCSS.ELA-Literacy.SL.11-12.6 Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. | Skillfully adapt speech to the specific context and task, demonstrating skillful command of formal English. | Adapt speech to the specific context and task, demonstrating command of formal English with occasional errors. | Somewhat effectively adapt speech to the specific context and task, demonstrating partial command of formal English with several errors. | Ineffectively adapt speech to the specific context and task, demonstrating insufficient command of formal English with frequent errors. |

- A response that is a personal response and makes little or no reference to the task or text can be scored no higher than a 1.
- A response that is totally copied from the text with no original writing must be given a 0.
- A response that is totally unrelated to the task, illegible, incoherent, blank, or unrecognizable as English must be scored as a 0.

12.3 Speaking and Listening Checklist

Assessed Standards: _____

| | Does my response... | ✓ |
|--|---|--------------------------|
| Command of Evidence and Reasoning | Explicitly draw on evidence from texts and other research on the topic or issue? (SL.11-12.1.a) | <input type="checkbox"/> |
| | Pose and respond to questions that probe reasoning and evidence? (SL.11-12.1.c) | <input type="checkbox"/> |
| | Ensure a hearing for a full range of positions on a topic or issue? (SL.11-12.1.c) | <input type="checkbox"/> |
| | Clarify, verify, or challenge ideas and conclusions? (SL.11-12.1.c) | <input type="checkbox"/> |
| | Promote divergent and creative perspectives? (SL.11-12.1.c) | <input type="checkbox"/> |
| Collaboration and Presentation | Respond to diverse perspectives? (SL.11-12.1.d) | <input type="checkbox"/> |
| | Synthesize comments, claims, and evidence made on all sides of an issue? (SL.11-12.1.d) | <input type="checkbox"/> |
| | Resolve contradictions when possible? (SL.11-12.1.d) | <input type="checkbox"/> |
| | Determine what additional information or research is required to deepen the investigation or complete the task? (SL.11-12.1.d) | <input type="checkbox"/> |
| | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning? (SL.11-12.4) | <input type="checkbox"/> |
| | Address alternative or opposing perspectives? (SL.11-12.4) | <input type="checkbox"/> |
| | Demonstrate organization, development, substance, and style appropriate to the specific purpose, audience, and task? (SL.11-12.4) | <input type="checkbox"/> |
| | Make strategic use of digital media in presentations to enhance understanding of findings, reasoning, and evidence and to add interest? (SL.11-12.5) | <input type="checkbox"/> |
| | Adapt speech to the specific context and task, demonstrating command of formal English? (SL.11-12.6) | <input type="checkbox"/> |

| | | |
|--|---|--------------------------|
| | Demonstrate command of formal English? (SL.11-12.6) | <input type="checkbox"/> |
|--|---|--------------------------|

Model Surfacing Issues Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: As you read, look for issues that are suggested in the text. Remember that an issue is an important aspect of human society for which there are many different opinions about what to think or do. Summarize the issue succinctly, and note the page number and what the text says about the issue in the correct columns.

| Issue | Page(s) | Key information about the issue from the text |
|---|---------|--|
| The effect of climate on human development | 22 | Diamond explains that the “stimulatory effects” of a “cold climate” or the “inhibitory effects of a hot, humid, tropical climate[]” are used to explain differences in “human creativity and energy” (p. 22). |
| Irrigation and centralized bureaucracies | 22 | Diamond suggests that the need for water in “lowland river valleys” in dry climates is an incorrect explanation for the development of “irrigation” and “centralized bureaucracies” (p. 22), and thus an incorrect explanation for human development differences. |
| Immediate, proximate (first stage) explanations vs. ultimate causes | 23, 24 | Although some “historians and geographers” have investigated “worldwide comparisons of human societies” (p. 23), this research has provided only “proximate explanations” (p. 24). There is “no generally accepted answer to Yali’s question” (p. 24) because ultimate causation has yet to be researched. |

12.3.1

Lesson 4

Introduction

In this lesson, students read and analyze *Guns, Germs, and Steel*, pages 65–71 (from “The biggest population shift of modern times has been” to “no Indian should be able to offend a Christian”). In this passage, Diamond uses a patchwork of eyewitness accounts to reconstruct “the encounter between the Inca emperor Atahualpa and the Spanish conquistador Francisco Pizarro,” which he calls “the decisive moment in the greatest collision of modern history” (p. 66). Additionally, students learn how to generate inquiry questions from their surfaced issues to prepare for independent research. Student learning is assessed via a Quick Write at the end of the lesson: Select two inquiry questions and discuss how the selected questions will lead to further exploration of a surfaced issue.

For homework, students read and annotate pages 71–78 of *Guns, Germs, and Steel*, boxing any unfamiliar words and looking up their definitions. Additionally, students continue to generate inquiry questions for 2–3 surfaced issues and come to the next lesson prepared to discuss several questions.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| RI.11-12.1.a | Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain. a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s). |
| Addressed Standard(s) | |
| W.11-12.9.b | Draw evidence from literary or informational texts to support analysis, reflection, and research. b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i> , presidential addresses]”). |

| | |
|---------------|---|
| L.11-12.4.a,c | <p>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i>, choosing flexibly from a range of strategies.</p> <ul style="list-style-type: none"> a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word’s position or function in a sentence) as a clue to the meaning of a word or phrase. c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. |
|---------------|---|

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.</p> <ul style="list-style-type: none"> Select two inquiry questions and discuss how the selected questions will lead to further exploration of a surfaced issue. |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Select two inquiry questions (e.g., How does technology influence war (duration of battle, number of casualties, etc.)? and How does warfare influence technological advancement?). Discuss how the selected questions will lead to further exploration of a surfaced issue (e.g., The questions I have selected will lead to further exploration of the issue “technology and warfare.” I am interested in how technology influences war, as Diamond points out that “Pizarro captured Atahualpa within a few minutes” (p. 66), largely due to the Spaniards’ huge technological advantage. Without a technological advantage (i.e., without guns) would the collision at Cajamarca have lasted longer and would the Incas have defended themselves more easily? I am also interested in whether war spurs people to develop new technologies.). |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|---|
| <ul style="list-style-type: none"> well-attested (v.) – gave sufficient proof or evidence of; manifested inferred (adj.) – formed (an opinion) from evidence; reached (a conclusion) based on known facts |

- subsequent (adj.) – occurring or coming later or after
- subdue (v.) – to conquer and bring into subjection
- revered (v.) – regarded with respect tinged with awe; venerated
- formidable (adj.) – causing fear, apprehension, or dread
- litter (n.) – a vehicle carried by people or animals, consisting of a bed or couch, often covered and curtained, suspended between shafts

Vocabulary to teach (may include direct word work and/or questions)

- infidels (n.) – those who do not believe in a religion that another regards as the true religion

Additional vocabulary to support English Language Learners (to provide directly)

- ragtag (adj.) – made up of different people or things and not organized or put together well
- reneged (v.) – refused to do something that you promised or agreed to do
- squadron (n.) – a military unit consisting of soldiers

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards & Text: <ul style="list-style-type: none"> • Standards: RI.11-12.1.a, W.11-12.9.b, L.11-12.4.a,c • Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 65–71 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Reading and Discussion 4. Posing Inquiry Questions 5. Quick Write 6. Closing | <ol style="list-style-type: none"> 1. 5% 2. 15% 3. 35% 4. 25% 5. 15% 6. 5% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (refer to 12.3.1 Lesson 3) (optional)

- Student copies of the Surfacing Issues Tool (refer to 12.3.1 Lesson 2) (optional)—students may need additional blank copies
- Copies of the Posing Inquiry Questions Handout for each student
- Student copies of the Short Response Rubric and Checklist (refer to 12.3.1 Lesson 1) (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: RI.11-12.1.a. In this lesson, students read pages 65–71 of *Guns, Germs, and Steel*, analyzing the eyewitness accounts in this excerpt. Students also learn how to generate inquiry questions from their surfaced issues to prepare for independent research.

- Students look at the agenda.

❗ **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard RI.11-12.1.a. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

💬 Student responses should include:

- Develop different kinds of questions about a text that help with comprehension and analysis.
- Further explore the issues that are surfaced in the text.

❗ In this lesson, students begin to generate inquiry questions based on issues surfaced in the text.

Activity 2: Homework Accountability

15%

Instruct students to take out their responses to the first part of the previous lesson's homework assignment. (Read and annotate pages 65–71 of *Guns, Germs, and Steel* (from “The biggest population shift of modern times has been” to “no Indian should be able to offend a Christian”) (W.11-12.9.b).)

Instruct students to form pairs to discuss their responses.

💬 Student annotation may include:

- Exclamation point next to the sentence, “Nevertheless, Pizarro captured Atahualpa within a few minutes after the two leaders first set eyes on each other” (p. 66), because it is a very surprising victory since the odds were stacked against the Spanish.
- Star next to the paragraph that begins, “Thus, Atahualpa’s capture interests us specifically as marking” (p. 66), because in this paragraph, Diamond explains that this historical scenario mirrors other clashes between “colonizers and native peoples” (p. 66).
- Star next to the paragraph that begins, “Atahualpa asked for the Book, that he might look at it” (p. 69), because this is the moment that sparks the eruption of Spanish soldiers and the beginning of battle.

Instruct student pairs to share and discuss the vocabulary words they identified and defined in the previous lesson's homework (L.11-12.4.c).

💬 Students may identify the following words: *well-attested*, *inferred*, *subsequent*, *subdue*, *revered*, *formidable*, and *litter*.

① **Differentiation Consideration:** Students may also identify the following words: *ragtag*, *reneged*, and *squadron*.

① Definitions are provided in the Vocabulary box in this lesson.

Instruct students to take out their responses to the second part of the previous lesson's homework assignment. (Also, continue to surface issues related to the text for research purposes and come to the next class prepared to share 2–3 additional issues.) Instruct student pairs to discuss their responses to the homework assignment.

💬 Student responses may include:

- Reliability of primary sources
- Religious motivations for war
- Specific moments in history as windows into other events in world history

Activity 3: Reading and Discussion

35%

Instruct students to stay in their pairs from the previous activity. Post or project each set of questions below for students to discuss. Instruct students to continue to annotate the text as they read and discuss (W.11-12.9.b).

Remind students to continue to record issues for research as they read and analyze the text.

- ① **Differentiation Consideration:** For additional support, consider providing students with copies of the Surfacing Issues Tool.
- ① If necessary to support comprehension and fluency, consider using a masterful reading of the focus excerpt for the lesson.
- ① **Differentiation Consideration:** Consider posting or projecting the following guiding question to support students in their reading throughout this lesson:

Summarize the events that led to Atahualpa's capture.

Instruct student pairs to reread pages 65–71 (from “The biggest population shift of modern times has been” to “no Indian should be able to offend a Christian”) and answer the following questions before sharing out with the class.

What is the “Old World” (p. 65) to which the author refers?

- 💬 The “Old World” is Europe. Since the “New World” was inhabited by “Native Americans” (p. 65), the “New World” refers to the Americas.

What does Diamond's use of the word *nevertheless* (p. 66) suggest about Pizarro's capture of Atahualpa?

- 💬 The word *nevertheless* draws attention to the fact that Pizarro led a “ragtag group of 168 Spanish soldiers” in “unfamiliar terrain” and “far beyond the reach of timely reinforcements,” while Atahualpa had an “army of 80,000 soldiers” (p. 66). Being so vastly outnumbered in foreign territory would normally prevent an army from achieving victory, so Pizarro's capture of Atahualpa was unlikely.

According to Diamond, what about Atahualpa's capture “interests us” (p. 66)?

- 💬 Diamond claims that Pizarro's victory over Atahualpa was “[t]he most dramatic moment in ... European–Native American relations” (pp. 65–66) since Columbus. Diamond also claims that “the factors that resulted in Pizarro's seizing Atahualpa were essentially the same ones that determined the outcomes of many similar collisions between colonizers and native peoples elsewhere in the modern world” (p. 66). Therefore, to understand this event will help the reader

understand the general principles behind many other similar events that shaped modern history in the New World.

Given the identities of the authors of the “eyewitness accounts” (p. 67), what might the word *infidels* mean in the first paragraph on page 67? (L.11-12.4.a)

☞ The firsthand accounts were written by Pizarro’s “companions” and “brothers” who serve “the Roman Catholic empire” (p. 67). Their belief that “the battles of the Spaniards ... will cause joy to the faithful and terror to the infidels” suggests that, in this case, infidels are people who do not share or practice the Catholic faith (p. 67).

① Consider providing students with the definition for *infidels*.

▶ Students write the definition of *infidels* on their copies of the text or in a vocabulary journal.

① **Differentiation Consideration:** If students struggle, consider asking the following scaffolding question:

Who are the authors of the “eyewitness accounts” (p. 67)?

☞ The firsthand accounts were written by Spanish Catholics, specifically “six of Pizarro’s companions, including his brothers” (p. 67).

Why were the Spaniards “full of fear” (p. 68)?

☞ The Spaniards were “full of fear” (p. 68) because as they approached Cajamarca they realized that they were severely outnumbered: “Hernando Pizarro estimated the number of Indian Soldiers there at 40,000, but ... there were actually more than 80,000” (p. 68). As well as being so outnumbered, they were also “so far into a land where [they] could not hope to receive reinforcements” (p. 68) or additional supplies to keep the battle going.

How did the Governor convince Atahualpa to approach the Spaniards (p. 68)?

☞ The Governor sent a messenger to Atahualpa saying that “[he] [would] receive him as a friend and brother ... No harm or insult [would] befall him” (p. 68). However, the Governor lied to Atahualpa in order to lure him closer so that he could capture him.

How is Atahualpa’s toss of the Bible meaningful in the “collision” (p. 65) of the Spaniards and Incas?

☞ The Spaniards were in Cajamarca to “cause joy to the faithful and terror to the infidels” (p. 67) and to spread Christianity as part of their conquest. Because the Bible is the holy book of the Christians, when Atahualpa “threw it away from him” (p. 69) the Spanish were deeply insulted. This event sparked the battle that followed. The Friar yelled, “Come out! Come out, Christians! Come at these enemy dogs who reject the things of God. That tyrant has thrown my book of

holy law to the ground!” (p. 69). Because Atahualpa rejected Christianity, by throwing the Bible and adhering to a different religious law, the Spaniards decided to attack.

Why were the Incas so “terrified” when they far outnumbered the Spanish troops (p. 70)? What advantage does the Incas’ terror highlight?

- The Incas were “terrified” by “the firing of the guns and at the horses” (p. 70) because they had never seen such technology, nor had they ever seen horses. Diamond claims that “the Spaniards’ superior weapons would have assured an ultimate Spanish victory” (p. 66). The Incas’ terror is an example of how superior weapons were used to give Europeans a dramatic upper hand in battle against native peoples.

How do the eyewitness accounts help demonstrate “the factors ... that determined the outcome of many similar collisions between colonizers and native peoples” (p. 66)?

- The eyewitness accounts demonstrate that the Spanish, like many other “colonizers ... in the modern world” had advantages over “native peoples” (p. 66), like greater access to weapons.

Lead a brief whole-class discussion of student responses.

Activity 4: Posing Inquiry Questions

25%

Instruct students to take out their documentation of the issues that they have surfaced throughout this lesson and previous lessons. Inform students that in this lesson, they will use these issues to generate inquiry questions as they begin the process of building evidence-based arguments for research. Explain that inquiry questions guide the research and analysis throughout the research process. Inform students that this inquiry question process is iterative; students will continue to surface new questions as they acquire information about their research issues.

- ▶ Students listen.

Distribute the Posing Inquiry Questions Handout to students. Explain that this handout offers instructions and tips for generating inquiry questions. Students will refine these questions in later lessons as they narrow down their area of investigation and problem-based question, but at this stage students will pose questions to guide an initial exploration of an issue they surfaced from the text. Instruct students to read the Generating Questions portion of the handout.

- ▶ Students read the Generating Questions portion of the handout.

Explain to students that they will come up with a wide variety of inquiry questions by applying the questions on the handout to the issues they surfaced. Encourage students to consider what they find interesting and would like to know more about when they are generating inquiry questions. Explain that at this stage it is best to brainstorm as many questions as possible.

- ▶ Students listen.

Explain that students will now see this process modeled using “warfare and colonization” as a sample issue. Display for students the issue “warfare and colonization” and the example inquiry question:

How are warfare and colonization related?

Explain to students that this inquiry question is an open-ended question, and therefore satisfies one of the suggestions from the handout (“Questions that can be answered with a simple ‘yes’ or ‘no’ generally do not make effective inquiry questions”). Ask students:

What are some other potential inquiry questions for the issue “warfare and colonization”?

💬 Student responses may include:

- How does technology influence battle and colonization?
- What motivates people to colonize?
- What are some historical examples where people colonized other countries without waging warfare?

① This model uses potential inquiry questions based on a specific issue surfaced in this lesson.

Instruct students to form pairs. Instruct student pairs to choose an issue from their surfaced issues and generate 5 inquiry questions for that issue.

💬 Student responses vary according to the research conducted, but should follow the guidance on the Posing Inquiry Questions Handout. Student responses may include:

- Issue: Technology and warfare
- Inquiry questions:
 - How does technology influence war (duration of battle, number of casualties, etc.)?
 - How or why is more advanced technology more or less advantageous than a large number of troops?
 - How does warfare influence technological advancement?

Activity 5: Quick Write

15%

Instruct students to respond briefly in writing to the following prompt:

Select two inquiry questions and discuss how the selected questions will lead to further exploration of a surfaced issue.

Instruct students to look at their annotations to find evidence. Ask students to use this lesson's vocabulary wherever possible in their written responses.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from the text.

🗨 See the High Performance Response at the beginning of this lesson.

① Consider using the Short Response Rubric to assess students' writing. Students may use the Short Response Rubric and Checklist to guide their written responses.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to read and annotate pages 71–78 of *Guns, Germs, and Steel* (from “Let us now trace the chain of causation” to “causation that will take up the next two parts of this book”) (W.11-12.9.b). Direct students to box any unfamiliar words and look up their definitions. Instruct them to choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text (L.11-12.4.c).

Additionally, instruct students to continue to generate inquiry questions for 2–3 surfaced issues and come to the next lesson prepared to discuss several questions.

- ▶ Students follow along.

Homework

Read and annotate pages 71–78 of *Guns, Germs, and Steel* (from “Let us now trace the chain of causation” to “causation that will take up the next two parts of this book”). Box any unfamiliar words and look up their definitions. Choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text.

Also, continue to generate inquiry questions for 2–3 surfaced issues and come to the next lesson prepared to discuss several questions.

Model Surfacing Issues Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: As you read, look for issues that are suggested in the text. Remember that an issue is an important aspect of human society for which there are many different opinions about what to think or do. Summarize the issue succinctly, and note the page number and what the text says about the issue in the correct columns.

| Issue | Page(s) | Key information about the issue from the text |
|---|---------|---|
| Technological disparities between Europeans and Native Americans | 65–66 | The Europeans' technology, such as guns, provided them with an upper hand in battle with native peoples in the New World. The upper hand was so great that Pizarro was able to "capture[] Atahualpa within a few minutes after the two leaders first set eyes on each other" (p. 66), despite the fact that Pizarro was outnumbered by tens of thousands. |
| Specific moments in history as windows into other events in world history | 66 | Diamond claims that "Atahualpa's capture offers us a broad window onto world history" (p. 66) because "the factors that resulted in Pizarro's seizing Atahualpa were essentially the same ones that determined the outcome of many similar collisions ... elsewhere in the modern world" (p. 66). Thus, historians can look at individual moments in history in order to understand broader patterns. |

| | | |
|---|--------|---|
| Religion as a motivating factor in colonization | 67, 71 | The writers of the firsthand accounts say that they are “vassals of the most invincible Emperor of the Roman Catholic Empire” (p. 67) on a mission to “cause joy to the faithful and terror to the infidels” (p. 67). Pizarro claims that “by reason of our good mission, God ... permits this” (p. 71). These statements suggest that religion can motivate people to conquer other people. |
| Warfare and colonization | 71 | Throughout the entire passage (pp. 65–71), warfare and colonization are bound, because the colonizers are waging warfare on the Inca people. At the end of the passage specifically, Pizarro is quoted as saying, “Do not take it as an insult that you have been defeated and taken prisoner, for with the Christians who come with me, though so few in number, I have conquered greater kingdoms than yours” (p. 71). The way that Pizarro speaks about colonizing and spreading Christianity explicitly mentions “conquer[ing]” kingdoms in warfare, as though they are inextricable. |

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Posing Inquiry Questions Handout

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Generating questions

In this module, *Guns, Germs, and Steel* is a starter or “seed text” that helps to generate potential issues that drive the research process. Issues that are surfaced in the text will be used to pose inquiry questions. These inquiry questions help illuminate different potential areas of investigation within a research issue. When generating inquiry questions, it is often a good idea to brainstorm as many as possible before selecting and refining the richest ones. Here are several guiding questions to help you get started:

How is the issue defined?

What are its major aspects?

Where did it originate?

What are its causes and implications?

What is its history?

What other issues is it connected to or associated with?

What are its important places, things, people, and experts?

Selecting and refining questions

Once the brainstorming process is completed, it is important to review and select the strongest questions generated. Use these questions to assist with selecting and refining the strongest inquiry questions:

Are you genuinely interested in answering your question?

There is a lot of work involved in research, and genuine interest motivates the research process. The most effective questions are about issues that are interesting to individual researchers and what they consider to be valuable information.

Can your question truly be answered through your research?

Some questions are unanswerable (Are there aliens on Jupiter?) or take years to answer (What is the meaning of life?). An effective inquiry question must be realistic and researchable.

Is your question clear? Can you pose your question in a way that you and others understand what you are asking?

Clear inquiry questions are straightforward and not confusing. If the question has two parts it may be better to separate the parts to form two new questions.

What sort of answers does your question require?

Questions that can be answered with a simple “yes” or “no” generally do not make effective inquiry questions. Effective inquiry questions should support deep investigation that may even lead to multiple answers, and more questions. For example, the question “What are the causes of war?” could lead to questions about how these causes are defined and research about different reasons for going to war throughout history.

Do you already know the answer?

Effective inquiry questions are questions that cannot be answered immediately. The research process involves inquiry, finding more information about a question, and developing a perspective based on the evidence discovered, and this cannot happen if the question is already answered or too simplistic. For example, there is a big difference between the questions, “Has the United States participated in any wars?” (a question that is easily answered and requires little research) and, “What has been the impact of war on the United States?” (a question that would require a lot of research).

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12.3.1

Lesson 5

Introduction

In this lesson, students read and analyze *Guns, Germs, and Steel*, pages 71–78 (from “Let us now trace the chain of causation” to “causation that will take up the next two parts of this book”). In this passage, Diamond analyzes the proximate causes that contribute to Pizarro’s extraordinary capture of Atahualpa. Students consider how the events and ideas in this passage develop “proximate causation” (p. 78). Student learning is assessed via a Quick Write at the end of the lesson: How do the ideas and events in this excerpt interact to develop the larger concept of “proximate causation” (p. 78)?

For homework, students read and annotate pages 229–237 of *Guns, Germs, and Steel*, boxing any unfamiliar words and looking up their definitions. Additionally, students continue to surface issues and develop inquiry questions as part of the research process. Finally, students respond briefly in writing to two questions.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| RI.11-12.3 | Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text. |
| Addressed Standard(s) | |
| W.11-12.9.b | <p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i>, presidential addresses]”).</p> |
| L.11-12.4.c | <p>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i>, choosing flexibly from a range of strategies.</p> <p>c. Consult general and specialized reference materials (e.g., dictionaries, glossaries,</p> |

| | |
|--|--|
| | thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. |
|--|--|

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.</p> <ul style="list-style-type: none"> How do the ideas and events in this excerpt interact to develop the larger concept of “proximate causation” (p. 78)? |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Explain how the ideas and events in this excerpt interact to develop “proximate causation” (e.g., Diamond traces the “chain of causation ... beginning with the immediate events” (p. 71), like the fact that the Spanish had “steel swords and other weapons” (p. 72) and horses. Diamond then explores other less-immediate causes of the Spaniards’ victory: For example, the Spanish had access to knowledge about other cultures that the Incas did not, and thus Atahualpa “marched into Pizarro’s obvious trap” (p. 76). Additionally, an “epidemic of smallpox ... had killed the Inca emperor Huayna Capac” (pp. 74–75), so the Inca Empire was divided and weak, which only lent greater power to the Spaniards with their technological advantages (guns, horses, etc.). Beginning with the most “[i]mmediate reasons” (p. 78), such as advanced weaponry, and working backward to less immediate reasons such as smallpox and literacy, Diamond demonstrates how those “proximate factors” interacted to result in “proximate causation” of this historical outcome (p. 78).). |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> antecedents (n.) – preceding circumstances or events precipitated (v.) – hastened the occurrence of endemic (adj.) – natural to or characteristic of a specific people or place maritime (adj.) – of or relating to the sea |

| |
|--|
| <ul style="list-style-type: none"> envoy (n.) – a diplomatic agent; any accredited messenger or representative provocation (n.) – something that incites, instigates, angers, or irritates |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None. |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> hindsight (n.) – the knowledge and understanding that you have about an event only after it has happened routed (v.) – defeated someone easily and completely in a game or contest muskets (n.) – long guns that were used by soldiers before the invention of the rifle lances (n.) – long, pointed weapons used in the past by knights riding on horses daggers (n.) – sharp, pointed knives that are used as weapons besieged (v.) – a city, building, etc. that is surrounded by soldiers who are trying to take control of it immunity (n.) – the power to keep yourself from being affected by a disease |

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|---|
| Standards & Text: <ul style="list-style-type: none"> Standards: RI.11-12.3, W.11-12.9.b, L.11-12.4.c Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 71–78 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Reading and Discussion Quick Write Closing | <ol style="list-style-type: none"> 5% 20% 55% 15% 5% |

Materials

- Student copies of the Surfacing Issues Tool (refer to 12.3.1 Lesson 2) (optional)—students may need additional blank copies

- Student copies of the Short Response Rubric and Checklist (refer to 12.3.1 Lesson 1) (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| 📘 | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: RI.11-12.3. In this lesson, students read pages 71–78 of *Guns, Germs, and Steel*, analyzing how the ideas and events in this excerpt develop “proximate causation” (p. 78).

- Students look at the agenda.

Activity 2: Homework Accountability

20%

Instruct students to take out their responses to the first part of the previous lesson’s homework assignment. (Read and annotate pages 71–78 of *Guns, Germs, and Steel* (from “Let us now trace the chain of causation” to “causation that will take up the next two parts of this book”) (W.11-12.9.b).) Instruct students to discuss their responses to the homework assignment in pairs.

💬 Student annotation may include:

- Star next to the paragraph that begins, “Let us now trace the chain of causation” (pp. 71–72). This statement describes what Diamond does through the rest of the excerpt as he explains the reasons why Atahualpa was captured.
- Star next to the sentence, “The transformation of warfare by horses began with their domestication around 4000 B.C., in the steppes north of the Black Sea” (p. 74), because this shows how horses came to be native to Spain but not the Americas.
- Exclamation mark next to the paragraph that begins, “Atahualpa’s presence at Cajamarca thus highlights one of the key factors in world history: diseases transmitted to peoples

lacking immunity” (p. 75), because the effects that disease had on the conquest of the New World are very surprising.

Instruct student pairs to share and discuss the vocabulary words they identified and defined in the previous lesson’s homework (L.11-12.4.c).

💬 Students may identify the following words: *antecedents*, *precipitated*, *endemic*, *maritime*, *envoy*, and *provocation*.

① **Differentiation Consideration:** Students may also identify the following words: *hindsight*, *routed*, *muskets*, *lances*, *daggers*, *besieged*, and *immunity*.

① Definitions are provided in the Vocabulary box in this lesson.

Instruct students to take out their responses to the second part of the previous lesson’s homework assignment. (Continue to generate inquiry questions for 2–3 surfaced issues and come to the next lesson prepared to discuss several questions.) Instruct students to share their inquiry questions in pairs.

💬 Student responses may include:

- What is more important in military strategy: number of soldiers or technology?
- How did learning about history aid European colonizers in the New World?

Activity 3: Reading and Discussion

55%

Instruct students to form pairs. Post or project each set of questions below for students to discuss. Instruct students to continue to annotate the text as they read and discuss (W.11-12.9.b).

Remind students to continue to surface issues and develop inquiry questions for research as they read and analyze the text.

① **Differentiation Consideration:** For additional support, consider providing students with copies of the Surfacing Issues Tool.

① If necessary to support comprehension and fluency, consider using a masterful reading of the focus excerpt for the lesson.

① **Differentiation Consideration:** Consider posting or projecting the following guiding question to support students in their reading throughout this lesson:

What does Diamond mean by “proximate causation” (p. 78)?

Instruct student pairs to reread pages 71–78 (from “Let us now trace the chain of causation in this extraordinary confrontation” to “causation that will take up the next two parts of this book”) and answer the following questions before sharing out with the class.

What is a “chain of causation” (p. 71)?

- *Causation* is the relationship between an event and its possible cause. A “chain of causation” (p. 71) is a series of causes leading to a single conclusion or event.

① Remind students of their work with the term *causation* in 12.3.1 Lesson 3.

What is the purpose of the questions Diamond poses in the first paragraph of this excerpt?

- Diamond’s purpose in asking the questions is to demonstrate the chain of causation leading to the Spaniards’ victory. Diamond begins to “trace the chain of causation in this extraordinary confrontation” (p. 71) by presenting questions about why history happened the way it did. For example, Diamond asks, “Why did Pizarro capture Atahualpa?” rather than the other way around, given Atahualpa’s “vastly more numerous forces” (p. 72). Diamond also wonders about the “antecedents” (p. 72) of the events leading to the Spanish defeat of the Incas. For instance, Diamond asks, “How did Pizarro come to be there to capture [Atahualpa], instead of Atahualpa’s coming to Spain to capture King Charles I?” (p. 72).

How does Diamond explain Pizarro’s capture of Atahualpa, as well as other Spanish victories, against enormous odds?

- Diamond explains that the Spanish had a major advantage because of the physical military tools at their disposal, such as “steel swords” and other “strong, sharp weapons,” primitive guns called “harquebuses” (p. 73), and horses. These advantages were important because “[h]orsemen could easily outride Indian sentries before the sentries had time to warn Indian troops behind them, and could ride down and kill Indians on foot” (p. 74).

Why did the Spanish have horses when the Incas did not?

- Horses were not native to the Americas and so were not available for Native Americans to use in warfare. Diamond explains that, “[t]he transformation of warfare by horses began with their domestication around 4000 B.C., in the steppes north of the Black Sea” (p. 74).

What was the role of military equipment in Europeans’ colonization of the New World (pp. 72–74)?

- Spain’s weapons helped it to win many “decisive” (p. 72) battles against native peoples whose “rebellions ... failed because of the Spaniards’ far superior armament” (p. 73), including sharp

weapons and metal body armor (p. 74). Diamond states that “[t]he sole Native Americans able to resist European conquest for many centuries were those tribes that reduced the military disparity by acquiring and mastering both horses and guns” (p. 72), though even those tribes eventually fell to “massive army operations by white governments” (p. 72).

What events left the Incas “divided,” rather than a “united empire” (p. 75)?

- Diamond writes that “an epidemic of smallpox ... had killed the Inca Emperor Huayna Capac ... and ... his designated heir, Ninan Cuyuchi” (pp. 74–75). Atahualpa then fought with “his half brother Huascar” (p. 75) in a civil war for power over the empty throne. Thus, smallpox resulted in a divided empire.

What two factors intersected to result in the “military disparity” (p. 72) that allowed for Pizarro’s victory?

- Disease and “military disparity” (p. 72) worked together by playing “immediate” (p. 71) roles in determining the outcome of the collision at Cajamarca. If it had not been for an outbreak of smallpox, Pizarro “would have faced a united empire” (p. 75). But the Inca Empire was “divided and vulnerable” (p. 74), which amplified the power of the Spaniards with their advantages such as guns and horses.

How did literacy contribute to Pizarro’s capture of Atahualpa? How did literacy contribute to other similar historical events?

- Student responses should include:
 - Literacy gave the Spanish access to “a huge body of knowledge about human behavior and history” (p. 77). Atahualpa and other native peoples, in contrast, had never been exposed to the Spaniards or any other “invaders from overseas” (p. 77). Had he been aware of information about similar threats of colonization, Atahualpa may not have “walk[ed] into [Pizarro’s] trap” (p. 76) so readily.
 - The principle that a tradition of literacy gave the New-World settlers access to information about other cultures and behaviors that native peoples did not have applies to many other European victories in the New World. This same principle resulted in Montezuma’s miscalculation “when he took Cortés for a returning god and admitted him ... into the Aztec capital” (p. 77), which resulted in Cortés’s or another European’s victory.

What is a “proximate factor[.]” (p. 78)?

- *Proximate* means “nearest” or “immediately before.” Diamond seeks to identify “the set of proximate factors that *resulted* in Europeans’ colonizing the New World” (p. 78), which suggests

that a proximate factor in this context is the nearest factor before an event that caused that event.

① Consider reminding students of their work with the vocabulary word *proximate* in 12.3.1 Lesson 3.

How does Diamond structure this excerpt in order to address the “proximate factors” (p. 78) leading to Atahualpa’s capture?

- 💬 Diamond opens this excerpt with a series of questions, such as “Why did Pizarro capture Atahualpa and kill so many of his followers?” and “Why did Atahualpa walk into ... a transparent trap?” (p. 72). Diamond then proceeds to answer these questions one by one, asking the questions again in italics, until there are none he can explain with “proximate factors” (p. 78).

What questions are left unanswered even after exploring the “proximate factors that resulted in Europeans’ colonizing the New World” (p. 78)?

- 💬 Diamond claims that, “we are still left with the fundamental question why all those immediate advantages came to lie more with Europe than with the New World” (p. 78). That is, while we may understand the “proximate factors” of such events, such as the Spanish having military advantage, we still do not understand what comes before the proximate factors, or the “ultimate causation” (p. 78) or root causes of such advantages.

① **Differentiation Consideration:** If students struggle, consider posing the following scaffolding question:

What is the difference between “proximate causation” and “ultimate causation” (p. 78)?

- 💬 The difference between “proximate causation” and “ultimate causation” (p. 78) is that proximate causes are the “[i]mmediate reasons” (p. 78) or nearest causes for why an event has occurred. In the case of Pizarro’s capture of Atahualpa, the proximate causes are European advantages such as “military technology” and “writing” (p. 78). In contrast, ultimate causation is the root cause for why something has happened; the first or original factor for why history has proceeded the way that it has. For example, Diamond questions, “Why weren’t the Incas the ones to invent guns and steel swords, to be mounted on animals?” (p. 78), demonstrating that the ultimate or root causes of why the Europeans had “proximate” (p. 64) advantages that the Incas did not has yet to be explored.

Lead a brief whole-class discussion of student responses.

Activity 4: Quick Write

15%

Instruct students to respond briefly in writing to the following prompt:

How do the ideas and events in this excerpt interact to develop the larger concept of “proximate causation” (p. 78)?

Instruct students to look at their annotations to find evidence. Ask students to use this lesson’s vocabulary wherever possible in their written responses.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from the text.

🗨 See the High Performance Response at the beginning of this lesson.

① Consider using the Short Response Rubric to assess students’ writing. Students may use the Short Response Rubric and Checklist to guide their written responses.

Activity 5: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to read and annotate pages 229–237 of *Guns, Germs, and Steel* (from “On July 3, 1908, archaeologists excavating the ancient Minoan palace” to “yet another invention in search of a use?”) (W.11-12.9.b). Direct students to box any unfamiliar words and look up their definitions. Instruct students to choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text (L.11-12.4.c).

Additionally, instruct students to continue to surface issues and generate inquiry questions as part of the research process and come to the next lesson prepared to discuss 1–2 issues and 1–2 questions.

Also for homework, instruct students to respond briefly in writing to the following questions:

How does Diamond's explanation of technology on page 231 relate to his research purpose as established in earlier excerpts?

How does Diamond dismiss the claim “necessity is the mother of invention” (p. 232) and the “heroic theory of invention” (p. 231)?

Ask students to use this lesson’s vocabulary wherever possible in their written responses.

- ▶ Students follow along.

Homework

Read and annotate pages 229–237 of *Guns, Germs, and Steel* (from “On July 3, 1908, archaeologists excavating the ancient Minoan palace” to “yet another invention in search of a use?”). Box any unfamiliar words and look up their definitions. Choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text.

Additionally, continue to surface issues and generate inquiry questions as part of the research process. Come to the next lesson prepared to discuss 1–2 issues and 1–2 inquiry questions.

Finally, respond briefly in writing to the following questions:

How does Diamond's explanation of technology on page 231 relate to his research purpose as established in earlier excerpts?

How does Diamond dismiss the claim “necessity is the mother of invention” (p. 232) and the “heroic theory of invention” (p. 231)?

Use this lesson’s vocabulary wherever possible in your written responses.

Model Surfacing Issues Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: As you read, look for issues that are suggested in the text. Remember that an issue is an important aspect of human society for which there are many different opinions about what to think or do. Summarize the issue succinctly, and note the page number and what the text says about the issue in the correct columns.

| Issue | Page(s) | Key information about the issue from the text |
|--|---------|---|
| Chain of causation | 71–78 | Diamond attempts to “trace the chain of causation” (p. 71) leading up to Atahualpa’s capture. Diamond begins with the most immediate circumstances and works backward, from guns to disease, in order to identify the principles at play in similar world events. |
| Proximate factors vs. ultimate causation | 78 | Diamond explains that Pizzaro’s success was based on military technology, infectious diseases, maritime technology, centralized political organization, and writing. However, these are all “proximate factors” (p. 78) or immediate factors that do not explore the “ultimate causation” (p. 78) or why all those “advantages came to lie more with Europe than with the New World” (p. 78). |
| Technology as a military advantage | 73 | Diamond writes that “Within half a dozen years of the rebellions against the initial conquest, Incas mounted two desperate, large-scale, well-prepared rebellions against the Spaniards. All those efforts failed |

| | | |
|---|----|---|
| | | because of the Spaniards' far superior armament" (p. 73). Technology like steel weapons and guns helped the Spanish conquer the Incas, but if the Incas had had better armament, or weapons, the Europeans may not have succeeded in defeating them. |
| Disease as genocide paving the way for colonization | 75 | Diamond writes that "Throughout the Americas, diseases introduced with Europeans spread from tribe to tribe far in advance of the Europeans themselves, killing an estimated 95 percent of the pre-Columbian Native American population" (p. 75). Disease served to pave the way for European colonization, insofar as it helped Europeans defeat pre-existing societies. |
| Literacy as military advantage | 77 | Diamond claims that "literacy made the Spaniards heirs to a huge body of knowledge about human behavior and history" (p. 77), which the Inca people did not have. This gave the Spanish a military advantage insofar as they could predict others' behavior more easily than the Incas. |

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12.3.1

Lesson 6

Introduction

In this lesson, students continue to read and analyze *Guns, Germs, and Steel*, pages 229–237 (from “On July 3, 1908, archaeologists excavating the ancient Minoan palace” to “yet another invention in search of a use?”). In this excerpt, Diamond challenges the ideas of “[n]ecessity is the mother of invention” (p. 232) and “heroic theory of invention” (p. 231). Instead, Diamond claims that innovation often precedes the necessity for an invention.

Students begin their exploration of argument by learning how to delineate the author’s supporting claims and evidence. Students complete a reading and discussion in small groups, analyzing how the author supports a claim in the focus excerpt. Students identify specific evidence and explain its relationship to the claim. Student learning is assessed via a Quick Write at the end of the lesson: Identify at least two pieces of evidence and explain how each piece supports one of the author’s claims.

For homework, students read and annotate pages 237–243 of *Guns, Germs, and Steel*, boxing any unfamiliar words and looking up their definitions. Additionally, students continue to surface possible research issues from the text and pose inquiry questions as they read and analyze the text.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| CCRA.R.8 | Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. |
| Addressed Standard(s) | |
| W.11-12.9.b | Draw evidence from literary or informational texts to support analysis, reflection, and research. b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i> , presidential addresses]”). |
| SL.11- | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in |

| | |
|-------------|---|
| 12.1.a | groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. |
| L.11–12.4.c | Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i> , choosing flexibly from a range of strategies. c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. |

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.</p> <ul style="list-style-type: none"> Identify at least two pieces of evidence and explain how each piece supports one of the author's claims. |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Identify one of the author's claims (e.g., necessity is not the mother of invention). Identify at least two pieces of evidence and explain how they support the claim (e.g., Diamond states, "When Edison built his first phonograph in 1877, he ... propose[d] ten uses" (p. 233) for it, including recording books for blind people, announcing clock time, and even teaching spelling. This evidence supports the claim that necessity is not the mother of invention because it shows that Edison created the phonograph before there was a need for it. The example of the phonograph also illustrates that society found new purposes for the phonograph once it was invented. Additionally, the evidence that Nikolaus Otto built a gas engine when "[t]here was no crisis in the availability of horses, no dissatisfaction with the railroads" (p. 233) also supports the claim. The example of Otto supports the idea that need is not what initially drives innovation, because the ultimate use of the engine caused more changes and refinements in the original prototype that made it more useful for emerging needs, such as transportation and mechanized labor.). |

Vocabulary

Vocabulary to provide directly (will not include extended instruction)

- unprepossessing (adj.) – not creating a favorable impression; unattractive
- syllabary (n.) – a set of written symbols, each of which represents a syllable, used to write a given language
- precocious (adj.) – unusually advanced or mature in development
- idiosyncratic (adj.) – displaying an individualizing characteristic or quality
- debasement (n.) – a reduction in quality or value
- prototype (n.) – the original or model on which something is based or formed
- incentive (n.) – something that incites or tends to incite to action or greater effort, as a reward offered for increased productivity
- denigrate (v.) – to treat or represent as lacking in value or importance; belittle; disparage
- precursors (n.) – people or things that precede, as in a job, a method, etc.; predecessors
- serendipitous (adj.) – good; beneficial; favorable
- distillation (n.) – a process of vaporization and subsequent condensation, as for purification or concentration

Vocabulary to teach (may include direct word work and/or questions)

- None.

Additional vocabulary to support English Language Learners (to provide directly)

- excavating (v.) – uncovering (something) by digging away and removing the earth that covers it
- chanced upon (v.) – found (something) by chance
- generalize (v.) – to make a general statement or form a general opinion
- laypeople (n.) – people who are not members of a particular profession
- phonograph (n.) – a record player; a device used for playing musical records
- concede (v.) – to admit that you have been defeated and stop trying to win
- lobbying (v.) – trying to influence government officials to make decisions for or against something
- tinkering (v.) – repairing or improving something (such as a machine) by making small changes or adjustments to it
- inaugurated (v.) – was the beginning of (something, such as a period of time)
- cumulatively (adv.) – including or adding together all the things that came before

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards & Text: <ul style="list-style-type: none"> Standards: CCRA.R.8, W.11-12.9.b, SL.11-12.1.a, L.11-12.4.c Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 229–237 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Introduction of Argument Terms Claims and Evidence Small Group Discussion Quick Write Closing | <ol style="list-style-type: none"> 5% 20% 15% 45% 10% 5% |

Materials

- Student copies of the Surfacing Issues Tool (refer to 12.3.1 Lesson 2) (optional)—students may need additional blank copies
- Copies of the Argument Visual Handout for each student (optional)
- Student copies of the Short Response Rubric and Checklist (refer to 12.3.1 Lesson 1) (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| 📘 | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: CCRA.R.8. In this lesson, students explore the nature of innovation throughout history. Students also identify claims and supporting evidence in the text.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

20%

Instruct students to take out their responses to the first part of the previous lesson's homework assignment. (Read and annotate pages 229–237 of *Guns, Germs, and Steel* (from “On July 3, 1908, archaeologists excavating the ancient Minoan palace” to “yet another invention in search of a use?”) (W.11-12.9.b).) Instruct students to form pairs to discuss their responses.

☞ Student annotation may include:

- Star next to “That makes it the leading cause of history’s broadest pattern” (p. 231), because this statement suggests that technology makes the biggest difference between wealthy and impoverished societies.
- Star next to the phrase “Quite a few inventions do conform” (p. 232), because this explanation describes why people tend to believe that innovation and inventions are driven by consumer needs.
- Question mark next to “The first cameras, typewriters, and television sets were as awful as Otto’s seven-foot-tall gas engine” (p. 233) – what made these prototypes so “awful”?
- Star next to “overstates the importance of rare geniuses” (p. 234), because the author explains why people, despite evidence to the contrary, persist in believing that only a few great people create the inventions that fulfill humanity’s needs.
- Exclamation point near “Who today remembers that gasoline ... originated as yet another invention in search of a use?” (p. 237). This information is surprising because gasoline has changed modern life in so many ways including making transportation easier and powering all kinds of modern machinery.

Instruct student pairs to share and discuss the vocabulary words they identified and defined in the previous lesson's homework (L.11-12.4.c).

- ☞ Students may identify the following words: *unprepossessing*, *syllabary*, *precocious*, *idiosyncratic*, *debasement*, *prototype*, *incentive*, *denigrate*, *precursors*, *serendipitous*, and *distillation*.

- ① **Differentiation Consideration:** Students may also identify the following words: *excavating, chanced upon, generalize, laypeople, phonograph, concede, lobbying, tinkering, inaugurated, and cumulatively*.
- ① Definitions are provided in the Vocabulary box in this lesson.
-

Instruct students to take out their responses to the second part of the previous lesson's homework assignment. (Continue to surface issues and generate inquiry questions as part of the research process. Come to the next lesson prepared to discuss 1–2 issues and 1–2 inquiry questions.) Instruct student pairs to discuss their surfaced issues and potential inquiry questions.

💬 Student responses may include:

- **Surfaced issues:** Eurocentrism; heroic theory of invention; necessity is the mother of invention; the nature of innovation; patent law.
- **Potential inquiry questions:** What is the impact of Eurocentric bias on global trade?; How does the heroic theory of invention affect entrepreneurship in the United States?; What inventions were created to fulfill a need?; How can a society stimulate innovation?; How do patent laws affect rates of innovation?

- ① See the [Model Surfacing Issues Tool](#) at the end of this lesson for more details regarding surfaced issues.
-

Instruct students to take out their responses to the third part of the previous lesson's homework assignment. (Respond briefly in writing to the following questions.) Instruct student pairs to share and discuss their responses to the questions posed in the previous lesson's homework.

How does Diamond's explanation of technology on page 231 relate to his research purpose as established in earlier excerpts?

💬 Student responses may include:

- Diamond claims that, "Technology, in the form of weapons and transport, provides the direct means by which certain peoples have expanded their realms and conquered other peoples" (p. 231). In the Prologue, Diamond explains that "some peoples developed guns, germs, steel, and other factors conferring political and economic power before others did" but these "factors" are only "proximate explanations" (p. 24). These proximate factors lead to questions of "ultimate causation" (p. 78) and do not fully explain how inequality came to be across various societies. Diamond's research purpose of finding out "ultimate

- explanations” (p. 24) is exemplified in his focus for this excerpt, “why technology did evolve at such different rates on different continents” (p. 232).
- Diamond asks, “Why were Eurasians, rather than Native Americans or sub-Saharan Africans, the ones to invent firearms, oceangoing ships, and steel equipment?” (p. 231). This question connects directly to Diamond’s original inquiry about inequality in the modern world: “Why did wealth and power become distributed as they now are, rather than in some other way?” (p. 15). Diamond’s research purpose is to discover the “ultimate explanations” (p. 24) for why societies differ in present-day technological advancement.

How does Diamond dismiss the claim “necessity is the mother of invention” (p. 232) and the “heroic theory of invention” (p. 231)?

🗣️ Student responses may include:

- Diamond dismisses the claim that “[n]ecessity is the mother of invention” (p. 232) and suggests that “[i]n fact, many or most inventions were developed by people driven by curiosity or by a love of tinkering in the absence of any initial demand for the product they had in mind” (p. 232). Diamond provides the example of Edison’s phonograph, which was invented for “ten uses” (p. 233), none of which was its ultimate purpose of playing records. Another example Diamond provides is Nikolaus Otto’s gas engine, which was invented during a time when there was “no crisis in the availability of horses, no dissatisfaction with railroads” (p. 233).
- Diamond dismisses the “heroic theory of invention” (p. 231) and instead claims that “there has never been any such person” (p. 235) as a genius inventor. He supports this claim by suggesting all “famous inventors had capable predecessors” (p. 235). He explores “precursors” (p. 234) to the famous invention of the steam engine and provides examples of lesser-known precursors to more famous inventions that catapulted their inventors to fame, including “Edison’s famous ‘invention’ of the incandescent light bulb” (p. 234); “the Wright brothers’ manned powered airplane” (p. 235); “Samuel Morse’s telegraph” (p. 235), which had three precursors; and “Eli Whitney’s ‘cotton gin’ (p. 232)”

Lead a brief whole-class discussion of student responses.

Activity 3: Introduction of Argument Terms

15%

Explain to students they read and discuss components of argument as part of their analysis of *Guns, Germs, and Steel* in 12.3.1. Post or project the following terms for students. Define the terms for students and explain how they relate to one another.

- ▶ Students follow along.

- ① **Argument:** The composition of precise claims about an issue, including relevant and sufficient evidence and valid reasoning. Explain to students that they do not address Diamond's argument because 12.3.1 includes only excerpts of Diamond's text, not the text in its entirety. However, students will develop a complete argument when they begin writing their own research-based arguments in 12.3.2.
- **Central Claim:** An author or speaker's main point about an issue in an *argument*.
"The factors that resulted in Pizarro's seizing Atahualpa were essentially the same ones that determined the outcome of many similar collisions between colonizers and native peoples" (p. 66) and thus provides "a broad window onto world history" (p. 66).
 - ① Explain to students that arguments like the one discussed in *Guns, Germs, and Steel* can include multiple central claims.
 - **Supporting Claim:** A smaller, related point that reinforces or advances the central claim. An example of a *supporting claim* from page 66 of *Guns, Germs, and Steel* is as follows:
"Atahualpa's capture was decisive for the European conquest of the Inca Empire."
 - **Evidence:** The topical and textual facts, events, and ideas from which the claims of an argument arise, and which are cited to support those claims. An example of *evidence* from page 66 of *Guns, Germs, and Steel* is as follows:
With Atahualpa out of the way, the Spaniards were able to "dispatch exploring parties" to other Inca villages and "send for reinforcements from Panama."
 - **Reasoning:** The logical relationships among ideas, including relationships among claims and relationships across evidence. An example of *reasoning* from page 66 of *Guns, Germs, and Steel* is as follows:
"Although the Spaniards' superior weapons would have assured an ultimate Spanish victory in any case, the capture made the conquest quicker and infinitely easier."

Explain to students that an *argument* includes all claims including the central claim(s) and supporting claims, as well as evidence and reasoning. Explain to students that *supporting claims* support the overarching central claim for a particular issue and that *evidence* and *reasoning* are used to support all claims.

- ① **Differentiation Consideration:** Consider distributing the Argument Visual Handout to aid student understanding in how the components of an *argument* are related. Explain to students that this handout shows the relationship among the components of an argument, and includes the terms and definitions used to describe its components.
- ① Students will be introduced to and work with counterclaims in 12.3.1 Lesson 13.

Explain to students that their work in this lesson focuses on identifying *supporting claims* and *evidence* that supports those claims. Explain to students that they now practice identifying another claim and supporting evidence from pp. 65–78.

Instruct students to form pairs and identify another supporting claim from pages 65–78.

🗨 Student responses may include:

- The story of Atahualpa’s capture is instructive in identifying the factors that determine victory in “collisions between colonizers and native peoples” (p. 66) throughout history.
- Imbalances in weaponry “were decisive in innumerable other confrontations of Europeans with Native Americans and other peoples” (p. 72).
- Disease played a “decisive” (p. 75) role in the conquest of the Inca Empire.

Instruct student pairs to identify evidence that supports one or more of the claims they identified.

🗨 Student responses may include:

- **Claim:** The story of Atahualpa’s capture is instructive for identifying the factors that determine victory in “collisions between colonizers and native peoples” (p. 66) throughout history.
Evidence: The use of horses at Cajamarca “exemplifies a military weapon that remained potent for 6,000 years, until the early 20th century, and that was eventually applied on all the continents” (p. 74).
- **Claim:** Imbalances in weaponry “were decisive in innumerable other confrontations of Europeans with Native Americans and other peoples” (p. 72).
Evidence: The Europeans defeated the Incas with “steel swords, lances, and daggers, strong, sharp weapons that slaughtered thinly armored Indians” (p. 73) as well as “steel or chain mail armor” and “above all ... steel helmets” (p. 74).
- **Claim:** Disease played a “decisive” (p. 75) role in the conquest of the Inca Empire.
Evidence: Smallpox, which had been introduced by the Europeans, was the “reason for the civil war” (p. 74) between Atahualpa and his half-brother, Huascar, “that left the Incas divided and vulnerable” (p. 74).

Lead a brief whole-class discussion about claims and evidence.

Explain to students that, in addition to determining the claims in an argument, another part of delineating an argument is evaluating the evidence used to support those claims. It is important that the evidence used is both *relevant*, which means “related to the issue in an appropriate way,” and *sufficient*, which means “adequate for the purpose, or enough.” *Relevant* evidence is connected to the claim and *sufficient* evidence thoroughly reinforces the claims in an argument (central and/or supporting claims).

One piece of powerful evidence may be sufficient to support a claim, or several pieces of evidence may be collectively sufficient to support a claim. For the purposes of this lesson, students focus on identifying claims and supporting evidence.

- ▶ Students listen.

Activity 4: Claims and Evidence Small Group Discussion

45%

Instruct students to form groups of 4–5 for this activity. Explain to students that they are to identify supporting claims and relevant evidence from pages 229–237 of *Guns, Germs, and Steel*. Next, they analyze the evidence Diamond uses to support his claims. Instruct students to identify a claim and evidence in the excerpt, cite the page number(s), and determine the relevance of the evidence by analyzing whether the evidence supports Diamond’s claim.

- ▶ Students form heterogeneous groups and identify claims and supporting evidence.
- ① Remind students to continue to surface issues from the text as they engage in this text analysis activity.
- ① **Differentiation Consideration:** If necessary, consider providing time for students to reread the lesson’s excerpt before engaging in this activity.
- ① **Differentiation Consideration:** Consider posting or projecting the following guiding question to support students in their analysis in this activity:

What claims does Diamond make in this excerpt about inventions?

- ① Students do not evaluate the extent to which Diamond’s evidence is relevant or sufficient or the validity of his reasoning in this lesson, as the focus of this activity is to support students’ understanding of the ways in which claims and evidence work together in an argument.

💬 Student responses may include:

- **Claim:** Necessity is not the mother of invention.
Evidence: Diamond provides specific examples of Thomas Edison’s phonograph and Nikolaus Otto’s gas engine. Diamond states, “When Edison built his first phonograph in 1877, he published an article proposing ten uses to which his invention might be put. They included preserving the last words of dying people, recording books for blind people to hear, announcing clock time, and teaching spelling” (p. 233). Nikolaus Otto built a gas engine when “[t]here was no crisis in the availability of horses, no dissatisfaction with the railroads” (p. 233).
How the evidence supports the claim: The examples of the phonograph and the gas engine illustrate high-profile inventions that were not created with specific needs in mind. Edison

created an invention that did not have an immediate need, and the purposes for which it was intended were not society's best use of the invention. The example of Otto illustrates another inventor who created a prototype to fulfill a need that was not yet identified, supporting the claim that necessity is not the mother of invention.

- **Claim:** Diamond claims that “technology develops cumulatively rather than in isolated heroic acts” (p. 235).

Evidence: Diamond provides evidence of the precursors of James Watt's steam engine, contradicting the “splendid fiction” (p. 234) of the story of Watt's inspiration. Similarly, “Edison's famous ‘invention’ of the incandescent light bulb” (p. 234) was a refinement of several other successful existing inventions that had already earned patents. Diamond then concludes, “[a]ll recognized famous inventors had capable predecessors and successors and made their improvements at a time when society was capable of using their product” (p. 235).

How the evidence supports the claim: James Watt happened to be working on Newcomen's functional steam engine when he had an idea for his own, based on the machine he was fixing. Edison, too, simply refined an idea that had functional precursors. Thus, the stories of Watt and Edison both provide examples to support the claim that technology develops cumulatively and is not dependent on isolated genius.

Inform students that explaining how evidence supports the claim is *reasoning*. Remind students that *reasoning* is the logical relationships among ideas, including relationships among claims and relationships across evidence.

► Students listen.

- ① Students will have more opportunities to work with the concept of *reasoning* in 12.3.1 Lessons 8, 11, and 12.
- ① Consider reminding students of their previous work with SL.11-12.1.a, since this discussion requires that students come to class having read the material and asks them to explicitly draw on evidence from the text to support their discussion.

Activity 5: Quick Write

10%

Instruct students to respond briefly in writing to the following prompt.

Identify at least two pieces of evidence and explain how each piece supports one of the author's claims.

Instruct students to look at their annotations to find evidence. Ask students to use this lesson's vocabulary wherever possible in their written responses.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from the text.

🗣 See the High Performance Response at the beginning of this lesson.

① Consider using the Short Response Rubric to assess students' writing. Students may use the Short Response Rubric and Checklist to guide their written responses.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to read and annotate pages 237–243 of *Guns, Germs, and Steel* (from “Once an inventor has discovered a use for a new technology” to “some proportion of societies is likely to be innovative”) (W.11-12.9.b). Direct students to box any unfamiliar words and look up their definitions. Instruct students to choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text (L.11-12.4.c).

Also, instruct students to continue to surface possible research issues and pose inquiry questions as they read and analyze the text.

- ▶ Students follow along.

Homework

Read and annotate pages 237–243 of *Guns, Germs, and Steel* (from “Once an inventor has discovered a use for a new technology” to “some proportion of societies is likely to be innovative”). Box any unfamiliar words and look up their definitions. Choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text.

Also, continue to surface possible research issues and pose inquiry questions as you read and analyze the text.

Model Surfacing Issues Tool

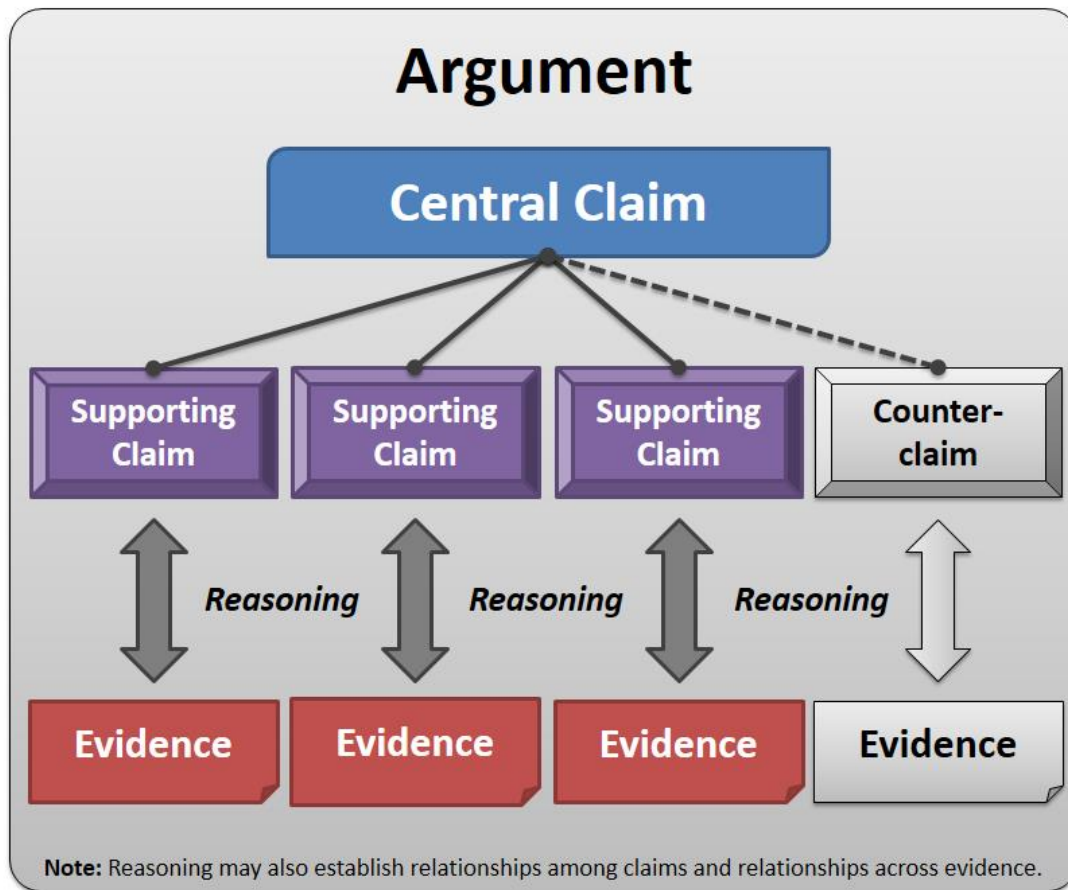
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| Name: | | Class: | | Date: | |
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Directions: As you read, look for issues that are suggested in the text. Remember that an issue is an important aspect of human society for which there are many different opinions about what to think or do. Summarize the issue succinctly, and note the page number and what the text says about the issue in the correct columns.

| Issue | Page(s) | Key information about the issue from the text |
|--------------------------------------|----------|--|
| Eurocentrism | 231 | Based on their adaptation of technology, many people “assume that Eurasians are superior to other peoples in inventiveness and intelligence” (p. 231). |
| Heroic theory of invention | 231, 234 | In this excerpt, Diamond suggests that the “heroic theory of invention” (p. 231), which states that a few geniuses are to be given credit for innovation, is flawed. |
| Necessity is the mother of invention | 232 | The Manhattan Project was specifically created during World War II “to build an atomic bomb before Nazi Germany could do so” (p. 232). |
| The nature of innovation | 232 | Diamond argues against the idea that “[n]ecessity is the mother of invention” and that inventions arise by “curiosity” and “tinkering” and find their usefulness later (p. 232). |
| Patent law | 233–234 | Diamond states that inventors in the US must determine a potential use for their technologies to earn a patent. This may discourage some |

| | | |
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| | | people from pursuing patents or discovering materials that do not fit an immediate need. |
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Argument Visual Handout



- **Argument:** The composition of precise claims about an issue, including relevant and sufficient evidence and valid reasoning
- **Central Claim:** An author or speaker's main point about an issue in an argument
- **Supporting Claim:** Smaller, related points that reinforce or advance the central claim
- **Counterclaim:** A claim that is opposed to an author's central claim
- **Evidence:** The topical and textual facts, events, and ideas from which the claims of an argument arise, and which are cited to support those claims
- **Reasoning:** The logical relationships among ideas, including relationships among claims and relationships across evidence

12.3.1

Lesson 7

Introduction

In this lesson, students read and analyze pages 237–243 of *Guns, Germs, and Steel* (from “Once an inventor has discovered a use for a new technology” to “some proportion of societies is likely to be innovative”), in which Diamond discusses many factors that inform the acceptance of a new technology into a particular society. Students analyze how ideas in this excerpt interact to develop the concept of receptivity to innovation within and across societies. Additionally, students continue to surface potential research issues and develop potential inquiry questions. Student learning is assessed via a Quick Write at the end of the lesson: How do ideas in this excerpt interact to develop the larger concept of society’s receptivity to innovation?

For homework, students read and annotate pages 243–249 of *Guns, Germs, and Steel*, boxing any unfamiliar words and looking up their definitions. Additionally, students continue the research process by surfacing issues and generating inquiry questions as they read and analyze the text.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| RI.11-12.3 | Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text. |
| Addressed Standard(s) | |
| W.11-12.9.b | <p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i>, presidential addresses]”).</p> |
| L.11-12.4.c | <p>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i>, choosing flexibly from a range of strategies.</p> <p>c. Consult general and specialized reference materials (e.g., dictionaries, glossaries,</p> |

| | |
|--|--|
| | thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. |
|--|--|

Assessment

Assessment(s)

Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.

- How do ideas in this excerpt interact to develop the larger concept of society's receptivity to innovation?

High Performance Response(s)

A High Performance Response should:

- Identify two or more ideas in this excerpt (e.g., the “laundry list ... of factors” (p. 239) affecting receptivity; innovative vs. conservative societies).
- Explain how the ideas interact to develop the larger concept of society's receptivity to innovation (e.g., in this excerpt, Diamond delves into the factors that affect innovation receptivity among societies. First, Diamond introduces a “laundry list ... proposed by historians of technology” (p. 239) of physical, societal, and ideological factors that affect a society's receptivity to innovation. Diamond then challenges the “laundry list” (p. 239) by explaining that it “does not exhaust the list of reasons proposed to explain why societies differ” (p. 240) and that “proximate explanations” (p. 240) cannot explain the ultimate causes of continental differences regarding receptivity to technology. Instead, Diamond presents an alternate conclusion: “over a large enough area ... at any particular time, some proportion of societies is likely to be innovative” (p. 243). By describing the diversity of New Guinean societies, such as the innovative “Chimbu tribe [who] proved especially aggressive in adopting Western technology” (p. 241) and comparing them with the Daribi, who are “especially conservative and uninterested in new technology” (pp. 241–242), Diamond proves that receptivity to innovation is “essentially a random variable” (p. 243).).

Vocabulary

Vocabulary to provide directly (will not include extended instruction)

- prestige (n.) – high status or reputation achieved through success, influence, wealth, etc.
- cachet (n.) – superior status; importance; respect
- vested interests (n.) – personal or private reasons for wanting something to be done or to happen

- perverse (adj.) – persistent or obstinate in what is wrong
- uniformly (adv.) – in an identical or consistent way
- ideological (adj.) – relating to the body of doctrine, myth, belief, etc., that guides an individual, social movement, institution, class, or large group
- heretics (n.) – people who do not conform to an established attitude, doctrine, or principle
- stifles (v.) – makes something difficult or impossible
- plausible (adj.) – having an appearance of truth or reason; seemingly worthy of approval or acceptance; credible; believable
- benign (adj.) – mild; gentle
- tacitly (adv.) – in a way that is understood without being openly expressed; in a way that is suggested
- speculation (n.) – ideas or guesses about something that is not known
- prevalent (adj.) – widespread; of wide extent or occurrence; in general use or acceptance
- myriad (adj.) – of an indefinitely great number; innumerable

Vocabulary to teach (may include direct word work and/or questions)

- None.

Additional vocabulary to support English Language Learners (to provide directly)

- cumbersome (adj.) – complicated and hard to do
- porters (n.) – people whose job is to move people around
- counterproductive (adj.) – not helpful; making the thing you want to happen less likely to happen
- entrenched (v.) – placed (someone or something) in a very strong position that cannot easily be changed
- laundry list (n.) – a long list of related things

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|---|-------------|
| Standards & Text: <ul style="list-style-type: none"> • Standards: RI.11-12.3, W.11-12.9.b, L.11-12.4.c • Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 237–243 Learning Sequence: | |

| | |
|----------------------------------|--------|
| 1. Introduction of Lesson Agenda | 1. 5% |
| 2. Homework Accountability | 2. 15% |
| 3. Reading and Discussion | 3. 60% |
| 4. Quick Write | 4. 15% |
| 5. Closing | 5. 5% |

Materials

- Student copies of the Surfacing Issues Tool (refer to 12.3.1 Lesson 2) (optional)—students may need additional blank copies
- Student copies of the Short Response Rubric and Checklist (refer to 12.3.1 Lesson 1) (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: RI.11-12.3. In this lesson, students analyze how the ideas in this excerpt develop the concept of society's receptivity to innovation. Additionally, students continue to surface issues from the text and pose inquiry questions as part of the research process.

- Students look at the agenda.

Activity 2: Homework Accountability

15%

Instruct students to take out their responses to the first part of the previous lesson's homework assignment. (Read and annotate pages 237–243 of *Guns, Germs, and Steel*.) Instruct students to form pairs to discuss their responses.

🗨 Student annotation may include:

- Exclamation point by the phrase “Throughout history, war has often been a leading stimulant of technological innovation” (p. 240), because it is surprising that innovation can be stimulated by devastation.
- Numbers next to “relative economic advantage compared with existing technology” (p. 237); “social value and prestige” (p. 237); “compatibility with vested interests” (p. 237); and “the ease with which their advantages can be observed” (p. 238). These numbers are the factors that influence the acceptance of a specific technology within a society.
- Star next to “Thus it is untrue that there are continents whose societies have tended to be innovative and continents whose societies have tended to be conservative” (p. 243). This claim supports Diamond’s ideas that “at any particular time, some proportion of societies is likely to be innovative” (p. 243).

Instruct student pairs to share and discuss the vocabulary words they identified and defined in the previous lesson's homework (L.11-12.4.c).

🗨 Students may identify the following words: *prestige*, *cachet*, *vested interests*, *perverse*, *uniformly*, *ideological*, *heretics*, *stifles*, *plausible*, *benign*, *tacitly*, *speculation*, *prevalent*, and *myriad*.

① **Differentiation Consideration:** Students may also identify the following words: *cumbersome*, *porters*, *counterproductive*, *entrenched*, and *laundry list*.

① Definitions are provided in the Vocabulary box in this lesson.

Instruct students to take out their responses to the second part of the previous lesson's homework assignment. (Continue to surface possible research issues and pose inquiry questions as you read and analyze the text.) Instruct student pairs to share and discuss surfaced issues and potential inquiry questions.

🗨 Student responses may include:

- **Surfaced issues:** Prestige of designer products; government regulation of new technologies; cheap slave labor or low-wage labor; immigration regulation and its effects on innovation; patent law; capitalism; entrepreneurial, risk-taking behavior; religion; war; strong, centralized government; scarcity of environmental resources; conservative outlook to innovation.
- **Potential inquiry questions:** How does government regulation of an industry impact the financial success of businesses in the industry?; To what degree should a business rely on low-wage labor to increase profit?; How does regulation of immigrant workers impact the agricultural economy?; How do patent laws encourage innovation?; What political structure is the best for stimulating economic growth?; How does a society encourage entrepreneurial, risk-taking behaviors safely?; How do religious views impact economic decisions?; How does war stimulate innovation?; What size government is best for a healthy economy?; What responsibility does the government have to replenish or regulate scarce environmental resources?; When is a conservative outlook to innovation a benefit?

① See the [Model Surfacing Issues Tool](#) at the end of this lesson for more details regarding surfaced issues.

Activity 3: Reading and Discussion

60%

Instruct students to form pairs. Post or project each set of questions below for students to discuss. Instruct students to continue to annotate the text as they read and discuss (W.11-12.9.b).

Remind students to continue the research process by surfacing issues and identifying potential inquiry questions as they read and analyze the text.

- ① **Differentiation Consideration:** For additional support, consider providing students with copies of the Surfacing Issues Tool.
- ① If necessary to support comprehension and fluency, consider using a masterful reading of the focus excerpt for the lesson.
- ① **Differentiation Consideration:** Consider posting or projecting the following guiding question to support students in their reading throughout this lesson:

For what reasons do different societies adopt technology?

Instruct student pairs to read pages 237–241 (from “Once an inventor has discovered a use for a new technology” to “makes it easier, not harder, to understand history’s broad pattern”) and answer the following questions before sharing out with the class.

How does Diamond extend his claim that “invention is often the mother of necessity” (p. 232) in pages 237–238?

🗨 Student responses should include:

- Diamond extends his claim by stating that “[o]nce an inventor has discovered a use for a new technology, the next step is to persuade society to adopt it” (p. 237). Thus, the “mother” (p. 232) is the invention, and to get society to “accept[]” (p. 237) it, society must find a need for it.
- Diamond also explains that “a bigger, faster, more powerful device for doing something is no guarantee of ready acceptance” (p. 237). Instead, specific social factors, not including necessity, influence the acceptance of a new technology: “relative economic advantage” (p. 237); “social value and prestige” (p. 237); “compatibility with vested interests” (p. 237); and “the ease with which ... advantages can be observed” (p. 238). These social factors have greater impact on acceptance than necessity, as demonstrated by “the world’s continued rejection of an efficiently designed typewriter keyboard” or “Britain’s long reluctance to adopt electric lighting” (p. 237).

How does Diamond differentiate between the “four factors” (p. 237) of acceptance and the “laundry list” (p. 239) of factors?

🗨 The “four factors” describe factors influencing receptivity or acceptance of a technology “within the same society” (p. 237). The “laundry list” describes factors influencing receptivity “among societies” (p. 239).

How does Diamond counter the “laundry list” (p. 239) of factors that explain differences in receptivity among societies?

🗨 Student responses may include:

- Diamond points out that, of the 10 hypothetical physical, societal, and ideological factors, “none ... has any necessary association with geography” (p. 240). Therefore, the factors do not explain why “postmedieval Europe” was receptive to technology, but “India or China” was not (p. 240).
- Diamond states that the list of “14 explanatory factors” (p. 239) does not “exhaust the list of reasons proposed to explain why societies differ in their receptivity to new technology” (p. 240), indicating that the list of factors is not complete.
- Diamond states that “all of these proximate explanations bypass the question of the ultimate factors behind them” (p. 240), meaning that the factors in the list do not answer the ultimate question of why there are differences in technology and innovation “among societies” (p. 239).

Lead a brief whole-class discussion of student responses.

Instruct student pairs to read pages 241–243 (from “For the purposes of this book, the key question” to “some proportion of societies is likely to be innovative”) and answer the following questions before sharing out with the class.

How does Diamond challenge the answer to “the key question” (p. 241) about the “laundry list” (p. 239)?

- 💬 Diamond states that “[m]ost laypeople and many historians assume” that the factors on the “laundry list” (p. 239) lead directly to “continental differences in technological development” (p. 241). Diamond, however, states that “such claims are based on pure speculation” (p. 241). He states that there has never been a study to compare “systematic ideological differences” (p. 241) between societies that resulted in technological differences.

How does Diamond’s discussion about “the key question” relate to his explanation of “circular” reasoning (p. 241)?

- 💬 Diamond explains that “the usual reasoning” about society’s receptivity to innovation is “circular” because historians have “inferred” that “technological differences” between groups exist due to “ideological differences” (p. 241). However, the only basis for that inference is that technological differences exist in the first place; there is no concrete evidence that supports the existence of ideological differences.

① Consider explaining to students the concept of *circular reasoning*: where the evidence given to support a claim is a version of the claim itself.

How does Diamond develop his claims concerning innovative versus conservative societies on pages 241–243?

- 💬 Student responses may include:
 - Diamond describes two tribes living near one another in Papua New Guinea: the Chimbus and the Daribi. The innovative Chimbus “proved especially aggressive in adopting Western technology” (p. 241) while the Daribi remained “especially conservative and uninterested in new technology” (p. 241–242). This comparison develops Diamond’s claim that “from society to society” or geographic region “on the same continent” (p. 242), two societies can have varying outlooks regarding new technology.
 - Diamond illustrates how receptivity can “vary over time within the same society” through examples of the “conservative” modern Islamic societies that in the past were

“technologically advanced and open to innovation” (p. 242). China was also “more innovative and advanced” (p. 242) in the past and “technology was less advanced in Europe” (p. 243).

- Diamond states that “we think of western Europe and its derived North American societies as leading the modern world in technological innovation” (p. 243). However, Western Europe, a prime example of a “civilized” (p. 243) society, had less technological innovation than China or the Middle East “until the late Middle Ages” (p. 243). Thus, Diamond reinforces his claim that “receptivity to innovation fluctuates in time within the same region” (p. 243).

How do Diamond’s observations and descriptions of native societies on pages 241–243 support his conclusions about receptivity?

💬 Student responses may include:

- Diamond observes that “native societies” can “differ greatly” (p. 241) from one another in their level of receptivity, just as industrialized societies do. By using the example of the Papua New Guinean Chimbu tribe who “proved especially aggressive in adopting Western technology” (p. 241), and the Daribi tribe who were “especially conservative and uninterested in new technology” (pp. 241–242), Diamond demonstrates that the lifestyle of a given society (industrialized or stone age) does not determine its receptivity to new technology.
- Diamond observes that native societies are just as receptive to adopting new technology when it suits them or when it will improve their way of life. His observation of the Chimbos, who “saw white settlers planting coffee, [and] they began growing coffee themselves as a cash crop” (p. 241), and turning over the profits to purchase a modern sawmill, supports the idea that biology or being a similar native group is not a factor preventing certain societies from adopting new technologies.
- The example of Aboriginal Australians with different levels of receptivity to technology supports the idea that “over a large enough area ... at any particular time, some proportion of societies is likely to be innovative” (p. 243). While “Tasmanians continued to use stone tools” (p. 242) despite access to technology across the continent, others in mainland Australia adopted new technologies. For example, fishing tribes in southeastern Australia “devised elaborate technologies for managing fish populations” (p. 242) because it was advantageous to do so.

What leads Diamond to conclude that “at any particular time, some proportion of societies is likely to be innovative” (p. 243)?

💬 Student responses may include:

- Diamond explains that the list of factors affecting receptivity do not “differ[] systematically from continent to continent” (p. 241), but “the development and reception of inventions vary enormously from society to society on the same continent” (p. 242). These conclusions are exactly what “one would expect if society’s innovativeness is determined by many independent factors” (p. 243), and lead to the idea that the innovativeness of a society cannot be predicted by specific factors.
- Diamond suggests that all of the factors are in play in determining whether a society is receptive to innovation, and that “[w]ithout a detailed knowledge of all of those factors, innovativeness becomes unpredictable” (p. 243). Therefore, innovativeness is “essentially a random variable” (p. 243).
- The “laundry list” (p. 239) fails to provide “ultimate factors” (p. 240) to explain why societies differ in technological innovation. Diamond’s observations of societies, such as the Chimbus and Daribi, that live in close proximity and “differ greatly ... in their prevalent outlooks” (p. 241) supports the idea that receptivity to innovation varies over time among and within societies.

Lead a brief whole-class discussion of student responses.

Activity 4: Quick Write

15%

Instruct students to respond briefly in writing to the following prompt:

How do ideas in this excerpt interact to develop the larger concept of society’s receptivity to innovation?

Instruct students to look at their annotations to find evidence. Ask students to use this lesson’s vocabulary wherever possible in their written responses.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from the text.

🗣️ See the High Performance Response at the beginning of this lesson.

① Consider using the Short Response Rubric to assess students’ writing. Students may use the Short Response Rubric and Checklist to guide their written responses.

Activity 5: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to read and annotate pages 243–249 in *Guns, Germs, and Steel* (from “Where do innovations actually come from? For all societies” to “induced numerous investors to lend money to Gutenberg”) (W.11-12.9.b). Direct students to box any unfamiliar words and look up their definitions. Instruct students to choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text (L.11-12.4.c). Additionally, instruct students to continue the research process by surfacing issues and generating inquiry questions as they read and analyze the text.

- ▶ Students follow along.

Homework

Read and annotate pages 243–249 in *Guns, Germs, and Steel* (from “Where do innovations actually come from? For all societies” to “induced numerous investors to lend money to Gutenberg”). Box any unfamiliar words and look up their definitions. Choose the definition that makes the most sense in context, and write a brief definition above or near the word in the text.

Also, continue the research process by surfacing issues and posing inquiry questions as you read and analyze the text.

Model Surfacing Issues Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: As you read, look for issues that are suggested in the text. Remember that an issue is an important aspect of human society for which there are many different opinions about what to think or do. Summarize the issue succinctly, and note the page number and what the text says about the issue in the correct columns.

| Issue | Page(s) | Key information about the issue from the text |
|--|---------|---|
| Prestige of designer products | 237 | Diamond states that “social value and prestige” (p. 237) play a role in whether a society adopts a technology, and he provides the example of designer products. |
| Government regulation of new technologies | 238 | British cities still used gas lighting because “regulatory obstacles” (p. 238) prevented electricity companies from establishing electric light systems even though electricity was available. |
| Cheap slave labor or low-wage labor | 239 | Although “cheap slave labor” (p. 239) is a factor in increased receptivity to technology, it is not acceptable by modern day standards. However, low-wage work still exists. |
| Immigration regulation and its effects on innovation | 239 | Diamond states that “the prospect of changed immigration policies that would cut off the supply of cheap Mexican seasonal labor” (p. 239) was a factor in the development of technology to harvest tomatoes by machines. These policies stimulated innovation that was previously unnecessary |

| | | |
|---------------------------------------|-----|--|
| | | because of immigrant labor. |
| Patent law | 239 | Diamond states that patents help “protect[] ownership rights of inventors, reward[ing] innovation in the modern West” (p. 239). |
| Capitalism | 239 | Diamond states that modern-day capitalism is “organized in a way that [makes] it potentially rewarding to invest capital in technological development” (p. 239). |
| Entrepreneurial, risk-taking behavior | 239 | Risk taking behavior is “essential for efforts at innovation” (p. 239) but it can lead to dangerous or even illegal actions. |
| Religion | 240 | Religion can play various roles in innovation by either being “compatible” (p. 240) or incompatible with it. |
| War | 240 | “Throughout history, war has often been a leading stimulant of technological innovation” (p. 240). War leads to the innovation of weapons, strategies, and modes of transport. |
| Strong, centralized government | 240 | A strong, centralized government helped to boost technology development in Germany and Japan, but “crushed it in China after A.D. 1500” (p. 240). |
| Scarcity of environmental resources | 240 | The scarcity of environmental resources can drive a society to innovate to work around the scarcity or to replenish the scarce resource. |

| | | |
|------------------------------------|-----|---|
| Conservative outlook to innovation | 241 | Diamond indicates that many laypeople assume that in those societies with low receptivity to innovation, the society is “conservative, living in an imagined past Dreamtime of the world’s creation and not focused on practical ways to improve the present” (p. 241). |
|------------------------------------|-----|---|

12.3.1

Lesson 8

Introduction

In this lesson, students read and analyze pages 243–249 of *Guns, Germs, and Steel* (from “Where do innovations actually come from? For all societies” to “induced numerous investors to lend money to Gutenberg”). In this excerpt, the author explores the roles of different factors in the diffusion of technology.

Students continue to explore elements of argument by identifying Diamond’s claims in this lesson’s excerpt and discussing how he uses evidence and reasoning to support his claims. Students read and discuss in small groups, tracking evidence and reasoning and discussing how both support the claim. Student learning is assessed via a Quick Write at the end of the lesson: Identify one of Diamond’s claims and analyze how he uses evidence and reasoning to support the claim.

For homework, students select a previously analyzed excerpt, identify at least two of Diamond’s claims, and analyze how he uses evidence and reasoning to support these claims.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| CCRA.R.8 | Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. |
| Addressed Standard(s) | |
| W.11-12.9.b | <p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., "Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i>, presidential addresses]").</p> |

| | |
|---------------|--|
| SL.11-12.1.a | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others’ ideas and expressing their own clearly and persuasively. a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. |
| L.11-12.4.a,c | Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i> , choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word’s position or function in a sentence) as a clue to the meaning of a word or phrase. c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. |

Assessment

Assessment(s)

Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.

- Identify one of Diamond’s claims and analyze how he uses evidence and reasoning to support the claim.

High Performance Response(s)

A High Performance Response should:

- Identify a claim (e.g., “The importance of an invention’s diffusion potentially exceeds the importance of the original invention” (p. 247) because technological innovation “catalyzes” (p. 247) itself).
- Analyze how the author uses evidence and reasoning to support the claim (e.g., Diamond cites as evidence the “thousands of years of human experience” working with softer metals and “thousands of years of development of simple furnaces” that were necessary to make iron a “common” material (p. 248). Diamond reasons that “advances depend upon previous mastery of simpler problems” (p. 248), explaining that it is difficult to invent a new technology when people have not yet learned certain skills or solved “simpler problems.” Also, in his description of the Gutenberg press, Diamond provides the evidence that the machine was a “recombination” of “six technological advances ... in paper, moveable type, metallurgy, presses, inks, and scripts” (p. 248),

all of which ensured the success of Gutenberg’s printing press. However, he reasons that Crete’s Phaistos disk did not endure, which was based on a similar technology, because the advances to make this technology easy to use were not yet available. Diamond also reasons that new technologies and materials make it possible to discover or create more new technologies “by recombination” (p. 248) of existing technologies into something new.).

Vocabulary

Vocabulary to provide directly (will not include extended instruction)

- rotary quern (n.) – a primitive, hand-operated mill for grinding grain
- camera obscura (n.) – a darkened box-like device in which images of external objects, received through a small hole, are exhibited in their natural colors on a surface arranged to receive them; used for sketching, exhibition purposes, etc.
- vis-à-vis (adv.) – in relation to; compared with
- convulsed (v.) – disrupted the normal running of (a country, etc.)
- catalyze (v.) – to cause or accelerate a (chemical) change by the addition of a catalyst (something that causes a change)
- truncated (v.) – shortened by or as if having a part cut off; cut short

Vocabulary to teach (may include direct word work and/or questions)

- diffuse (v.) – to spread or cause to spread in all directions

Additional vocabulary to support English Language Learners (to provide directly)

- espionage (n.) – the things that are done to find out secrets from enemies or competitors; the activity of spying
- millennia (n.) – periods of 1,000 years

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|---|-------------|
| Standards & Text: <ul style="list-style-type: none"> • Standards: CCRA.R.8, W.11-12.9.b, SL.11-12.1.a, L.11-12.4.a,c • Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 243–249 | |

| Learning Sequence: | |
|--------------------------------------|--------|
| 1. Introduction of Lesson Agenda | 1. 5% |
| 2. Homework Accountability | 2. 15% |
| 3. Reading and Discussion | 3. 30% |
| 4. Reasoning and Evidence Discussion | 4. 30% |
| 5. Quick Write | 5. 15% |
| 6. Closing | 6. 5% |

Materials

- Student copies of the Surfacing Issues Tool (refer to 12.3.1 Lesson 2) (optional)—students may need additional blank copies
- Student copies of the Short Response Rubric and Checklist (refer 12.3.1 Lesson 1) (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|--|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| 📌 | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: CCRA.R.8. In this lesson, students engage in an evidence-based discussion to identify the author's claims, supporting evidence, and reasoning regarding the different factors at play in the diffusion of technology.

- Students look at the agenda.

Activity 2: Homework Accountability

15%

Instruct students to take out their responses to the first part of the previous lesson's homework assignment. (Read and annotate pages 243–249 of *Guns, Germs, and Steel*.) Instruct students to form pairs to discuss their responses.

🗨 Student annotation may include:

- Star next to “The relative importance of local invention and of borrowing depends mainly on two factors: the ease of invention ... and the proximity of the particular society to other societies” (p. 243), because this appears to be a central point in this excerpt.
- Star next to “The importance of diffusion ... is strikingly illustrated by some otherwise incomprehensible cases of societies that abandoned powerful technologies” (p. 246), because this describes a historical pattern that contradicts an established pattern.
- Exclamation point near the story of the samurai on pages 246–247, because this explains why swords were preferred over guns in Japan.
- Star next to the phrase “[t]hese examples, at first so bizarre to us, illustrate well the roles of geography and of diffusion in the history of technology” (p. 247), because Diamond suggests that these are the most important historical factors in the adoption of new technologies across cultures.

Instruct student pairs to share and discuss the vocabulary words they identified and defined in the previous lesson's homework (L.11-12.4.c).

🗨 Students may identify the following words: *rotary quern*, *camera obscura*, *vis-à-vis*, *convulsed*, *catalyze*, and *truncated*.

① **Differentiation Consideration:** Students may also identify the following words: *espionage* and *millennia*.

① Definitions are provided in the Vocabulary box in this lesson.

Instruct students to take out their responses to the second part of the previous lesson's homework. (Continue the research process by surfacing issues and posing inquiry questions as you read and analyze the text.) Instruct students to share their responses.

🗨 Student responses may include:

- **Surfaced issues:** diffusion, peaceful trade, espionage, blueprint copying of technology, geographic isolation, fads, government or ruling-class regulations, technological reversals, technology begets technology
- **Potential inquiry questions:** What is the relationship between diffusion and economic growth? How can peaceful trade develop interdependence between societies? How should a society deal with spies who steal inventions or intellectual ideas? How does geographic isolation affect a society's economy? What fads are beneficial for a society? How do governmental regulations help or harm societies? What factors affect a society's decision to abandon a technology?

① See the [Model Surfacing Issues Tool](#) at the end of the lesson for more detail regarding surfaced issues.

Activity 3: Reading and Discussion

30%

Instruct students to form small groups. Post or project each set of questions below for students to discuss. Instruct students to continue to annotate the text as they read and discuss ([W.11-12.9.b](#)).

- ① If necessary to support comprehension and fluency, consider using a masterful reading of the focus excerpt for the lesson.
- ① **Differentiation Consideration:** Consider posting or projecting the following guiding question to support students in their reading throughout this lesson:

Where does innovation come from?

Remind students to continue to surface issues and pose inquiry questions as they analyze the text during this activity.

- ① **Differentiation Consideration:** For additional support, consider providing students with copies of the [Surfacing Issues Tool](#).

Instruct student groups to read pages 243–249 (from “Where do innovations actually come from?” to “induced numerous investors to lend money to Gutenberg”) and answer the following questions before sharing out with the class.

Why did the wheel “diffuse rapidly ... over the Old World” (p. 244)? What might *diffuse* mean in this context? ([L.11-12.4.a](#))

- ☞ Because the wheel had high “utility” (p. 244) or functionality, it diffused, or spread, very quickly to other places. *Diffuse* might mean “to spread or move in all directions.”

① Consider providing students with the definition of *diffuse*.

- ▶ Students write the definition of *diffuse* on their copies of the text or in a vocabulary journal.

What factors promote potential diffusion of new technologies across societies?

☛ Student responses may include:

- Trade and travel can promote the diffusion of new technology because societies may “see or learn of the invention and adopt it” (p. 244), as in the case of “transistors from the United States to Japan in 1954” (p. 245).
- War or conflict can promote technology diffusion because societies “find themselves at a disadvantage vis-à-vis the inventing society” (p. 244), as in the case of muskets among New Zealand’s Maori tribe. Diamond describes how, during the Musket Wars, those Maori tribes who did not adopt muskets were “subjugated by tribes already armed with them” (p. 245); thus, the “musket technology” (p. 245) spread for survival purposes.
- Societies “embedded in the major continents” (p. 246) with shared boundaries or common trade routes diffuse technology more easily, as in the example of centrally located medieval Islam, which “acquired inventions from India and China and inherited ancient Greek learning” (p. 246).

What factors counteract potential diffusion of new technologies?

☛ Student responses may include:

- Geographical isolation counteracts potential diffusion. For example, the “Tasmanians had no contact with other societies for 10,000 years and acquired no new technology other than what they invented themselves” (p. 246).
- Fads counteract potential diffusion, as in the example of the Japanese samurai suppressing the adoption of guns. The “samurai-controlled government began by restricting gun production” and then added subsequent restrictions until “Japan was almost without functional guns” (p. 247). Additionally, fads can persist when the culture is isolated. One example is that of “Aboriginal Tasmanians, who abandoned even bone tools and fishing to become the society with the simplest technology in the modern world” (p. 247). If Tasmania were not geographically isolated, this fad may not have persisted.

How does the statement “technology begets more technology” relate to the “autocatalytic process” (p. 247)?

- ☛ Diamond suggests that the “autocatalytic” nature of invention is one that “speeds up at a rate that increases with time, because the process catalyzes itself” (p. 247). Therefore, “technology

begets more technology” because as simpler technologies are invented they pave the way for new and more complex technologies to be invented (p. 247).

What does the story of the Phaistos disk suggest about technological diffusion?

💬 Student responses should include:

- The Phaistos disk was ahead of its time. There were “simpler problems” (p. 248) or technological advances that had not yet been developed, such as advances in metallurgy, that prevented the technology of the disk from being widely diffused. This example suggests that technological diffusion is dependent on timing: when other “simpler problems” (p. 248) are not yet solved, a complex technology will not diffuse easily to other cultures.
- The story of the Phaistos disk suggests that materials and technologies such as “paper, movable type, metallurgy, presses, inks, and scripts” (p. 248) support the adoption of newer technologies. However, when materials are not readily available, technology cannot be combined or created and thus cannot diffuse.

What is Diamond’s answer to the question he poses on page 243: “Where do innovations actually come from?”

💬 Diamond asserts that “technology begets more technology” (p. 247), suggesting that innovations lead to more innovations through the “diffusion” (p. 245) of each new technology. In this way, innovation is an “autocatalytic process” (p. 247) or a process that accelerates itself, as new technologies are diffused and used in the creation of other more complex technologies through “recombination” (p. 248).

Lead a brief whole-class discussion of student responses.

Activity 4: Reasoning and Evidence Discussion

30%

In this activity, students work in their small groups from the previous activity to identify claims, as well as reasoning and evidence that support each claim. Instruct student groups to reread pages 243–249 and identify 2–3 claims.

- ① Students were introduced to *claims*, *evidence*, and *reasoning* in 12.3.1 Lesson 6.
- ① Remind students that because they are reading only excerpts from *Guns, Germs, and Steel*, they are not able to identify the author’s central claim. Instead, students focus on identifying multiple claims within the focus excerpts.
- ① **Differentiation Consideration:** If necessary, remind students of the following definitions:

- **Argument:** The composition of precise claims about an issue, including relevant and sufficient evidence, and valid reasoning
- **Central claim:** An author or speaker’s main point about an issue in an argument
- **Supporting claim:** A smaller, related point that reinforces or advances the central claim
- **Evidence:** The topical and textual facts, events, and ideas from which the claims of an argument arise, and which are cited to support those claims
- **Reasoning:** The logical relationships among ideas, including relationships among claims and relationships across evidence

🗨 Student responses may include:

- “The importance of an invention’s diffusion potentially exceeds the importance of the original invention” (p. 247) because technological innovation “catalyzes” (p. 247) itself.
- Societies “borrow[]” (p. 243), or adopt, inventions from other inventing societies because the original society lacking the invention can “find themselves at a disadvantage vis-à-vis the inventing society” (p. 244).
- “Cultural diffusion can involve either detailed ‘blueprints’ or just vague ideas stimulating a reinvention of details.” (p. 245)
- Items created directly from a “handling of natural raw materials ... developed at many different occasions in world history, at many places and times” (p. 243).
- The Old World wheel design did not emerge “repeatedly by chance” (p. 244) at many different sites in the Old World.
- Complex inventions are more likely to be “borrowed” (p. 243) than invented locally “because they spread more rapidly than they could be independently invented” (p. 244).
- Societies are susceptible to “fads, in which economically useless things become valued or useful things devalued temporarily” (p. 246).
- Diamond claims that “[w]ithout diffusion, fewer technologies are acquired and more existing technologies are lost” (p. 247).

Lead a brief whole-class discussion of student responses.

Remind students that the concepts of *reasoning* and *evidence* are closely related; *reasoning* connects the *evidence* to the *claim*.

- ▶ Students listen.

Display the following examples from pages 247–248 to illustrate the relationship between claims, reasoning, and evidence:

- **Claim:** Complex inventions are more likely to be borrowed than invented locally “because they spread more rapidly than they could be independently invented” (p. 244).
- **Evidence:** Diamond provides the example of a complex invention, the Old World wheel (“a solid wooden circle constructed of three planks fastened together” (p. 244)), explaining how it spread to “much of Europe and Asia” (p. 244) over the next few centuries after it was originally invented.
- **Reasoning:** Diamond reasons that “[n]o one thinks that the same peculiar Old World design [of wheels] appeared repeatedly by chance at many separate sites of the Old World within a few centuries of each other, after 7 million years of wheelless human history” (p. 244), suggesting that the wheel and other high-utility inventions spread instead by rapid diffusion.

Ask students the following questions:

How does the evidence support Diamond’s claim?

- The evidence includes a specific historical example of a complex invention, the “Old World wheels” (p. 244) that “diffused” more rapidly than it could be invented. This evidence supports the claim because it shows an example of a technology that was more likely to be borrowed than invented.

How does the reasoning connect the evidence to the claim?

- Diamond connects the evidence of the wheel to the claim by describing the pattern and speed of its diffusion. He reasons that because of the similar design of the wheel found in different places, the wheel must have diffused rather than been invented locally. He further reasons that the complexity of the design drove the diffusion; a simpler design would have been easier for societies to develop on their own.

Lead a brief whole class discussion of student responses.

Instruct student groups to select 2–3 claims surfaced in the previous discussion. Instruct students to find the claims in the text and annotate the text for evidence and reasoning that supports the selected claims. Explain to students that for each selected claim they should discuss one example of evidence and one example of reasoning, and explain how both support the selected claim.

- ▶ Student groups select claims from the previous discussion and annotate the text for the corresponding reasoning and evidence that supports the selected claim.

① The identified claims can be found on pages 243–249 of *Guns, Germs, and Steel*.

- ① Consider reminding students of their previous work with SL.11-12.1.a, as this discussion requires that students come to class prepared and explicitly draw on evidence from the text to support their discussion.

💬 Student responses may include:

- **Claim:** Societies borrow inventions from other “inventing societies” (p. 244) because the original society lacking the invention can “find themselves at a disadvantage vis-à-vis the inventing society” (p. 244).
Evidence: Diamond uses the example of “the spread of muskets among New Zealand’s Maori tribes” (pp. 244–245). New Zealand was “convulsed” (p. 245) by the Musket Wars, in which musket-less tribes had to adopt muskets or be “subjugated” (p. 245) by tribes that had already adopted muskets. Diamond states that the “outcome was that musket technology had spread throughout the whole of New Zealand by 1833” (p. 245). Tribes either had to adopt the technology or be defeated.
Reasoning: “[S]ocieties lacking the invention find themselves at a disadvantage vis-à-vis the inventing society, and they become overwhelmed and replaced if the disadvantage is sufficiently great.” (p. 244)
- **Claim:** “Cultural diffusion can involve either detailed ‘blueprints’ or just vague ideas stimulating a reinvention of details.” (p. 245)
Evidence: Diamond provides examples of blueprint technology diffusion, including “emigration (the spread of French glass and clothing manufacturing techniques over Europe by the 200,000 Hugenots expelled from France in 1685)” and “the transfer of Chinese papermaking techniques to Islam” (p. 245). Diamond also provides an example of “vague ideas” (p. 245) in Chinese porcelain technology. Diamond states that “many unsuccessful attempts were made to imitate it” but only after “lengthy experiments with processes and with mixing various minerals and clays together” (p. 245) was Johann Böttger able to replicate porcelain.
Reasoning: Diamond includes these examples to illustrate blueprint technology diffusion: through the examples of French glass and Chinese papermaking, the techniques, not the products, were diffused. Regarding the “vague ideas” that stimulated reinvention, he states, “European potters had to reinvent Chinese manufacturing methods for themselves, but they were stimulated to do so by having models of the desired product before them” (p. 245).
- **Claim:** Diamond claims that “technologies must not only be acquired, but also maintained” (p. 246) or reacquired by diffusion.
Evidence: To support this claim, Diamond provides specific examples of fads that did not allow technology to be maintained, but due to geographic isolation, led to technology reversal. One example is in Japan, where the samurai-controlled government introduced restrictions until “Japan was almost without functional guns again” (p. 247). China also

abandoned “oceangoing ships (as well as ... mechanical clocks and water-driven spinning machines)” (p. 247). Diamond provides other examples of Aboriginal societies that lost the technologies of “bone tools and fishing” and “bows and arrows” (p. 247) due to isolation.

Reasoning: Diamond reasons that “[a] society that temporarily turned against a powerful technology would continue to see it being used by neighboring societies and would ... reacquire it by diffusion ... [b]ut such fads can persist in isolated societies” (p. 246).

Activity 5: Quick Write

15%

Instruct students to respond briefly in writing to the following prompt:

Identify one of Diamond’s claims and analyze how he uses evidence and reasoning to support the claim.

Instruct students to look at their annotations to find evidence. Ask students to use this lesson’s vocabulary wherever possible in their written responses.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from the text.

☞ See the High Performance Response at the beginning of this lesson.

① Consider using the Short Response Rubric to assess students’ writing. Students may use the Short Response Rubric and Checklist to guide their written responses.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to select a previously analyzed excerpt, identify at least two of Diamond’s claims, and analyze how he uses evidence and reasoning to support these claims.

- ▶ Students follow along.

① The previously read excerpts of *Guns, Germs, and Steel* are pages 13–25, 65–78, and 229–249.

Homework

Select a previously analyzed excerpt, identify at least two of Diamond's claims, and analyze how he uses evidence and reasoning to support these claims.

Model Surfacing Issues Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: As you read, look for issues that are suggested in the text. Remember that an issue is an important aspect of human society for which there are many different opinions about what to think or do. Summarize the issue succinctly, and note the page number and what the text says about the issue in the correct columns.

| Issue | Page(s) | Key information about the issue from the text |
|---------------------------------|---------|---|
| Peaceful trade | 245 | “[P]eaceful trade” (p. 245) is one way in which technologies diffuse. |
| Espionage | 245 | “[E]spionage” (p. 245), or spying, is another way in which technologies diffuse across societies. |
| Blueprint copying of technology | 245 | Blueprint copying of technology is when one society gains the design or technique (the “blueprint” (p. 245)) from another society and is able to reproduce products using the blueprint. |
| Geographic isolation | 246 | Diamond describes geographic isolation as one of the main reasons “fads can persist” (p. 246). When fads persist, societies may abandon or lose useful technologies. |
| Fads | 246 | Fads are social movements, “in which economically useless things become valued or useful things devalued temporarily” (p. 246). Fads can lead to technological reversals, instances where societies lose or abandon useful innovations. |

| | | |
|--|-----|--|
| Government or ruling-class regulations | 247 | The Japanese samurai social class was able to create a Japan with almost no “functional guns” (p. 247) because of government regulations that led to a technological reversal of guns in Japan. |
| Technological reversals | 247 | Technological reversals are the loss of technology due to fads or social movements. These “reversals” (p. 247) persist typically due to geographic isolation. |
| Technology begets technology | 248 | Technology creates more technology by improving upon “simpler problems” (p. 248) and generating new technologies through “recombination” (p. 248). |
| Diffusion | 248 | Technology diffuses or spreads from society to society through various interactions between the societies. Diffusion of technology does not just lead to the diffused technology itself but can contribute to new innovation that can arise from the diffused technology (“recombination” (p. 248)). |

12.3.1

Lesson 9

Introduction

In this lesson, students pause in their reading of *Guns, Germs, and Steel*, and begin to focus on specific aspects of an issue to craft areas of investigation. Students then engage in a pre-search activity to begin gathering sources for further research. This work develops students' proficiency for posing general and specific questions, finding relevant sources, navigating a wide pool of potential sources, and validating the depth of and their interest in their proposed issues. Students use the Pre-Search Tool to record relevant information about the sources they find, including the author's name, issue, source, location, publication date, and general content/key ideas. Student learning is assessed via a Quick Write at the end of the lesson: Identify at least two sources and briefly explain how each source is related to one of your potential areas of investigation.

For homework, students reflect on their research process completed during the lesson and complete a multimedia journal entry in response to the following prompt: Explain why the 2–3 areas of investigation you crafted interest you.


Also for homework, students read and annotate pages 439–446 of *Guns, Germs, and Steel*, boxing any unfamiliar words and looking up their definitions. Additionally, students continue with their pre-searches and come to the next lesson prepared to discuss one potential source they found.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| Addressed Standard(s) | |
| W.11-12.9.b | Draw evidence from literary or informational texts to support analysis, reflection, and research. b. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., "Delineate and evaluate the reasoning in seminal U.S. texts, including the application of |

| | |
|-------------|---|
| | constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i> , presidential addresses]"). |
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 issues, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. |
| SL.11-12.5 | Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. |
| L.11-12.4.c | Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i> , choosing flexibly from a range of strategies. c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. |

Assessment

| Assessment(s) |
|--|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.</p> <ul style="list-style-type: none"> Identify at least two sources and briefly explain how each source is related to one of your potential areas of investigation. <p> Student responses are assessed using the 12.3.1 Research Rubric and Checklist.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Identify two sources (e.g., “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty; “Poverty Facts and Stats” by Anup Shah). Explain how each source is related to a potential area of investigation (e.g., The first article by Revenga and Shetty is related to the area of investigation of increasing wealth in developing nations because it describes how investment in human capital, or the investment in the skills and wellbeing of the workforce, can improve the economic prosperity of developing nations. Specifically, the article describes how important investments in women can improve the wealth of |

a developing nation. The second article by Anup Shah is also related to the area of investigation of increasing wealth in developing nations because it provides several statistics and facts about global poverty. These statistics and facts provide insight about the potential area of investigation because they illustrate factors that keep people in poverty and thus prevent nations from increasing their economic standing.).

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|---|---|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.7, W.11-12.9.b, SL.11-12.1, SL.11-12.5, L.11-12.4.c | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Areas of Investigation 4. Pre-Search Activity 5. Quick Write 6. Closing | <ol style="list-style-type: none"> 1. 5% 2. 10% 3. 30% 4. 35% 5. 10% 6. 10% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (refer to 12.3.1 Lesson 3) (optional)
- Student copies of the Surfacing Issues Tool (refer to 12.3.1 Lesson 2) (optional)—students may need additional blank copies
- Copies of the Pre-Search Tool for each student (optional)
- Copies of the 12.3.1 Research Rubric and Checklist for each student

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: W.11-12.7. In this lesson, students begin to narrow their issues for future research by developing areas of investigation. Additionally, students engage in a pre-search activity to begin identifying potential sources for their research.

- Students look at the agenda.

❗ **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard W.11-12.7. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

💬 Student responses should include:

- Conduct research for short and long projects.
- Use research to answer a question or solve a problem.

- Expand or limit the inquiry based on the project or the research issue.
- Read and put together multiple sources on the subject, showing what students understand about the subject based on what they learned from the sources.

- ① **Differentiation Consideration:** Consider providing students with the following definitions: *sustained* means “kept up or continued, as an action or process,” *self-generated* means “made without the aid of an external agent; produced spontaneously,” and *inquiry* means “the act of seeking information by questioning.”

Ask students to consider the meaning of *inquiry* in the context of the standard.

💬 Students responses may include:

- The standard is about conducting research, which means looking for information.
- The verb is “to inquire,” which means to look for information.

Explain that the research process taught in 12.3.1 is based on *inquiry* and that questioning plays a vital role in exploring a specific area of investigation.

- ① **Differentiation Consideration:** Consider providing students with the following definition: *synthesize* means “to combine into a single unit or unified entity or thing.” Explain to students that after plenty of research, they draw conclusions or *synthesize* the research to make claims about the area of investigation. However, this action happens near the end of 12.3.1, after significant research and analysis has been conducted.
- ① Consider pointing out that the prefix *syn-* means “with” or “together.”
- ① **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard SL.11-12.5. Instruct students to talk in pairs about what they think the standards means. Lead a brief discussion about the standard.

💬 Student responses should include:

- Use different kinds of digital media in presentations.
 - Use media to make presentations clear and engaging.
- ① Students will work with SL.11-12.5 throughout the module when recording entries for their multimedia journals.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Select a previously analyzed excerpt, identify at least two of Diamond's supporting claims, and analyze how he uses evidence and reasoning to support the claims.) Instruct students to form pairs to discuss their responses.

💬 Student responses may include:

- Diamond claims that "[o]nce an inventor has discovered a use for a new technology, the next step is to persuade society to adopt it" (p. 237). He supports this claim by "comparing the acceptability of different inventions within the same society" (p. 237) to demonstrate that a society must be persuaded to adopt new technology and that "a bigger, faster, more powerful device ... is no guarantee of ready acceptance" (p. 237). Diamond presents the evidence of the wheel used for transport, which would appear to be a useful technology any society would adopt; however, he presents contrary evidence about native Mexicans who "invented wheeled vehicles with axles for use as toys, but not for transport" (p. 237). He reasons that "wheeled vehicles ... offered no advantage over human porters" and therefore native Mexicans would have needed to be persuaded to adopt wheels for transport.
- Diamond claims that "[o]n any continent, at any given time, there are innovative societies and also conservative ones" (p. 243). The evidence provided describes differences in the innovative outlook between the Daribi and Chimbus societies within the "highlands of eastern New Guinea" (p. 241). The Chimbu were "especially aggressive in adopting Western technology" (p. 241), while the Daribi were "especially conservative (pp. 241–242), despite living in nearly the same region. He reasons based on these and other examples that "over a large enough area ... at any particular time, some proportion of societies is likely to be innovative" (p. 243).

Activity 3: Areas of Investigation

30%

Explain to students that in this lesson they develop 3–4 areas of investigation within issues surfaced in *Guns, Germs, and Steel*. Remind students that they have explored many issues, generated inquiry questions for these issues, and inform them that they will craft areas of investigation for research. Explain that while earlier research discussions produced many issues, in this lesson students will narrow their investigations by focusing on specific aspects of an issue, known as "areas of investigation."

- ▶ Students listen.

Explain to students that within any given issue, there are a variety of research directions to pursue. These various directions, or areas of investigation, represent options for research that students should

evaluate in order to identify the research direction that might be most interesting or compelling to pursue.

Instruct students that the first step in this process is to identify three surfaced issues that appeal to them. Instruct students to independently review the various issues they have surfaced throughout their analysis of *Guns, Germs, and Steel* and select the 3 issues they feel are the most interesting or compelling in regard to possible research issues.

① **Differentiation Consideration:** If students have been using the Surfacing Issues Tool to record issues throughout the unit, remind them to refer to the tool for this activity.

Once students have selected their top 3 issues, instruct students to form pairs and briefly discuss their selections. Remind students to individually record notes from their discussion to develop independently their own potential areas of investigation. Details from the discussion, such as a description of the issue that interests them, why they are interested in this issue, and the question(s) they may have about the issue, allow students to refine and focus their ideas for subsequent research.

- ▶ Students review the issues they surfaced throughout 12.3.1 and select 3 for discussion.
- 🗨 Student responses may include:
 - Global wealth and power distribution (p. 15)
 - Patent law (pp. 233–234, p. 239)
 - Diffusion (p. 244)

Inform students that now that they have selected three issues they begin crafting possible areas of investigation for each selected issue. Post or project the following information and model how to craft an area of investigation from a selected issue:

- **Selected issue:** Global wealth and power distribution
- **An area within this issue that may be of interest is:** Specific ways for an economically disadvantaged country to increase its economic standing
- **An explanation of why this area may be interesting:** Through the reading and analysis of *Guns, Germs, and Steel*, I have learned about the historical and modern-day inequities regarding wealth and power distribution. Even though Diamond gives reasons for why these inequities exist, he never suggests solutions.
- **Questions that may exist regarding this area are:** I want to know how disparities can be made more equal. What factors within a specific country are preventing its economic growth? What methods are most effective in improving a nation's economic standing? Is there an ideal process that economically disadvantaged countries can follow to assist them in their growth?

- **Area of investigation phrased as a question:** What steps can a disadvantaged country take to increase its economic standing?
 - **Express your potential area of investigation as a statement or phrase:** Increasing wealth in developing nations
-

Instruct students to consider their own research issues and brainstorm several areas of investigation, using the following questions to guide exploration of their areas of investigation.

What is your research issue?

In a few words, describe an area within the issue that you would like to know more about.

Explain why you are interested in this area of the issue.

Express your potential area of investigation as a question.

Express your potential area of investigation as a statement or phrase.

- ▶ Students independently brainstorm several areas of investigation.

① Consider posting or projecting the guiding questions to support students in their exploration of their areas of investigation.

Instruct students to form small groups and discuss their brainstormed areas of investigation. As a group, students should work together to narrow down their lists into 2–3 areas of investigation for their selected issues. Remind students to take notes individually during the conversation. Explain to students that after the group discussion, they select 2–3 areas of investigation to explore independently.

- ▶ Students form small groups and craft areas of investigation using the area of investigation process previously introduced.

① Consider reminding students of their previous work with SL.11-12.1, which requires students to initiate and participate effectively in a range of collaborative discussions.

Transition students from their groups and instruct them to work independently, using the same process and their discussion notes to individually craft a final version of 2–3 areas of investigation.

💬 Student responses may include:

- **What is your research issue?** Patent law
- **In a few words, describe an area within the issue that you would like to know more about:**
I want to know what laws protect inventions and inventors and whether these laws are effective at stimulating innovation.
- **Explain why you are interested in this area of the issue:** Diamond states that technology and innovation may be the most important factors in the economic prosperity of a nation. I have learned through research that patent law is one small piece of the bigger idea of intellectual property law. This issue of intellectual property law is interesting and important because innovation is one of the key factors in the economic success of a nation, and property law may provide incentives for innovation.
- **Express your potential area of investigation as a question:** Which intellectual property laws positively affect innovation?
- **Express your potential area of investigation as a statement or phrase:** Intellectual property laws and innovation

① Students will vet their areas of investigation in 12.3.1 Lesson 14 before selecting one area of investigation to research in-depth.

Lead a brief whole-class discussion of student responses.

Activity 4: Pre-Search Activity

35%

Instruct students to select one area of investigation to guide their preliminary research. Inform students that the goal of this lesson's pre-search is to ensure that there is enough source material to allow for more in-depth research and to ensure there are multiple perspectives for research. Explain that effective pre-searches work to refine an area of investigation before more detailed research begins. Finally, instruct students to use this pre-search to confirm their interest in the area of investigation.

- ▶ Students listen.

Instruct students to consider why they are curious about this particular area of investigation, and how their area of research may connect to the original issue. Explain to students that when conducting research, one must ask questions. The pre-search begins with one question that eventually leads to additional questions.

- ▶ Students listen.

Inform students that the pre-search activity ensures that the different sources display multiple perspectives on the area of investigation. Explain that *perspective* means how someone understands an issue, which includes his or her relationship to and analysis of the issue. For example, Diamond's perspective influences how he searches for the answer to Yali's question. Although he generally uses a neutral, objective tone, his perspective on the issues of inequality, natural intelligence, and innovation

are different from those of other experts he cites in his research. Like Diamond's, an author's perspective is not always explicitly stated in the text, but rather, it is implied. Diamond would like societies to be more equal; he wants to understand why barriers to prosperity exist in different societies and explore answers that do not rely on biological or inaccurate explanations. Inform students that other argument texts—like those students may find during their pre-searches—may include perspectives that are more explicit.

- ▶ Students listen.

- ① Students may need more clarification around *perspective*. If necessary, allow time for students to ask questions to clarify their understanding.

Instruct students to consider an author's perspective while pre-searching. Students should ask themselves: What do I know about the author? What do I know about the publication? What does the author explicitly say in the text? Can I infer a perspective based on the author's tone, language, and approach?

- ▶ Students listen.

- ① Consider posting the questions about the author's perspective to support students as they pre-search.

Instruct students to begin independently searching for sources using the resources available to them (the Internet, library, librarian/media specialist, etc.). At this point, the goal is to confirm that there is enough available information on the area of investigation to warrant further research; therefore, students should not read closely or annotate the sources they find; they should only record the title, location (e.g., website URL), author, and general notes about the source in a notebook. Students should read enough of the potential source to confirm that it is relevant. Instruct students to record basic information about the sources they identify, including the title, author, and location of the document and write a brief summary of how the article relates to their area of investigation.

- ① **Differentiation Consideration:** Consider distributing the Pre-Search Tool and instructing students to use the Pre-Search Tool to record general information about the sources they find, including title, location, author's name, and how the source relates to the issue.
- ① Consider coordinating with the school's librarian/media specialist in advance to ensure computer access and support for students throughout the inquiry process. Encourage students to discuss their pre-searches with a librarian/media specialist. Explain to students that the librarian/media specialist has a broad knowledge of media resources and can help students locate an array of resources appropriate for their research.

As they search and scan potential sources, students should consider the following questions:

- Do these sources point your research into a different area?
 - After reading through several potential sources, how could you refine your inquiry question or statement/phrase to sharpen your research?
 - Do any of these sources make you curious about a related issue?
 - ▶ Students conduct their pre-searches.
- ① Consider using available school resources to model a search for sources about increasing wealth in developing nations.
- ① **Differentiation Consideration:** If students would benefit from collaboration, consider organizing students by issue into small groups of 2–4. Students may work alongside one another and share with the group the sources they find individually. This model may help students to articulate general information about the source as they explain it to the rest of the group.

Activity 5: Quick Write

10%

Distribute the 12.3.1 Research Rubric and Checklist and instruct students to examine it. Explain to students that this rubric will be used to assess their research skills as they progress throughout the rest of 12.3.1.

- ▶ Students examine the 12.3.1 Research Rubric and Checklist.

Instruct students to respond briefly in writing to the following prompt:

Identify at least two sources and briefly explain how each source is related to one of your potential areas of investigation.

Remind students to use the relevant portions of the 12.3.1 Research Rubric and Checklist to guide their written responses.

- ▶ Students listen and read the Quick Write prompt.
- ① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from their pre-searches.
- 🗣 See the High Performance Response at the beginning of this lesson.

Activity 6: Closing

10%

Explain to students that throughout this unit they will periodically capture their research process and findings in a multimedia journal. For homework in several lessons, students are given journal prompts to answer using a video or audio medium. Instruct students to spend only 5–10 minutes recording themselves for each journal homework assignment. Explain to students that for the Performance Assessment at the end of Module 12.3, they edit and revise their multimedia journals in order to craft a single narrative presentation of their research process and findings for a diverse audience of adults and peers.

- ① Students may use audio or video recording software to record their multimedia journals. Students who have smartphones, laptops, or tablets will likely have video recording software built in. However, remind students that they must use technology that allows them to edit their audio or video, since they will have to edit their journals in the Performance Assessment. Consider providing the following links to support students in the recording of their multimedia journals: <http://www.howtogeek.com/> (search terms: Audio Editing: The Basics), <http://mac.appstorm.net/> (search terms: Podcast, GarageBand), and <http://www.intel.com/> (search terms: Streaming audio, Podcast, PC).
- ① Consider instructing students to write down on an exit slip whether they will record an audio or video journal. Ask them to include the technology they plan to use, to help determine the type of support students will need.
- ① Remind students to save their multimedia journals in a secure place. Encourage students to upload their multimedia journals to a cloud storage space, such as Dropbox or Google Drive.
- ① If students do not have access to multimedia technology, instruct students to record written responses to the journal prompts.
- ① For additional support, encourage students to consult with school media or technology specialists.
- ① **Differentiation Consideration:** Consider encouraging students to work in pairs to help each other record their multimedia journal entries.

Display and distribute the homework assignment. For homework, instruct students to reflect on the research process completed during this lesson and complete a multimedia journal entry in response to the following prompt:

Explain why the 2–3 areas of investigation you crafted interest you.

Additionally, instruct students to read and annotate pages 439–446 of *Guns, Germs, and Steel* (from “The third recent extension of GGS’s message” to “a ripe area for study in the modern world”) (W.11-12.9.b). Direct students to box any unfamiliar words and look up their definitions. Instruct students to

choose the definition that makes the most sense in the context, and write a brief definition above or near the word in the text (L.11-12.4.c).

Additionally, instruct students to continue their pre-searches and come to the next lesson prepared to discuss one potential source they found.

- ▶ Students follow along.

Homework

Reflect on your research process completed during this lesson and complete a multimedia journal entry in response to the following prompt:

Explain why the 2–3 areas of investigation you crafted interest you.

Additionally, read and annotate pages 439–446 of *Guns, Germs, and Steel* (from “The third recent extension of GGS’s message” to “a ripe area for study in the modern world”). Box any unfamiliar words and look up their definitions. Choose the definition that makes the most sense in the context, and write a brief definition above or near the word in the text.

Also, continue your pre-searches and come to the next lesson prepared to discuss one potential source you found.

Pre-Search Tool

| | | | | | |
|--|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
| Directions: Use this tool to record general information about the sources you find and their relevance to your potential area of investigation. | | | | | |
| Source notes | | | How does this source connect to your potential area of investigation? | | |
| Source #1 Title: Location: Author: | | | | | |
| Source #2 Title: Location: Author: | | | | | |
| Source #3 Title: Location: Author: | | | | | |

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Is there enough source information to research this potential area of investigation?

Model Pre-Search Tool

| | | | | | |
|---|--|---------------|---|--------------|--|
| Name: | | Class: | | Date: | |
| Directions: Use this tool to record general information about the sources you find and their relevance to your potential area of investigation. | | | | | |
| Source notes | | | How does this source connect to your potential area of investigation? | | |
| Source #1 Title: Empowering Women is Smart Economics Location: http://www.imf.org/external/pubs/ft/fandd/2012/03/revenga.htm Author: Ana Revenga and Sudhir Shetty | | | This article describes how investment in human capital (the labor force), specifically women, can increase wealth in developing nations. | | |
| Source #2 Title: Poverty Facts and Stats Location: http://www.globalissues.org/article/26/poverty-facts-and-stats Author: Anup Shah | | | This article shares many facts and statistics about poverty in developing nations and can be used to investigate specific factors that contribute to poverty. | | |
| Source #3 Title: Evidence for Action: Gender Equality and Economic Growth Location: http://www.chathamhouse.org/ (search terms: Evidence for Action) Author: John Ward, Bernice Lee, Simon Baptist, and Helen Jackson | | | This report explains how investment in human capital and technology can increase wealth in developing nations. | | |

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Is there enough source information to research this potential area of investigation?

There is enough source information to research this potential area of investigation because I have located at least 10 different possible sources that include a range of perspectives on the issue.

12.3.1 Research Rubric

____ / ____ (Total points)

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|---|---|---|--|---|
| Content and Analysis The extent to which the response demonstrates completion of short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrows or broadens the inquiry when appropriate; synthesizes multiple sources on the subject, demonstrating understanding of the subject under investigation. CCSS.ELA-Literacy.W.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. | Skillfully demonstrate completion of short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; skillfully narrow or broaden the inquiry when appropriate; skillfully synthesize multiple sources on the subject, consistently demonstrating thorough understanding of the subject under investigation. | Demonstrate completion of short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. | Somewhat effectively demonstrate completion of short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; somewhat effectively narrow or broaden the inquiry when appropriate; somewhat effectively synthesize multiple sources on the subject, inconsistently demonstrating understanding of the subject under investigation. | Ineffectively demonstrate completion of short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; ineffectively narrow or broaden the inquiry when appropriate; ineffectively synthesize or fail to synthesize multiple sources on the subject, rarely demonstrating understanding of the subject under investigation. |
| Command of Evidence and Reasoning The extent to which the response demonstrates the use of relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assessment of the strengths and limitations of each | Skillfully demonstrates the use of relevant information from multiple authoritative print and digital sources, using advanced searches effectively; thorough assessment of the strengths and limitations of each source in terms of the task, purpose, and audience; skillful and selective integration of information into the text to maintain the flow of ideas, | Demonstrates the use of relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assessment of the strengths and limitations of each source in terms of the task, purpose, and audience; skillful and selective integration of information into the text to maintain the flow of ideas, avoiding plagiarism | Somewhat effectively demonstrates the use of relevant information from multiple authoritative print and digital sources, using advanced searches; partial assessment of the strengths and limitations of each source in terms of the task, purpose, and audience; somewhat effective integration of information into the text to maintain the flow of ideas, | Ineffectively demonstrates the use of relevant information from multiple authoritative print and digital sources, using advanced searches effectively; insufficient assessment of the strengths and limitations of each source in terms of the task, purpose, and audience; ineffective integration of information into the text to maintain the flow of ideas, avoiding |

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|--|--|--|---|---|
| <p>source in terms of the task, purpose, and audience; selective integration of information into the text to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p>CCSS.ELA-Literacy.W.11-12.8</p> <p>Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> | avoiding plagiarism and overreliance on any one source and consistently following a standard format for citation. | and overreliance on any one source and following a standard format for citation. | avoiding plagiarism and overreliance on any one source and inconsistently following a standard format for citation. | plagiarism and overreliance on any one source and rarely following a standard format for citation. |
| <p>Command of Evidence and Reasoning</p> <p>The extent to which the response draws evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>CCSS.ELA-Literacy.W.11-12.9</p> <p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> | Skillfully use textual evidence from literary or informational texts to support analysis, reflection, or research. | Accurately use textual evidence from literary or informational texts to support analysis, reflection, or research. | Somewhat effectively or with partial accuracy use textual evidence from literary or informational texts to support analysis, reflection, or research. | Ineffectively or inaccurately use textual evidence from literary or informational texts to support analysis, reflection, or research. |

- A response that is a personal response and makes little or no reference to the task or text can be scored no higher than a 1.
- A response that is totally copied from the text with no original writing must be given a 0.
- A response that is totally unrelated to the task, illegible, incoherent, blank, or unrecognizable as English must be scored as a 0.

12.3.1 Research Checklist

Assessed Standards: _____

| | Does my response... | ✓ |
|--|--|--------------------------|
| Content and Analysis | Demonstrate completion of short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem? (W.11-12.W.7) | <input type="checkbox"/> |
| | Narrow or broaden the inquiry of the research project when appropriate? (W.11-12.W.7) | <input type="checkbox"/> |
| | Synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation? (W.11-12.W.7) | <input type="checkbox"/> |
| Command of Evidence and Reasoning | Demonstrate the use of relevant information from multiple authoritative print and digital sources, using advanced searches effectively? (W.11-12.W.8) | <input type="checkbox"/> |
| | Assess the strengths and limitations of each source in terms of the task, purpose, and audience? (W.11-12.W.8) | <input type="checkbox"/> |
| | Integrate information into the response selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation? (W.11-12.W.8) | <input type="checkbox"/> |
| | Use textual evidence from literary or informational texts to support analysis, reflection, and research? (W.11-12.W.9) | <input type="checkbox"/> |

12.3.1

Lesson 10

Introduction

In this lesson, students read and analyze pages 439–446 of *Guns, Germs, and Steel* by Jared Diamond (from “The third recent extension of GGS’s message” to “a ripe area for study in the modern world”). In this excerpt, Diamond extends several of the principles he has observed over the course of the book to present-day questions of business productivity and innovation. Students consider how Diamond further develops ideas previously explored in the text and apply their analysis independently in a written response at the beginning of the lesson. This response informs students’ participation in a whole-class discussion that follows. Student learning is assessed via a Quick Write at the end of the lesson: In this excerpt, how does the author further develop ideas introduced earlier in the text?

For homework, students continue with their pre-searches. Students find three more potential sources for at least one area of investigation and record the following information: author’s name, topic, source, location, publication date, and general content/key ideas.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| RI.11-12.3 | Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text. |
| Addressed Standard(s) | |
| W.11-12.9.b | <p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>a. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., "Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., <i>The Federalist</i>, presidential addresses]").</p> |

| | |
|------------------|--|
| SL.11-12.1.a,c,d | <p>Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i>, building on others’ ideas and expressing their own clearly and persuasively.</p> <p>a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</p> <p>c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.</p> <p>d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.</p> |
| L.11-12.4.c | <p>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i>, choosing flexibly from a range of strategies.</p> <p>c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage.</p> |

Assessment

| Assessment(s) |
|--|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.</p> <ul style="list-style-type: none"> In this excerpt, how does the author further develop ideas introduced earlier in the text? |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Identify ideas that were introduced earlier in the text (e.g., proximate vs. ultimate causation, diffusion). Explain how those ideas are further developed in this excerpt (e.g., Diamond further develops the |

idea of diffusion in his analysis of Route 128 and Silicon Valley. Diamond claims that the “industrial belts” of Route 128 and the Silicon Valley are “quite different in terms of corporate ethos” (p. 444). Silicon Valley companies are “fiercely competitive with one another” but “there is much collaboration—a free flow of ideas, people and information” (p. 444). Diamond writes that on Route 128, on the other hand, “businesses ... are much more secretive and insulated from one another” (p. 444), which results in far lower productivity and innovation. These ideas parallel and further develop Diamond’s claim about “diffusion” on page 246: “In these societies technology developed most rapidly, because they accumulated not only their own inventions but also those of other societies” (p. 246). As Diamond points out, isolated nations developed less technology because “[w]ithout diffusion, fewer technologies are acquired, and more existing technologies are lost” (p. 247). Diamond applies the same ideas of diffusion and isolation to the business world when discussing theories about Route 128’s industrial decline due to lack of communication, and Silicon Valley’s success due to “collaboration” (p. 444).

Vocabulary

Vocabulary to provide directly (will not include extended instruction)

- anarchy (n.) – a state or society without government or law
- entities (n.) – being or existence, especially when considered as distinct, independent, or self-contained
- optimal (adj.) – best or most effective
- per-capita (adj.) – of or for each person

Vocabulary to teach (may include direct word work and/or questions)

- None.

Additional vocabulary to support English Language Learners (to provide directly)

- fragmented (adj.) – broken into parts or pieces
- insulated (v.) – prevented from dealing with or experiencing
- gross (adj.) – including everything; total

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards & Text: <ul style="list-style-type: none"> Standards: RI.11-12.3, W.11-12.9.b, SL.11-12.1.a,c,d, L.11-12.4.c Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 439–446 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Pre-Discussion Quick Write 4. Whole-Class Discussion 5. Quick Write 6. Closing | <ol style="list-style-type: none"> 1. 5% 2. 15% 3. 15% 4. 45% 5. 15% 6. 5% |

Materials

- Student copies of the 12.3 Speaking and Listening Rubric and Checklist (refer to 12.3.1 Lesson 3) (optional)
- Student copies of the Short Response Rubric and Checklist (refer to 12.3.1 Lesson 1) (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: RI.11-12.3. In this lesson, students consider how the author expands on ideas introduced earlier in the text. Students respond briefly in writing before participating in a whole-class discussion. Students then have the opportunity to review or expand their Quick Write responses after the discussion.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

15%

Instruct students to take out their responses to the first part of the previous lesson's homework assignment. (Reflect on your research process completed during the lesson and complete a multimedia journal entry in response to the following prompt: Explain why the 2-3—areas of investigation you crafted interest you.) Instruct students to talk in pairs about their responses to their multimedia journal entry prompt.

- 💬 Student responses vary according to students' areas of investigation.

- ① Consider checking in with students on an individual basis during their research discussion to formatively assess their application of research skills and offer targeted feedback.

Instruct students to take out their responses to the second part of the previous lesson's homework assignment. (Read and annotate pages 439–446 of *Guns, Germs, and Steel*. (W.11-12.9.b)) Instruct student pairs to discuss their annotations.

- 💬 Student annotations may include:
 - Star next to the question “Should your group have a centralized direction ... or should there be diffuse leadership or even anarchy?” (p. 439), because this question is essential to what follows in this excerpt.
 - Star beside the paragraph that begins “My comparison of the histories of China, the Indian subcontinent” (p. 440), because this paragraph ultimately defines what Diamond calls the “Optimal Fragmentation Principle” (p. 441), which he then applies to companies.
 - Exclamation mark beside the sentence “The efficiency of the Japanese food-processing industry is a miserable 32 percent that of ours” (p. 442), because this is surprising since Japan has many successful industries including the car industry.
-

Instruct student pairs to share and discuss the vocabulary words they identified and defined in the previous lesson's homework (L.11-12.4.c).

💬 Students may identify the following words: *anarchy*, *entities*, *optimal*, and *per-capita*

① **Differentiation Consideration:** Students may also identify the following words: *fragmented*, *insulated*, and *gross*.

① Definitions are provided in the Vocabulary box in this lesson.

Instruct students to take out their responses to the third part of the previous lesson's homework assignment. (Continue your pre-searches and come to the next lesson prepared to discuss one potential source you found.) Instruct student pairs to discuss the potential source they found for homework.

💬 Student responses vary according to the research conducted.

Activity 3: Pre-Discussion Quick Write

15%

Inform students that their analysis in this lesson begins with a Quick Write in response to the prompt below. Students then use their independently generated responses to inform the following discussion and have the opportunity to review or expand their Quick Write responses after the discussion.

① **Differentiation Consideration:** If necessary, consider providing time for students to reread the lesson's excerpt before they respond in writing to the following prompt.

① **Differentiation Consideration:** Encourage students to reference their previous Quick Writes from 12.3.1 as resources when completing this Pre-Discussion Quick Write.

① This activity differs from previous lessons' Reading and Discussion activities by allowing students more independence in analyzing the text before the lesson assessment. For the reading and text analysis in this lesson, students first work independently to respond to a text-based prompt regarding how the author further develops ideas introduced earlier in the text. Students then discuss their independent responses in small groups. Later, they evaluate their initial responses and consider how their original opinions were challenged or verified through discussion, and whether they made new connections in light of the evidence and reasoning presented.

Instruct students to read the following prompt:

In this excerpt, how does the author further develop ideas introduced earlier in the text?

▶ Students listen and read the Quick Write prompt.

- ① Consider posting or projecting the following guiding question to support students in their reading throughout the lesson:

What connections does the author make between ideas in this excerpt and ideas in the previous parts of the text?

- ① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from the text.

☞ See the High Performance Response at the beginning of this lesson.

- ① This initial Quick Write is intended to demonstrate students' first thoughts and observations in response to the prompt. Students will have additional time to develop their analysis in this lesson, and return to this Quick Write after a whole-class discussion.

Activity 4: Whole-Class Discussion

45%

Facilitate a whole-class discussion of student responses to and observations of the Pre-Discussion Quick Write. Encourage students to consider points of agreement or disagreement with other students and consider how the evidence and reasoning presented by other students can help qualify or justify the observations they generated independently.

Instruct students to use the relevant portions of the 12.3 Speaking and Listening Rubric and Checklist to guide their discussion.

- ① **Differentiation Consideration:** If students require further support with this excerpt, consider discussing the following economic terms including: *free competition, industrial belt, monopolies, imports, economies of scale, and exports.*
- ① Consider reminding students of their previous work with SL.11-12.1.a, which requires that students have come to class having read the material and asks them to explicitly draw on evidence from the text to support their discussion.
- ① Consider reminding students of their previous work with SL.11-12.1.c, which requires that students pose and respond to questions and qualify or justify their own points of agreement and disagreement with other students.
- ① Consider reminding students of their previous work with SL.11-12.1.d, which requires that students seek to understand and respond thoughtfully to diverse perspectives in order to deepen the investigation of their position and observations.

① Consider assessing students speaking and listening skills as outlined in SL.11-12.1.a, c, d using the 12.3 Speaking and Listening Rubric.

- ▶ Students share their observations and evidence generated during the Pre-Discussion Quick Write with the whole class.

💬 Student responses may include:

- Diamond builds on his initial ideas regarding “proximate” and “ultimate” (p. 78) causation by indirectly applying the concepts to a business context, illustrating that proximate factors may contribute to a business’s growth, but may not be fully responsible for its ultimate success. For example, Diamond acknowledges that a proximate or immediate factor like “the idiosyncrasies of individuals” (page 440) can be “partly” (p. 440) responsible for a given company’s success. With a specific reference to Microsoft’s Bill Gates, Diamond explains “[e]ven with a superior corporate organization, Microsoft would not be successful with an ineffectual leader” (p. 440). Yet, Diamond continues to press for root or “ultimate” (p. 78) causes that create the most effective “form of organization of human groups” (p. 440). He finally determines that the organization of Microsoft, which includes “lots of units,” “free communication,” and “a great deal of freedom” for individuals to “pursu[e] their own ideas” (p. 444) is the best organization in which businesses may grow. Diamond illustrates that “ultimate causation” (p. 78) in business can affect its “competitive ability” (p. 444) by showing that Microsoft’s organization reflects and arises from successful organizations and governments across a span of millennia.
- In this excerpt, Diamond also further develops the idea of “ultimate causation” (p. 78) from earlier in the text when discussing a nation’s progress in innovation and economics. Diamond claims the ultimate causes for a nation’s progress regarding innovation are tied to its political organization. For example, Diamond notes that areas with some (but not an extreme) amount of “political fragmentation” (p. 440), like Europe, tend to be more successful with innovation than areas with complete unification, like China. Also, Diamond claims that “countries in regions with long histories of state societies or agriculture have higher per-capita GNP than countries with short histories” (p. 446). This claim further exemplifies how ultimate causation contributes to a nation’s economic success, as it highlights the importance of how root causes such as the growth of agriculture and the evolution of organized societies influence even modern-day economics.
- Diamond claims that the “industrial belts” of Route 128 and the Silicon Valley are “quite different in terms of corporate ethos” (p. 444). Silicon Valley companies are “fiercely competitive with one another” but “there is much collaboration—a free flow of ideas, people and information” (p. 444). Diamond writes that on Route 128, on the other hand, “businesses ... are much more secretive and insulated from one another” (p. 444) which

results in far lower productivity and innovation. These ideas parallel and further develop Diamond's claim about "diffusion" on page 246: "In these societies technology developed most rapidly, because they accumulated not only their own inventions but also those of other societies." As Diamond points out, isolated nations developed less technology because "[w]ithout diffusion, fewer technologies are acquired, and more existing technologies are lost" (p. 247). Diamond applies the same ideas of diffusion and isolation to the business world when discussing theories about Route 128's industrial decline due to lack of communication and Silicon Valley's success due to "collaboration" (p. 444).

- ① **Differentiation Consideration:** If students struggle, consider asking the following scaffolding questions:

What are the advantages of "political fragmentation" (p. 440)?

How does Diamond describe the ways that "good institutions ... ar[i]se" (p. 445)?

In what ways does Diamond imply that businesses can be usefully compared to countries?

How do "proximate causation" and "ultimate causation" (p. 78) interact with business organizations in this excerpt?

- ① Consider instructing students to form small groups and having each group elect a spokesperson to share their observations, or allowing students to volunteer to discuss the observations and evidence generated during their Quick Writes.

Instruct students to form pairs and briefly discuss how their opinions were challenged or verified through discussion, or whether they made new connections in light of the evidence and reasoning presented during the discussions.

- ▶ Student pairs discuss how their opinions were challenged or verified through discussion, and identify any new connections made.

Lead a brief whole-class discussion of student observations.

Activity 5: Quick Write

15%

Instruct students to return to their Pre-Discussion Quick Write. Instruct students to independently revise or expand their Quick Write response in light of the whole-class discussion, adding any new connections, and strengthening or revising any verified or challenged opinions.

In this excerpt, how does the author further develop ideas introduced earlier in the text?

Instruct students to look at their annotations to find evidence. Ask students to use this lesson's vocabulary wherever possible in their written responses.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students revise or expand their Pre-Discussion Quick Write responses.

🗨 See the High Performance Response at the beginning of this lesson.

① Consider using the Short Response Rubric to assess students' writing. Students may use the Short Response Rubric and Checklist to guide their written responses.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to continue their pre-searches and find three more potential sources for at least one area of investigation and record the following information: author's name, topic, source, location, publication date, and general content/key ideas.

- ▶ Students follow along.

Homework

Continue with your pre-searches. Find three more potential sources for at least one area of investigation and record the following information: author's name, topic, source, location, publication date, and general content/key ideas.

12.3.1

Lesson 11

Introduction

In this lesson, students prepare for the Mid-Unit Assessment in 12.3.1 Lesson 12 by engaging in a discussion of Diamond's claims in key excerpts from *Guns, Germs, and Steel*, analyzing whether his evidence is relevant and sufficient and whether his reasoning is valid. This lesson and the 12.3.1 Mid-Unit Assessment build upon students' previous work in 12.3.1 Lessons 6 and 8 with identifying components of an argument and the relationships across those components. Student learning is assessed via completion of the Evaluating Evidence and Reasoning Tool at the end of the lesson.

For homework, students review and expand their notes, tools, and annotations in preparation for the following lesson's Mid-Unit Assessment. In addition, students continue to conduct pre-searches to gather potential sources for research. Students find three more potential sources for at least one area of investigation and record the following information: author's name, issue, source, location, publication date, and general content/key ideas.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| CCRA.R.8 | Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. |
| Addressed Standard(s) | |
| W.11-12.9.b | <p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>a. Apply <i>grades 11–12 Reading standards</i> to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy (e.g., <i>The Federalist</i>, presidential addresses)”).</p> |
| SL.11-12.1.a | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. |

- | | |
|--|---|
| | <p>a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</p> |
|--|---|

Assessment

Assessment(s)

Student learning is assessed via completion of the Evaluating Evidence and Reasoning Tool at the end of the lesson.

 The Evaluating Evidence and Reasoning Tool serves as the assessment for this lesson.

High Performance Response(s)

A High Performance Response should:

- Identify a specific excerpt from the text (e.g., *Guns, Germs, and Steel*, pages 71–78).
- Identify a claim in this excerpt (e.g., “Pizarro’s capture of Atahualpa illustrates the set of proximate factors that resulted in Europeans’ colonizing the New World” (p. 78)).
- Identify evidence and reasoning in the text (e.g., Evidence in the text includes: the use of horses at Cajamarca, which “exemplifies a military weapon that remained potent for 6,000 years, until the early 20th century, and that was eventually applied on all the continents” (p. 74); the fact that “Pizarro came to Cajamarca by means of European maritime technology” (p. 75); and the fact that the “Spaniards’ had steel swords and other weapons, steel armor, guns, and horses” (p. 72), giving them a military advantage over Pizarro. Diamond reasons that these factors amounted to “imbalances of equipment [which] were decisive in innumerable other confrontations of Europeans with Native Americans and other peoples” (p. 72). He explains that there were dozens of times when “a few dozen European horsemen routed thousands of Indians with great slaughter” (pp. 72–73) and reasons that the same set of factors played the deciding role in other conflicts between colonizers and natives.).
- Evaluate whether the evidence is relevant and sufficient (e.g., Each example of evidence is relevant to the claim because it provides a specific example of one of “the set of proximate factors” (p. 78) that led to Atahualpa’s defeat and was instrumental in many other conflicts between European colonizers and New World natives. The evidence selected is sufficient to support the claim because it shows how several combined factors ensured Atahualpa’s capture and the Spaniards’ victory at Cajamarca. Diamond provides further evidence to indicate that these same factors were instrumental in the “Europeans’ colonizing of the New World” (p. 78).).

- Evaluate whether the reasoning is valid (e.g., The reasoning is valid because Diamond uses sound logic to demonstrate that the factors of military disparity and “equipment” (p. 72) made the difference between victory and defeat at Cajamarca and many other times in history between colonizers and natives).

① See Model Evaluating Evidence and Reasoning Tool at the end of this lesson.

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> • None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> • None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> • None.* |

*Because this is not a close reading lesson, there is no specified vocabulary. However, in the process of returning to the text, students may uncover unfamiliar words. Teachers can guide students to make meaning of these words using the strategies outlined in L.11-12.4.a-d.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards & Text: <ul style="list-style-type: none"> • Standards: CCRA.R.8, W.11-12.9.b, SL.11-12.1.a • Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 13–25, 65–78, 229–249, and 439–446 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Evaluating Evidence and Reasoning 4. Evaluating Evidence and Reasoning Tool and Assessment 5. Closing | <ol style="list-style-type: none"> 1. 5% 2. 10% 3. 40% 4. 40% 5. 5% |

Materials

- Copies of the Evaluating Evidence and Reasoning Tool for each student

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ▶ | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: CCRA.R.8. In this lesson, students prepare for the Mid-Unit Assessment in 12.3.1 Lesson 12 by engaging in a small group discussion and evaluating the author's use of evidence and reasoning to support one of his claims in the text.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Continue to conduct your pre-searches. Find three more potential sources for at least one area of investigation and record the following information: author's name, issue, source, location, publication date, and general content/key ideas.) Instruct students to form pairs and articulate their selected area of investigation before briefly explaining how each source relates to that area of investigation.

- 💬 Student responses vary according to the research conducted.

Activity 3: Evaluating Evidence and Reasoning

40%

Explain to students they are beginning to prepare for the Mid-Unit Assessment in 12.3.1 Lesson 12 by identifying several of Diamond's claims and evaluating the evidence and reasoning he uses to support his claims. Explain to students that they are building on their previous work with identifying components of an argument and the relationships across these components from 12.3.1 Lessons 6 and 8.

Display the 12.3.1 Mid-Unit Assessment prompt:

Choose an excerpt from *Guns, Germs, and Steel*. Identify one of Diamond's supporting claims; evaluate whether the evidence is relevant and sufficient and the reasoning is valid to support that claim.

- ▶ Students listen and read the 12.3.1 Mid-Unit Assessment prompt.

Remind students that each excerpt contains several claims. For the Mid-Unit Assessment, students may select any claims that include evidence and reasoning.

Instruct students to form groups to discuss how to evaluate evidence and reasoning. Instruct students to answer the following questions before sharing out with the class.

What is relevant evidence?

- ☞ Relevant evidence connects directly to the claim and is related to the issue in an appropriate way.

What is sufficient evidence?

- ☞ Sufficient evidence thoroughly reinforces the claims in an argument. One piece of powerful evidence may be sufficient to support a claim, or several pieces of evidence may be collectively sufficient to support a claim.

① **Differentiation Consideration:** Consider reminding students that *evidence* refers to the topical and textual facts, events, and ideas from which the claims of an argument arise, and which are cited to support those claims.

What is valid reasoning?

- ☞ Valid reasoning is the sound or logical relationship among ideas, including relationships among claims and relationships across evidence.

Lead a brief whole-class discussion of student responses.

Post or project the following model claim, evidence, and reasoning from *Guns, Germs, and Steel*:

Claim: “Diseases endemic in Europe played a decisive role in European conquests, by decimating many peoples on other continents.” (p. 75)

Evidence: “Smallpox ... killed the Inca emperor Huayna Capac and most of his court around 1526, and then immediately killed his designated heir, Ninan Cuyuchi.” (pp. 74–75) The death of the designated heir led to a civil war, which further weakened the power of the Inca Empire.

Evidence: The Europeans brought with them smallpox and other diseases, to which they had immunity but which “decimat[ed]” (p. 75) the indigenous population of the New World. “Throughout the Americas, diseases introduced by Europeans spread from tribe to tribe far in advance of the Europeans themselves, killing an estimated 95 percent of the pre-Columbian Native American population.” (p. 75)

Reasoning: Diamond reasons that if smallpox had not been introduced to the New World “the Spaniards would have faced a united Empire” (p. 75) and may not have been victorious at Cajamarca.

Lead a brief whole-class discussion of student responses.

Instruct student groups to briefly discuss the following questions before sharing out with the entire class.

Is the evidence relevant to the claim?

- ☞ The evidence is relevant because it directly relates to the central point of the claim. It illustrates how disease introduced by the colonizing peoples, the Europeans, weakened the political organization of native groups and killed “many peoples on other continents” (p. 75), making colonization easier.

Is the evidence sufficient to support the claim?

- ☞ The evidence selected is sufficient to support the claim. The evidence illustrates that disease introduced by the Europeans was an ultimate cause in the fall of the Inca Empire because the leadership was weakened by smallpox. The evidence also illustrates how, within other parts of the New World, disease was a major factor in weakening the native peoples, allowing for easier conquest.

Is the reasoning valid?

- ☞ Diamond’s reasoning is valid. Diamond connects the local effects of smallpox at Cajamarca and the resulting conquest of the Inca Empire to other instances where disease played a role in the conquest of the New World.

Lead a brief whole-class discussion of student responses.

Explain to students that invalid reasoning may be called *fallacious reasoning*. Inform students that *fallacious reasoning* means reasoning that includes or is based on a false notion or belief, or invalid reasoning. Guide students through the following model of fallacious reasoning.

- **Claim:** “New Guineans are smarter than Westerners.” (p. 20)
- **Evidence:** In European societies, “infectious epidemic diseases of dense populations (such as smallpox) were historically the major cause of death, while murders were relatively uncommon and a state of war was the exception rather than the rule” (p. 20). “Instead, traditional New Guineans suffered high mortality from murder, chronic tribal warfare, accidents, and problems in procuring food” (p. 20). Therefore New Guineans are “[i]ntelligent people [who] are likelier than less intelligent ones to escape those causes of high mortality (p. 20). “In the average American household, the TV set is on for seven hours per day.” (p. 21) “Almost all studies of child development emphasize the role of childhood stimulation and activity in promoting mental development, and stress the irreversible mental stunting associated with reduced childhood stimulation” (p. 21).
- **Is the evidence relevant and sufficient?** The evidence is not sufficient. The first two pieces of evidence are based on the evolutionary theory of natural selection. The last piece of evidence is weak because it is related to watching too much television, which focuses on a single aspect of society, not taking into account other aspects of society. In addition, the statistical evidence that “[i]n the average American household, the TV set is on for seven hours per day” (p. 21) does not directly support or relate to the claim because it is not clear that Americans, specifically children, are necessarily watching TV during that block of time.
- **Reasoning:** Diamond reasons that because there are fewer epidemics in New Guinea than in Europe, intelligence is naturally selected in New Guineans. Thus, Diamond reasons that disease kills all kinds of people in Europe, whether they are intelligent or not. Therefore, Diamond explains that more New Guineans than Westerners have the genetic capacity for natural intelligence. He also reasons that “almost all studies of child development emphasize the role of childhood stimulation and development in promoting mental development” (p. 21), thus, reasoning that “[t]his effect surely contributes a non-genetic component to the superior average mental function displayed by New Guineans” (p. 21).
- **Is the reasoning valid?** Diamond’s reasoning that intelligence is due to natural selection is fallacious because intelligence is not static or unchanging, and it can be developed. Diamond’s reasoning that Western children are less intelligent due to Americans watching television “seven hours per day” (p. 21) is not valid because his reasoning is based on two pieces of unrelated evidence, including the

hours Americans spend watching television and childhood stimulation. Also, Western children may be receiving just as much “childhood stimulation and activity” (p. 21), although via different means than New Guinean children.

Activity 4: Evaluating Evidence and Reasoning Tool and Assessment

40%

Distribute copies of the Evaluating Evidence and Reasoning Tool to all students. Instruct students to examine the tool.

- ▶ Students examine the Evaluating Evidence and Reasoning Tool.

- ① Consider displaying the previously read excerpts of *Guns, Germs, and Steel* (pages 13–25, 65–78, 229–249, and 439–446).

Instruct small groups to spend the remainder of the lesson reviewing excerpts from *Guns, Germs, and Steel* to identify claims, evidence, and reasoning in the text and complete the Evaluating Evidence and Reasoning Tool (W.11-12.9.b).

- 🗨 See the Model Evaluating Evidence and Reasoning Tool at the end of this lesson.

- ① **Differentiation Consideration:** If students struggle to complete the Evaluating Evidence and Reasoning Tool, consider modeling how to complete the tool.
- ① Consider reminding students of their previous work with SL.11-12.1.a, as this discussion requires that students come to class having read the material and asks them to explicitly draw on evidence from the text to support their discussion.

Lead a brief whole-class discussion of students’ work on their Evaluating Evidence and Reasoning Tools. Ask students to look at their responses from their tools and discuss the following question:

Identify one of Diamond’s claims and evaluate whether the evidence is relevant and sufficient and the reasoning is valid.

- 🗨 See Model Evaluating Evidence and Reasoning Tool at the end of this lesson.

Inform students that they have the opportunity to add to their Evaluating Evidence and Reasoning Tools for homework.

Activity 5: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to review and expand their notes, tools, and annotations in preparation for the following lesson's Mid-Unit Assessment. In addition, students should continue to conduct pre-searches to gather potential sources for research. Instruct students to find three more potential sources for at least one area of investigation and record the following information for each source: author's name, issue, source, location, publication date, and general content/key ideas.

- ▶ Students follow along.

Homework

Review and expand your notes, tools, and annotations in preparation for the following lesson's Mid-Unit Assessment. In addition, continue to conduct pre-searches to gather potential sources for research. Find three more potential sources for at least one area of investigation and record the following information: author's name, issue, source, location, publication date, and general content/key ideas.

Evaluating Evidence and Reasoning Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Identify and record the claim in the text, as well as the evidence and reasoning that support the claim. Remember that *evidence* supports claims and *reasoning* connects evidence to a claim. *Reasoning* may also explain the relationship among claims or across evidence. Then, evaluate whether the evidence is relevant and sufficient and the reasoning is valid.

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|--------------|--|
| Text: | |
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| Claim: |
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| Evidence: |
|------------------|

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|--------------------|--------------------|--------------------|
| Evidence 1: | Evidence 2: | Evidence 3: |
| | | |

| | | |
|-------------------|-------------------|-------------------|
| Relevance: | Relevance: | Relevance: |
| | | |

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| Explain whether the evidence is sufficient to support the claim. |
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|-------------------|
| Reasoning: |
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Is this reasoning valid? Explain.

Model Evaluating Evidence and Reasoning Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Identify and record the claim in the text, as well as the evidence and reasoning that support the claim. Remember that *evidence* supports claims and *reasoning* connects evidence to a claim. *Reasoning* may also explain the relationship among claims or across evidence. Then, evaluate whether the evidence is relevant and sufficient and the reasoning is valid.

| | |
|--------------|---|
| Text: | <i>Guns, Germs, and Steel</i> , pages 71–78 |
|--------------|---|

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|--|--|---|
| Claim: | | |
| “Pizarro’s capture of Atahualpa illustrates the set of proximate factors that resulted in Europeans’ colonizing the New World instead of Native Americans’ colonizing Europe.” (p. 78) | | |
| Evidence: | | |
| Evidence 1: The use of horses at Cajamarca “exemplifies a military weapon that remained potent for 6,000 years, until the early 20th century, and that was eventually applied on all the continents” (p. 74). | Evidence 2: “Pizarro came to Cajamarca by means of European maritime technology.” (p. 75) | Evidence 3: “The Spaniards had steel swords and other weapons, steel armor, guns, and horses” (p. 72), giving them a military advantage over Pizarro. |
| Relevance: The evidence directly addresses one of the immediate or “proximate” (p. 78) reasons for why the Spaniards were successful in defeating Atahualpa’s empire despite incredible odds. The Incans lacked the more advanced weaponry of horses, creating a “military disparity” (p. 72) that the Spaniards and other Europeans were able to capitalize on in their conquest of the “New World” (p. 78). | Relevance: This evidence is relevant because it also addresses one of the “proximate” (p. 78) reasons for the Spaniards’ victory in defeating Atahualpa. Without the ability to navigate the ocean, Atahualpa was unable to venture “out of South America” (p. 75) and “Atahualpa [didn’t] instead try to conquer Spain” (p. 75). Thus, natives of the New World, lacking maritime technology, were unable to colonize Europe whereas Europeans had the | Relevance: The evidence is relevant because it directly relates to the key points of the claim: it illustrates the military disparity in play at the collision at Cajamarca. The evidence also shows that “[s]uch examples of the power of guns against native peoples lacking guns could be multiplied indefinitely” (p. 73) by extending these “proximate” (p. 78) factors to other collisions between colonizers and native people. |

| | | |
|---|---|--|
| | transportation to colonize the New World. | |
| Explain whether the evidence is sufficient to support the claim. | | |
| The selected evidence is sufficient to support the claim because it shows three different factors that contributed to Atahualpa's capture and shows why the Spaniards were victorious at Cajamarca. Diamond then applies the same evidence to other examples of colonizers defeating native people. | | |
| Reasoning: | | |
| Diamond reasons that these "proximate factors" (p. 78) amounted to "imbalances of equipment [which] were decisive in innumerable other confrontations of Europeans with Native Americans and other peoples" (p. 72). | | |
| Is this reasoning valid? Explain. | | |
| The reasoning is valid because Diamond uses sound logic to demonstrate that the factors of military disparity and "equipment" (p. 72) made the difference between victory and defeat at Cajamarca and at many other times in history between colonizers and natives. | | |

Model Evaluating Evidence and Reasoning Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Identify and record the claim in the excerpt, as well as the evidence and reasoning that support the claim. Remember that *evidence* supports claims and *reasoning* connects evidence to a claim. *Reasoning* may also explain the relationship among claims or across evidence. Then, evaluate whether the reasoning is valid and the evidence is relevant and sufficient.

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| Text: | <i>Guns, Germs, and Steel</i> , pages 439–446 |
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| Claim: | | |
| The Optimal Fragmentation Principle is that “innovation proceeds most rapidly in a society with some optimal intermediate degree of fragmentation: a too-unified society is at a disadvantage, and so is a too-fragmented society” (p. 441). | | |
| Evidence | | |
| <p>Evidence 1: “There are a thousand tiny beer companies in Germany, shielded from competition with one another because each German brewery has virtually a local monopoly, and they are also shielded from competition with imports.” (p. 441)</p> | <p>Evidence 2: Diamond states that in Japan, the food-processing industry is not as efficient as other industries. He notes that “food-processing companies enjoy local monopolies,” while “Japanese steel, metal, car, car parts, camera, and consumer electronics companies compete fiercely and have higher productivities” (p. 443). Also, Diamond states that the “Japanese food-producing companies ... don’t learn the best international methods for producing food” (p. 443) because they are isolated.</p> | <p>Evidence 3: Diamond compares Route 128 to Silicon Valley. He states that “Silicon Valley consists of lots of companies that are fiercely competitive with one another” (p. 444) but that there is a great deal of collaboration across the companies. On the other hand, the Route 128 corridor contains companies that are “much more secretive and insulated from one another” (p. 444).</p> |
| <p>Relevance: This evidence is directly relevant to the claim because it presents a situation in which there is too much fragmentation, which results in fragmented local monopolies</p> | <p>Relevance: This evidence is directly relevant to the claim because it presents a situation in which “local monopolies” (p. 443) create “fragmentation” (p. 444) and are not able to engage</p> | <p>Relevance: This evidence is directly relevant to the claim because the Silicon Valley companies appear to conform to the “optimal intermediate degree of fragmentation” (p.</p> |

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| that are unable to compete globally. | in competition or learn or communicate “the best international methods” (p. 443) to increase productivity. | 441), resulting in competition and collaboration, while the Route 128 corridor does not allow for enough collaboration or “unity” (p. 444) to ensure best practices or “innovation” (p. 444). |
| Explain whether the evidence is sufficient to support the claim. | | |
| The evidence is not sufficient to draw a conclusion. Simply comparing different countries and industries with different histories and contexts does not lead to a solid conclusion that “you don’t want either excessive unity or excessive fragmentation” (p. 444) because that is not the only factor influencing productivity. Further, the evidence is focused on specific industrial sectors that are influenced by “local tastes” (p. 442) within a country that are affected by a variety of outside factors that cannot be accounted for in just the context of “fragmentation” or “unity” (p. 444). Germany or Japan may be able to change their “organization” (p. 444) but factors like “local tastes” (p. 442) will also continue to influence production. | | |
| Reasoning: | | |
| Diamond reasons that “[W]e may be able to extract a general principle about group organization. If your goal is innovation and competitive ability, you don’t want either excessive unity or excessive fragmentation. Instead, you want your country, industry, industrial belt, or company to be broken up into groups that compete with one another while maintaining relatively free communication.” (p. 444) | | |
| Is this reasoning valid? Explain. | | |
| The reasoning is valid because Diamond limits the principle to “innovation and competitive ability” (p. 444) among industries. And, although he uses only a few examples to support his claim, Diamond draws logical relationships between them, illustrating how excessively fragmented or isolated industries suffer when it comes to competing in the global market. | | |

12.3.1

Lesson 12

Introduction

In this lesson, the Mid-Unit Assessment, students use textual evidence from Jared Diamond's *Guns, Germs, and Steel* and the Evaluating Evidence and Reasoning Tool from 12.3.1 Lesson 11 to craft a formal, multi-paragraph response to the following prompt: Choose an excerpt from *Guns, Germs, and Steel*. Identify one of Diamond's supporting claims; evaluate whether the evidence is relevant and sufficient and the reasoning is valid to support that claim.

Students review their annotated texts, lesson Quick Writes, discussion notes, homework notes, and tools to organize their ideas. Students then develop their responses to convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of the content. The Mid-Unit Assessment is assessed using the 12.3.1 Mid-Unit Text Analysis Rubric.

For homework, students complete another multimedia journal entry, reflecting on their 2–3 selected areas of investigation and their work with pre-searches. Students' multimedia entries should respond to the following prompt: Describe what you have learned from your pre-searches. What area of investigation looks most promising for further research?

Standards

| Assessed Standard(s) | |
|----------------------|--|
| CCRA.8 | Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. |
| W.11-12.2.a-f | <p>Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.</p> <ul style="list-style-type: none"> a. Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and |

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| | <p>examples appropriate to the audience’s knowledge of the topic.</p> <p>c. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.</p> <p>d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.</p> <p>e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.</p> <p>f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).</p> |
| Addressed Standard(s) | |
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| L.11-12.1 | Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. |
| L.11-12.2 | Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. |

Assessment

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| Assessment(s) |
| <p>Student learning in the first part of 12.3.1 is assessed via a formal, multi-paragraph response. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.</p> <ul style="list-style-type: none"> Choose an excerpt from <i>Guns, Germs, and Steel</i>. Identify one of Diamond’s supporting claims; evaluate whether the evidence is relevant and sufficient and the reasoning is valid to support that claim <p>① Student responses are assessed using the 12.3.1 Mid-Unit Text Analysis Rubric.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Identify a specific excerpt from the text (e.g., <i>Guns, Germs, and Steel</i>, pages 71–78). Identify a claim in this excerpt (e.g., “Pizarro’s capture of Atahualpa illustrates the set of proximate |

factors that resulted in Europeans' colonizing the New World" (p. 78)).

- Identify evidence and reasoning in the text (e.g., Evidence in the text includes: the use of horses at Cajamarca, which "exemplifies a military weapon that remained potent for 6,000 years, until the early 20th century, and that was eventually applied on all the continents" (p. 74); the fact that "Pizarro came to Cajamarca by means of European maritime technology" (p. 75); and the fact that the "Spaniards' steel swords and other weapons, steel armor, guns, and horses" (p. 72), gave them a military advantage over Pizarro. Diamond reasons that these factors amounted to "imbalances of equipment [which] were decisive in innumerable other confrontations of Europeans with Native Americans and other peoples" (p. 72). He explains that there were times when "a few dozen European horsemen routed thousands of Indians with great slaughter" (pp. 72–73) and reasons that the same set of factors played the deciding role in other conflicts between colonizers and natives.).
- Evaluate whether the evidence is relevant and sufficient (e.g., Each example of evidence is relevant to the claim because it provides a specific example of one of "the set of proximate factors" (p. 78) that led to Atahualpa's defeat and was instrumental in many other conflicts between European colonizers and New World natives. The evidence selected is sufficient to support the claim because it shows how several combined factors ensured Atahualpa's capture and the Spaniards' victory at Cajamarca. Diamond provides further evidence to indicate that these same factors were instrumental in the "Europeans' colonizing of the New World" (p. 78).).
- Evaluate whether the reasoning is valid (e.g., The reasoning is valid because Diamond uses sound logic to demonstrate that the factors of military disparity and "equipment" (p. 72) made the difference between victory and defeat at Cajamarca and many other times in history between colonizers and natives.).

OR

- Identify a specific excerpt from the text (e.g., *Guns, Germs, and Steel*, pages 439–446).
- Identify a supporting claim in the selected excerpt (e.g., The Optimal Fragmentation Principle is that "innovation proceeds most rapidly in a society with some optimal intermediate degree of fragmentation: a too-unified society is at a disadvantage, and so is a too-fragmented society" (p. 441)).
- Identify evidence and reasoning in the text (e.g., Diamond supports his claim by providing the example of Germany: "[t]here are a thousand tiny beer companies in Germany, shielded from competition with one another because each German brewery has virtually a local monopoly, and they are also shielded from competition with imports" (p. 441). Diamond cites the German beer industry as evidence of the principle that isolation and lack of competition holds innovation back. He describes how each German factory maintains a local monopoly and describes how this impacts the limited production of German beer producers. Diamond provides a second example in Japan,

where the food-processing industry is not as efficient as other industries. He states that “food-processing companies enjoy local monopolies” while “Japanese steel, metal, car, car parts, camera, and consumer electronics companies compete fiercely and have higher productivities” (p. 443). Also, Diamond states that the “Japanese food-producing companies ... don’t learn the best international methods for producing food” (p. 443) because they are isolated. Finally, Diamond compares Route 128 to Silicon Valley. He states that “Silicon Valley consists of lots of companies that are fiercely competitive with one another” (p. 444) but that there is a great deal of collaboration across the companies. On the other hand, the Route 128 corridor contains companies that are “much more secretive and insulated from one another” (p. 444). Using this evidence, Diamond reasons that “we may be able to extract a general principle about group organization. If your goal is innovation and competitive ability, you don’t want either excessive unity or excessive fragmentation. Instead, you want your country, industry, industrial belt, or company to be broken up into groups that compete with one another while maintaining relatively free communication” (p. 444).).

- Evaluate whether the evidence is relevant and sufficient (e.g., The evidence is relevant because Diamond presents several examples that demonstrate how “excessive unity or excessive fragmentation” impact innovation (p. 444). By comparing the organization of very different countries and industries, Diamond provides evidence that is relevant to this claim. However, the evidence is not sufficient to draw a final conclusion. Simply comparing different countries and industries with different histories and contexts does not lead to a solid conclusion that “you don’t want either excessive unity or excessive fragmentation” (p. 444) because that is not the only factor influencing productivity. Diamond only provides sufficient evidence and reasoning to support “the Optimal Fragmentation Principle” (p. 441) in certain industries and situations. While it may be true that the German beer industry, for instance, may boost productivity as a result of slightly less isolation and more international competition, that claim may not be true in another industry or country. Alternately, the evidence is focused on specific industrial sectors within a country, that are influenced by “local tastes” (p. 442) and, thus, are affected by a variety of outside factors that cannot be accounted for in just the context of “fragmentation” or “unity” (p. 444). Germany or Japan may be able to change their “organization” (p. 444) but factors like “local tastes” (p. 442) will also continue to influence production.).
- Evaluate whether the reasoning is valid (e.g., The reasoning is valid because Diamond limits the principle to “innovation and competitive ability” (p. 444) among industries. And, although he uses only a few examples to support his claim, he draws logical relationships between them, illustrating how excessively fragmented or isolated industries suffer when it comes to competition.).

Vocabulary

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|---|
| Vocabulary to provide directly (will not include extended instruction) |
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*Because this is not a close reading lesson, there is no specified vocabulary. However, in the process of returning to the text, students may uncover unfamiliar words. Teachers can guide students to make meaning of these words using the strategies outlined in L.11-12.4.a-d.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards & Text: <ul style="list-style-type: none"> Standards: CCRA.8, W.11-12.2.a-f, W.11-12.4, L.11-12.1, L.11-12.2 Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 13–25, 65–78, 229–249, and 439–446 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability 12.3.1 Mid-Unit Assessment Closing | <ol style="list-style-type: none"> 5% 10% 80% 5% |

Materials

- Copies of the 12.3.1 Mid-Unit Assessment for each student
- Copies of the 12.3.1 Mid-Unit Text Analysis Rubric and Checklist for each student

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| 📘 | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standards for this lesson: CCRA.8 and W.11-12.2 a-f. In this lesson, students complete the 12.3.1 Mid-Unit Assessment in which they identify one of Diamond's supporting claims and evaluate his reasoning and evidence.

- Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the first part of the previous lesson's homework assignment. (Review and expand your notes, tools, and annotations in preparation for the following lesson's Mid-Unit Assessment.) Instruct students to form pairs and share how they reviewed and expanded their materials for the Mid-Unit Assessment.

- Students discuss how they reviewed and organized their materials for the Mid-Unit Assessment.

Instruct students to take out their responses to the second part of the previous lesson's homework assignment. (Continue to conduct pre-searches to gather potential sources for research. Find three more potential sources for at least one area of investigation and record the following information: author's name, issue, source, location, publication date, and general content/key ideas.) Instruct student pairs to share 2–3 potential sources they found during their pre-searches.

- 💬 Student responses vary according to the research conducted.

Activity 3: 12.3.1 Mid-Unit Assessment

80%

Explain to students that because it is a formal writing task, the Mid-Unit Assessment should include an introductory statement, well-organized ideas supported by the most significant and relevant evidence, and a concluding statement or section. Students should use appropriate and varied transitions and syntax to clarify relationships among complex ideas, and manage the complexity of the topic by using precise language and domain-specific vocabulary. Remind students to use proper grammar, capitalization, punctuation, and spelling in their responses to establish a formal style and objective tone.

Instruct students to use their annotated texts, lesson Quick Writes, discussion notes, homework notes, and tools to write their response. Remind students to use the Evaluating Evidence and Reasoning Tool from 12.3.1 Lesson 11. Distribute and review the 12.3.1 Mid-Unit Text Analysis Rubric.

- ▶ Students examine the 12.3.1 Mid-Unit Text Analysis Rubric.

Instruct students to write a multi-paragraph response to the following prompt:

Choose an excerpt from *Guns, Germs, and Steel*. Identify one of Diamond’s supporting claims; evaluate whether the evidence is relevant and sufficient and the reasoning is valid to support that claim.

Remind students to use the 12.3.1 Mid-Unit Text Analysis Rubric to guide their written responses. Ask students to use this unit’s vocabulary wherever possible in their written responses.

- ① Consider reminding students that demonstrating command of the conventions of standard English grammar and usage when writing or speaking demonstrates their application of L.11-12.1.
- ① Consider reminding students that demonstrating command of the conventions of standard English capitalization, punctuation, and spelling when writing demonstrates their application of L.11-12.2.
- ① If necessary, consider reviewing the components of W.11-12.4, which include producing clear, coherent writing that employs organization and style appropriate to the task, purpose, and audience.
- ① Display the prompt for students to see, or provide the prompt in hard copy.
 - ▶ Students independently answer the prompt using evidence from the text.
 - 🗨 See the High Performance Response at the beginning of the lesson.
- ① Consider encouraging students who finish early to reread and revise their responses.

Activity 4: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to complete another multimedia journal entry, reflecting on their 2–3 selected areas of investigation and their work with pre-

searches. Instruct students that their multimedia entry should respond to the following prompt: Describe what you have learned from your pre-searches. What area of investigation looks most promising for further research?

- ▶ Students follow along.

Homework

Complete another multimedia journal entry, reflecting on your selected 2–3 areas of investigation and your work with pre-searches. Your multimedia entry should respond to the following prompt: Describe what you have learned from your pre-searches. What area of investigation looks most promising for further research?

12.3.1 Mid-Unit Assessment

Text-Based Response

Your task: Rely on your reading and analysis of excerpts from *Guns, Germs, and Steel* to write a well-crafted, multi-paragraph response to the following prompt:

Choose an excerpt from Guns, Germs, and Steel. Identify one of Diamond's supporting claims; evaluate whether the evidence is relevant and sufficient and the reasoning is valid to support that claim.

Your response will be assessed using the 12.3.1 Mid-Unit Text Analysis Rubric.

Guidelines

Be sure to:

- Read the prompt closely.
- Address all elements of the prompt in your response.
- Paraphrase, quote, and reference relevant evidence to support your claim.
- Organize your ideas in a cohesive and coherent manner.
- Maintain a formal style of writing.
- Follow the conventions of standard written English.

CCSS: CCRA.8, W.11-12.2 a-f

Commentary on the task:

This task measures CCRA.8 because it demands that students:

- Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.

This task measures W.11-12.2.a-f because it demands that students:

- Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
 - Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
 - Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
 - Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
 - Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.

- Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
- Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).

12.3.1 Mid-Unit Text Analysis Rubric

____ / ____ (Total points)

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|--|---|--|--|--|
| Content and Analysis The extent to which the response delineates and evaluates the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. CCSS.ELA-Literacy.CCRA.R.8 Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. | Skillfully delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. | Accurately delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. | With partial accuracy delineate and partially evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. | Inaccurately delineate or minimally evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. |
| Command of Evidence and Reasoning The extent to which the response thoroughly develops the topic through the effective selection and analysis of the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. CCSS.ELA-Literacy.W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of | Thoroughly and skillfully develop the topic with the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. (W.11-12.2.b) | Develop the topic with significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. (W.11-12.2.b) | Partially develop the topic with weak facts, extended definitions, details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. (W.11-12.2.b) | Minimally develop the topic, providing few or irrelevant facts, extended definitions, details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. (W.11-12.2.b) |

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|---|---|---|---|---|
| <p>content.</p> <p>CCSS.ELA-Literacy.W.11-12.2.b</p> <p>Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.</p> | | | | |
| <p>Coherence, Organization, and Style</p> <p>The extent to which the response introduces a topic and organizes complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; when useful to aiding comprehension, includes formatting, graphics, and multimedia.</p> <p>CCSS.ELA-Literacy.W.11-12.2</p> <p>Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.</p> <p>CCSS.ELA-Literacy.W.11-12.2.a</p> <p>Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which</p> | <p>Skillfully introduce a topic; effectively organize complex ideas, concepts, and information so that each new element clearly builds on that which precedes it to create a unified whole; when useful to aiding comprehension, skillfully include formatting, graphics, and multimedia. (W.11-12.2.a)</p> <p>Skillfully use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. (W.11-12.2.c)</p> <p>Skillfully use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic. (W.11-12.2.d)</p> <p>Skillfully establish and maintain a formal style and objective tone that is appropriate for the norms and conventions of the discipline. (W.11-12.2.e)</p> <p>Provide a concluding statement or section that clearly follows from and</p> | <p>Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; when useful to aiding comprehension, include formatting, graphics, and multimedia. (W.11-12.2.a)</p> <p>Effectively use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. (W.11-12.2.c)</p> <p>Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic. (W.11-12.2.d)</p> <p>Establish a formal style and objective tone that is appropriate for the norms and conventions of the discipline. (W.11-12.2.e)</p> <p>Provide a concluding statement or section that follows from and supports the information or explanation</p> | <p>Ineffectively introduce a topic; organize complex ideas, concepts, and information so that each new element partially builds on that which precedes it to create a loosely unified whole; when useful to aiding comprehension, somewhat effectively include formatting, graphics, and multimedia. (W.11-12.2.a)</p> <p>Somewhat effectively use transitions or use unvaried transitions and syntax to link the major sections of the text, creating limited cohesion or clarity in the relationships among complex ideas and concepts. (W.11-12.2.c)</p> <p>Inconsistently use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic. (W.11-12.2.d)</p> <p>Establish but fail to maintain a formal style and objective tone that is appropriate for the norms and conventions of the discipline. (W.11-12.2.e)</p> <p>Provide a concluding statement or</p> | <p>Lack a clear a topic; illogically arrange ideas, concepts, and information, failing to create a unified whole; when useful to aiding comprehension, ineffectively include formatting, graphics, and multimedia. (W.11-12.2.a)</p> <p>Ineffectively use transitions and syntax to link the major sections of the text, creating incoherent or unclear relationships among complex ideas and concepts. (W.11-12.2.c)</p> <p>Rarely or inaccurately use precise language, domain-specific vocabulary, or any techniques such as metaphor, simile, and analogy to manage the complexity of the topic. (W.11-12.2.d)</p> <p>Lack a formal style and objective tone that adheres to the norms and conventions of the discipline. (W.11-12.2.e)</p> <p>Provide a concluding statement or section that does not follow from or support the information or explanation presented. (W.11-12.2.f)</p> |

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|--|---|------------------------------|---|------------------------------|
| <p>precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.</p> <p>The extent to which the response uses appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.</p> <p>CCSS.ELA-Literacy.W.11-12.2.c</p> <p>Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.</p> <p>The extent to which the response includes and uses precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.</p> <p>CCSS.ELA-Literacy.W.11-12.2.d</p> <p>Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.</p> <p>The extent to which the response properly establishes and maintains a formal style and</p> | skillfully supports the information or explanation presented. (W.11-12.2.f) | presented. (W.11-12.2.f) | section that loosely follows from and so ineffectively supports the information or explanation presented. (W.11-12.2.f) | |

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|--|------------------------------|------------------------------|------------------------------|------------------------------|
| <p>objective tone as well as adheres to the writing conventions of the discipline.</p> <p>CCSS.ELA-Literacy.W.11-12.2.e</p> <p>Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.</p> <p>The extent to which the response provides a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).</p> <p>CCSS.ELA-Literacy.W.11-12.2.f</p> <p>Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).</p> | | | | |

- A response that is a personal response and makes little or no reference to the task or text can be scored no higher than a 1.
- A response that is totally copied from the text with no original writing must be given a 0.
- A response that is totally unrelated to the task, illegible, incoherent, blank, or unrecognizable as English must be scored as a 0.

12.3.1 Mid-Unit Text Analysis Checklist

Assessed Standards: _____

| | Does my response... | ✓ |
|---|---|--------------------------|
| Content and Analysis | Delineate and evaluate the argument and specific claims in a text? (CCRA.R.8) | <input type="checkbox"/> |
| | Evaluate the validity of the reasoning as well as the relevance and sufficiency of the evidence? (CCRA.R.8) | <input type="checkbox"/> |
| Command of Evidence and Reasoning | Develop the topic with the most significant and relevant textual evidence? (W.11-12.2.b) | <input type="checkbox"/> |
| Coherence, Organization, and Style | Introduce a topic? (W.11-12.2.a) | <input type="checkbox"/> |
| | Organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole? (W.11-12.2.a) | <input type="checkbox"/> |
| | When useful to aiding comprehension, include formatting, graphics, and multimedia? (W.11-12.2.a) | <input type="checkbox"/> |
| | Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts? (W.11-12.2.c) | <input type="checkbox"/> |
| | Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic? (W.11-12.2.d) | <input type="checkbox"/> |
| | Establish a formal style and objective tone that is appropriate for the norms and conventions of the discipline? (W.11-12.2.e) | <input type="checkbox"/> |
| | Provide a concluding statement or section that follows from and supports the explanation or analysis? (W.11-12.2.f) | <input type="checkbox"/> |

12.3.1

Lesson 13

Introduction

In this lesson, students continue to analyze *Guns, Germs, and Steel*, taking all excerpts into consideration in order to examine the author's counterclaims. Students first examine the role of counterclaims in argument and then work to identify Diamond's counterclaims and the evidence and reasoning that support those counterclaims. Students then identify the limitations of the counterclaims. Students pay particular attention to the way Diamond's counterclaims contribute to the persuasiveness of the text. Student learning is assessed via a Quick Write at the end of the lesson: Explain how one of the author's counterclaims contributes to the persuasiveness of the text.

For homework, students continue to conduct pre-searches for their 2–3 areas of investigation to gather potential sources for their research. Instruct students to find three more potential sources for at least one area of investigation and record the following information: author's name, issue, source, location, publication date, and general content/key ideas.

Standards

| Assessed Standard(s) | |
|-----------------------|---|
| CCRA.R.8 | Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. |
| RI.11-12.6 | Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text. |
| Addressed Standard(s) | |
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. |

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.</p> <ul style="list-style-type: none"> Explain how one of the author’s counterclaims contributes to the persuasiveness of the text. |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Identify one of the author’s counterclaims (e.g., “[T]he peoples of northern Europe contributed nothing of fundamental importance to Eurasian civilization until the last thousand years” (p. 22)). Analyze how the counterclaim contributes to the persuasiveness of the text (e.g., In this section of text, Diamond attempts to disprove alternate, simplistic claims in response to Yali’s question about unequal distribution of global wealth and power. With this counterclaim, Diamond opposes the claim that climate has “stimulatory effects” or “inhibitory effects” on human creativity and energy (p. 22). To provide evidence of his counterclaim, Diamond explains that the “sole Native American societies to develop writing arose in the warm climate of Mexico, and the oldest New World pottery comes from near the equator in tropical South America” (p. 22). Additionally, he offers that the “New World society generally considered the most advanced in art, astronomy, and other respects was the Classic Maya society of the tropical Yucatan and Guatemala” (p. 22). Diamond’s reasoning explains that people in Northern Europe “simply had the good luck to live in a geographic location where they were likely to receive advances (such as agriculture, wheels, writing, and metallurgy) developed in warmer parts of Eurasia” (p. 22). Through his counterclaim, evidence, and reasoning, Diamond demonstrates that historical evidence is insufficient to support the claim that climate has “stimulatory effects” or “inhibitory effects” (p. 22) on human creativity and energy, thus contributing to the persuasiveness of the text.). |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |

Additional vocabulary to support English Language Learners (to provide directly)

- None.*

*Because this is not a close reading lesson, there is no specified vocabulary. However, in the process of returning to the text, students may uncover unfamiliar words. Teachers can guide students to make meaning of these words using the strategies outlined in L.11-12.4.a-d.

Lesson Agenda/Overview



| Student-Facing Agenda | % of Lesson |
|---|--|
| Standards & Text: <ul style="list-style-type: none"> Standards: CCRA.R.8, RI.11-12.6, SL.11-12.1 Text: <i>Guns, Germs, and Steel</i> by Jared Diamond, pages 13–25, 65–78, 229–249, and 439–446 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Identifying Counterclaims, Evidence, and Reasoning Identifying Limitations Quick Write Closing | <ol style="list-style-type: none"> 5% 10% 35% 30% 15% 5% |

Materials

- Student copies of the Short Response Rubric and Checklist (refer 12.3.1 Lesson 1) (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |

| | |
|---|--|
|  | Indicates possible student response(s) to teacher questions. |
|  | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standards for this lesson: CCRA.R.8 and RI.11-12.6. In this lesson, students consider all excerpts read thus far in *Guns, Germs, and Steel* as they begin to identify and analyze the author’s counterclaims, evidence, reasoning, and limitations of the counterclaims.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson’s homework assignment. (Complete another multimedia journal entry, reflecting on your selected 2–3 areas of investigation and your work with pre-searches. Your multimedia entry should respond to the following prompt: Describe what you have learned from your pre-searches. What area of investigation looks most promising for further research?) Instruct students to form pairs and discuss their responses.

-  Student responses vary according to the research conducted.

Activity 3: Identifying Counterclaims, Evidence, and Reasoning

35%

Introduce the argument term *counterclaim* to students. Explain that a *counterclaim* is a statement that opposes or questions another claim. A *counterclaim* is used to call into question an author’s central or supporting claim, to create dialogue about the strength of those claims. Refuting or disproving counterclaims may contribute to the persuasiveness of the argument by providing an opportunity for the author to reassert the validity of the central or supporting claims.

Model the following relationship of *claim* to *counterclaim* as a way to provide students with an example of the role counterclaims play in argument.

- **Claim:** “Biological differences” in the “innate ability” of different groups explains the disparity in global wealth and power distribution (p. 18).
- **Counterclaim:** “However ... the peoples compared differ greatly in their social environments and educational opportunities.” (p. 19)

Consider explaining to students that authors use counterclaims in arguments where they work most effectively. Diamond provides counterclaims before he asserts his own claims. Students may choose to

organize their own claims and counterclaims similarly or differently when they write their own research-based argument papers in 12.3.2.

Ask students the following questions:

How does this counterclaim oppose the claim?

- ☛ This counterclaim suggests that perceived “[b]iological differences” or variations in “innate ability” are actually due to diverse social factors (p. 18). In this way, the counterclaim calls into question the accuracy of the claim and undermines its validity.

What other counterclaims from pages 18–21 does Diamond provide that challenge the previous claim about “biological differences” (p. 18)?

- ☛ Student responses may include:
 - “Racist explanations” for “human differences” are “loathsome ... [and] wrong” (p. 19).
 - “Sound evidence for the existence of human differences in intelligence that parallel human differences in technology is lacking.” (p. 19)
 - The “cognitive abilities [of] adults are heavily influenced by the social environment ... experienced during childhood, making it hard to discern any influence of preexisting genetic differences” (pp. 19–20).
 - “[T]he usual racist assumption” for “developmental *disadvantages*” “has to be turned on its head” (p. 21).

Lead a brief, whole-class discussion of student responses.

Explain to students that they are going to identify other counterclaims Diamond presents in the text. Instruct students to form pairs and answer the following prompt using one of the excerpts they read previously from *Guns, Germs, and Steel*.

- ① To provide a quick point of reference for students, consider posting or projecting the page numbers of all *Guns, Germs, and Steel* excerpts read in 12.3.1: pp. 13–25, 65–78, 229–249, and 439–446.

Choose a previously read excerpt from *Guns, Germs, and Steel*. Identify another counterclaim Diamond provides in response to a claim cited in the text. Include both the claim and the counterclaim in your answer, and explain how the counterclaim opposes the claim.

- ☛ Student responses may include:
 - **Claim:** Climate has “stimulatory effects” or “inhibitory effects” on human creativity and energy (p. 22).

Diamond’s counterclaim: “[T]he peoples of northern Europe contributed nothing of fundamental importance to Eurasian civilization until the last thousand years.” (p.22)

How the counterclaim opposes the claim: The counterclaim opposes the claim by denying the claim’s validity, indicating that “luck” and “geograph[y]” had more to do with the development of certain societies than did the climate (p. 22).

① See additional possible student responses below.

Explain to students that similar to a central or supporting claim, a well-developed counterclaim often includes its own supporting evidence and reasoning. Inform students that they are going to identify evidence and reasoning for each counterclaim they identified in the previous activity, and explain how the evidence and reasoning supports the counterclaim. Explain that not every claim or counterclaim provides both evidence and reasoning.

► Students listen.

① **Differentiation Consideration:** Consider reminding students that *reasoning* is the logical relationships among ideas, including relationships among claims and relationships across evidence.

Model the following counterclaim, evidence, reasoning, and explanation of support for the counterclaim.

► Students follow along.

- **Claim:** Colder climates have “stimulatory effects” on human creativity and energy, whereas “hot, humid, tropical climates” have an “inhibitory” effect (p. 22).
- **Diamond’s counterclaim:** “[T]he peoples of northern Europe contributed nothing of fundamental importance to Eurasian civilization until the last thousand years.” (p. 22)
- **Evidence:** “The sole Native American societies to develop writing arose in Mexico south of the Tropic of Cancer; the oldest New World pottery comes from near the equator in tropical South America; and the New World society generally considered the most advanced in art, astronomy, and other respects was the Classic Maya society of the tropical Yucatan and Guatemala in the first millennium A.D.” (p. 22)
- **Reasoning:** People in Northern Europe “simply had the good luck to live in a geographic location where they were likely to receive advances (such as agriculture, wheels, writing, and metallurgy) developed in warmer parts of Eurasia” (p. 22).
- **How does the evidence and /or reasoning support the counterclaim?** The evidence uses historical facts about “Native American societies” to prove that people from colder climates did not necessarily have more “creativity and energy” when it came to innovation (p. 22). The reasoning supports the counterclaim by describing how Europe did not contribute any “fundamental” advances and rather benefitted from the advances of other nations because of their geographical location (p. 22).

Instruct student pairs to identify evidence and reasoning that supports the counterclaim that they identified earlier in the lesson.

🗣 Student responses may include:

- **Claim:** Lowland river valleys in dry climates were instrumental in spurring the development of irrigation systems and centralized bureaucracies.

Diamond's counterclaim: "None of the crucial developments preceding political centralization in those same parts of the world were associated with river valleys or with complex irrigation systems." (pp. 22–23)

How the counterclaim opposes the claim: The counterclaim opposes the claim by explaining that commonly held ideas about what led to "political centralization" are incorrect (p. 22).

Evidence: "[D]etailed archaeological studies have shown that complex irrigation systems did not *accompany* the rise of centralized bureaucracies but *followed* after a considerable lag." (p. 22)

How does the evidence and/or reasoning support the counterclaim? Diamond's evidence supports the counterclaim by referencing "archaeological studies" that show the commonly accepted timeline of the development of "complex irrigation systems" in relation to "the rise of centralized bureaucracies" to be incorrect (p. 22).

- **Claim:** "[I]nventions supposedly arise when a society has an unfulfilled need." (p. 232)

Diamond's counterclaim: "[M]any or most inventions were developed by people driven by curiosity or by a love of tinkering in the absence of any initial demand for the product they had in mind." (p. 232)

How the counterclaim opposes the claim: The counterclaim opposes the claim by stating that "curiosity" or a "love of tinkering" explains the development of inventions (p. 232).

Evidence: The "inventions in search of a use include most of the major technological breakthroughs of modern times, ranging from the airplane and automobile, through the internal combustion engine and electric light bulb, to the phonograph and transistor" (p. 232).

Reasoning: "Once a device had been invented, the inventor then had to find an application for it. Only after it had been in use for a considerable time did consumers come to feel that they 'needed' it." (p. 232)

How does the evidence and/or reasoning support the counterclaim? The evidence provides a concrete list of well-known "inventions" that had to "search [for] a use" (p. 232). The reasoning supports the counterclaim because it explains the long process involved for an invention to become something "consumers ... feel that they 'need[]'" (p. 232).

Lead a brief whole-class discussion of student responses.

Activity 4: Identifying Limitations

30%

Explain to students the importance of recognizing and pointing out the limitations of any counterclaim. Inform students that *limitations* means “real or imaginary points beyond which a person or thing cannot go.” Explain to students that when they contemplate counterclaims, they are also assessing the strengths and limitations of the counterclaim in relation to the claim it opposes. In the context of argument, *limitations* may be points the author does not consider or does not develop fully or effectively. In considering a counterclaim, instruct students to evaluate how the counterclaim is limited as compared to the claim it opposes. Remember that identifying the limitations of a counterclaim can strengthen a claim and/or add to the persuasiveness of a text.

Display the following example of claim, counterclaim, evidence, and reasoning from the previous activity and model how to identify limitations:

- **Claim:** Climate has either “stimulatory effects” or “inhibitory effects” on human creativity and energy (p. 22).
- **Counterclaim:** “[T]he peoples of northern Europe contributed nothing of fundamental importance to Eurasian civilization until the last thousand years.” (p.22)
- **Evidence:** “The sole Native American societies to develop writing arose in Mexico south of the Tropic of Cancer; the oldest New World pottery comes from near the equator in tropical South America; and the New World society generally considered the most advanced in art, astronomy, and other respects was the Classic Maya society of the tropical Yucatan and Guatemala in the first millennium A.D.” (p. 22)
- **Reasoning:** People in Northern Europe “simply had the good luck to live in a geographic location where they were likely to receive advances (such as agriculture, wheels, writing, and metallurgy) developed in warmer parts of Eurasia” (p. 22).
- **Limitation:** The limitation of this counterclaim is that it is constructed entirely around Diamond’s opinion of what an “importan[t]” “contribut[ion]” (p. 22) is. Not everyone may share his viewpoint, and since his opinion about what constitutes an “importan[t]” “contribut[ion]” (p. 22) cannot be formally measured or evaluated, the counterclaim is ineffective in disproving the claim.

Inform students that pointing out the *limitations* of a counterclaim is about finding flaws or weaknesses in the counterclaim.

- ▶ Students listen and follow along with the modeling.

Instruct student pairs to review the counterclaim, reasoning, and evidence they identified in the previous activity and analyze the possible limitations of the counterclaim.

① Consider drawing students' attention to their application of SL.11-12.1 through the process of participating effectively in a range of collaborative discussions.

💬 Student responses may include:

- **Counterclaim:** “[M]any or most inventions were developed by people driven by curiosity or by a love of tinkering in the absence of any initial demand for the product they had in mind.” (p. 232)
- **Limitation:** A limitation of this counterclaim is that rather than being based on fact, it is built on a generalized statement that begins with “many or most,” which reflects uncertainty (p. 232). It also rests on the unsupported assumption that “curiosity” and “a love of tinkering” motivates inventors (p. 232).
- **Counterclaim:** “None of the crucial developments preceding political centralization in those same parts of the world were associated with river valleys or with complex irrigation systems.” (pp. 22–23)
- **Limitation:** The limitation of this counterclaim is its lack of specific supporting evidence. Diamond references “crucial developments” and “those same parts of the world,” but does not explain what “developments” he refers to or precisely what “parts of the world” his counterclaim is speaking about (p. 22). This lack of evidence leaves the reader to make assumptions to fill in these gaps, thus making the counterclaim less effective.

① Students will consider strengths and limitations of claims and counterclaims in their own writing in 12.3.2.

Activity 5: Quick Write

15%

Instruct students to respond briefly in writing to the following prompt:

Explain how one of the author's counterclaims contributes to the persuasiveness of the text.

Instruct students to look at their annotations to find evidence. Ask students to use this lesson's vocabulary wherever possible in their written responses.

- ▶ Students listen and read the Quick Write prompt

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from the text.
- 💬 See the High Performance Response at the beginning of this lesson.

- ① Consider using the Short Response Rubric to assess students' writing. Students may use the Short Response Rubric and Checklist to guide their written responses.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to continue to conduct pre-searches for their 2–3 areas of investigation to gather potential sources for their research. Instruct students to find three more potential sources for at least one area of investigation and record the following information: author's name, issue, source, location, publication date, and general content/key ideas.

- ▶ Students follow along.

Homework

Continue to conduct pre-searches for your 2–3 areas of investigation to gather potential sources for research. Find three more potential sources for at least one area of investigation and record the following information: author's name, issue, source, location, publication date, and general content/key ideas.

12.3.1**Lesson 14****Introduction**

In this lesson, students transition from analyzing the seed text, *Guns, Germs, and Steel*, to focusing solely on the research process initiated in earlier lessons.

Students begin the lesson by learning more about the research process. Students discuss possible ways to organize the materials they will gather during 12.3.1, and select one method of organization to support their research process. Next, using the Area Evaluation Checklist, students vet their 2–3 possible areas of investigation and independently select an area of investigation to research. Student learning is assessed via a Quick Write at the end of the lesson: Describe how you arrived at your specific area of investigation through the vetting process you conducted in the lesson. Explain how the Area Evaluation Checklist led you to select your specific area of investigation.

For homework, students reflect on their research processes completed during the lesson and complete a multimedia journal entry in response to the following prompt: How have you decided to organize your research and why? Why is your selected area of investigation compelling to you, and why is it worth investigating? Additionally, instruct students to search for two sources related to their selected area of investigation. Instruct students to prepare to discuss how the two sources connect to their selected area of investigation in the following lesson, 12.3.1 Lesson 15.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| Addressed Standard(s) | |
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.</p> <ul style="list-style-type: none"> Describe how you arrived at your specific area of investigation through the vetting process you conducted in the lesson. Explain how the Area Evaluation Checklist led you to select your specific area of investigation. <p><i>Student responses are assessed using the Area Evaluation Checklist.</i></p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Describe how you arrived at your specific area of investigation through the vetting process you conducted in the lesson (e.g., I chose the area of investigation of increasing wealth in developing nations because there are many perspectives and possible solutions regarding the issue, because it has a large scope for argument-based research, and because of its impact on the world). Explain how the Area Evaluation Checklist led you to select your specific area of investigation (e.g., Using the Area Evaluation Checklist, I was able to evaluate and compare the different areas of investigation, and select the strongest one for research. The area of investigation of increasing wealth in developing nations is the strongest because the area leads to interesting questions, like “What is the relationship between the financial security of individuals and a nation’s economy?” Additionally, the area of investigation supports a rich research-based argument that contains varied and compelling claims, such as how investment in human capital, like education or health care, improves economic prosperity, or how investment in technology increases wealth in developing nations.). |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.7, W.11-12.4 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Introduction to Research Process and Resources 4. Vetting Areas of Investigation 5. Quick Write 6. Closing | <ol style="list-style-type: none"> 1. 5% 2. 10% 3. 30% 4. 35% 5. 15% 6. 5% |

Materials

- Students' 2–3 areas of investigation (refer to 12.3.1 Lesson 9)
- Copies of the Area Evaluation Checklist for each student (at least three blank copies)
- Binders or electronic folders (for the Research Portfolio) (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: W.11-12.7. In this lesson, students learn more about the research process. First, students discuss and select how they will organize the research materials from the first half of the unit and the materials that will be distributed and gathered in this portion of the unit. Next, using the Area Evaluation Checklist, students vet their 2–3 possible areas of investigation they identified in 12.3.1 Lesson 9, and independently select a specific area of investigation. The lesson concludes with a Quick Write, in which students discuss their area of investigation and how they selected it using the Area Evaluation Checklist.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Continue to conduct pre-searches for your 2–3 areas of investigation to gather potential sources for research. Find three more potential sources for at least one area of investigation and record the following information: author's name, issue, source, location, publication date, and general content/key ideas.) Instruct students to form pairs and discuss the sources they found and how they relate to their areas of investigation.

- 💬 Student responses vary according to the research conducted.

① Consider collecting the homework to assess students' research progress.

Activity 3: Introduction to Research Process and Resources

30%

Explain to students that they are going to continue the research process they began in the first half of 12.3.1. Remind students that in the earlier portion of 12.3.1 they engaged in surfacing issues and narrowing those issues into two to three possible areas of investigation. Inform students that in the second half of 12.3.1, they will narrow the 2–3 possible areas of investigation into a specific debatable issue that is known as an *area of investigation*. Students then refine this area of investigation further by developing a problem-based question to guide the research and use the gathered evidence to inform and develop a perspective on the issue.

Begin by discussing the nature of inquiry-based research. Explain to students that researchers follow a general iterative process and use tools and strategies to find, analyze, and organize information from sources that they read. Effective researchers follow the data, which enables them to consider multiple perspectives. Researchers conduct research to discover new information, develop new ideas, and draw conclusions along the way. Reiterate that students should not go into the research with pre-established claims on a given research issue, but should keep an open mind and evaluate all the evidence as they engage in research.

Explain to students that there are multiple steps in the process and many of the steps are repeated; this type of research is not a sequential list of steps but a cyclical and iterative process, during which new directions and paths can be created at different points in the process.

- ▶ Students listen.

① **Differentiation Consideration:** Consider providing students with the following definition: *iterative* means “involving repetition relating to an operation or procedure.”

Explain to students that research is a form of exploration. Students learn to use skills like asking questions, conducting inquiries, and gathering reliable information. They learn how to organize, make connections, and analyze the information they gather. These processes show students how to deepen their understanding of a specific area of investigation. Through exploration, students develop a problem-based question to explore multiple arguments and finally develop a perspective of their own about an issue.

- ▶ Students listen.

Inform students that throughout the research process they create and use a structured organizational system for annotating, recording notes, analyzing sources, and sorting information such as handouts, tools, checklists, and sources.

Ask students to Turn-and-Talk with a peer to answer the following question:

What are the different ways in which you can organize your research and accompanying information?

💬 Student responses may include:

- A research portfolio, or a binder with sections for articles, sources, drafts, and other information relevant to the research process
- An electronic folder on a flash drive, in which all downloaded articles, drafts, hyperlinks, and other information relevant to the research process may be stored
- A hybrid process: a binder with printed and marked-up articles, drafts, and other information, as well as an electronic folder that contains drafts and links to sources
- An online portfolio using GoogleDocs or another cloud-based storage application, in which articles, hyperlinks, and drafts can be stored and shared with teachers and peers

Lead a brief whole-class discussion of student responses.

Ask students to Turn-and-Talk with a peer to answer the following question.

Which organizational format will work best for your research process and why?

💬 Student responses vary.

- ① **Differentiation Consideration:** If students need support in creating an organizational system, consider instructing them how to construct a Research Portfolio. Describe the sections of the Research Portfolio:
- Section 1: Defining an area of investigation – This section stores all the work you do exploring the issue and choosing an area of investigation.
 - Section 2: Gathering and analyzing information – This section stores all the information you gather throughout your investigation. It also stores your notes and analysis of sources.
 - Section 3: Drawing conclusions – This section stores your evidence-based claims about inquiry questions and inquiry paths, and the evidence-based perspective that you come to at the end of your inquiry.
 - Section 4: Discarded material – This section stores all the sources and analysis that you have discarded throughout your investigation. The purpose of this section is to keep a record of discarded materials until the end of the research process in case you change your mind and want to use them.
- ① Consider having students use a form of electronic folders or other technological media to house and manage their research materials.

Activity 4: Vetting Areas of Investigation

35%

Instruct students to take out their 2–3 areas of investigation from 12.3.1 Lesson 9 and distribute the Area Evaluation Checklist. Inform students that they must narrow down the 2–3 areas of investigation they crafted in the 12.3.1 Lesson 9 into an area of investigation that guides their inquiry for the rest of 12.3.1. Explain to students that they should use the Area Evaluation Checklist to vet their areas of investigation, so they can craft and select an area of investigation that sustains effective research for the duration of 12.3.1.

- ▶ Students take out and examine their 2–3 possible areas of investigation and the Area Evaluation Checklist.
- ① Distribute at least two blank copies of the Area Evaluation Checklist. Students need to complete a checklist for each area of investigation from 12.3.1 Lesson 9.
- ① **Differentiation Consideration:** Consider providing students with the following definition: *vet* means “to appraise, verify, or check for accuracy, authenticity, or validity.”

Show students how to use the Area Evaluation Checklist, using the following three areas of investigation as a model (based on the work from 12.3.1 Lesson 9):

- Area of investigation: increasing wealth in developing nations

- Area of investigation: the impact of technological diffusion (the Internet) on geographical isolation
 - Area of investigation: intellectual property laws and innovation
 - ▶ Students listen.
- ① Consider displaying the three model areas of investigation. Remind students that their areas of investigation should be different from these, and they should have 2–3 of their own, based on their pre-search work in earlier lessons, particularly 12.3.1 Lesson 9.

Model for students how to use the Area Evaluation Checklist to vet one of the model areas of investigation just discussed.

Inform students that they are going to assess their 2–3 areas of investigation using the Area Evaluation Checklist. Explain that the area of investigation they will see modeled for vetting is “increasing wealth in developing nations.”

- ▶ Students listen and follow along with the modeling.

① Consider displaying the Area Evaluation Checklist to show students the modeling.

Explain to students that the first part of the Area Evaluation Checklist calls for the researcher to articulate clearly his/her area of investigation in a way that others understand and that makes sense. The area of investigation should demonstrate that the researcher has a coherent vision of his/her area of investigation. For example, “My area of investigation is increasing wealth in developing nations.”

- ▶ Students listen and follow along with the modeling.

Explain to students that the second part of the Area Evaluation Checklist calls for the researcher to consider what thoughtful questions are necessary in order to explore deeply the area of investigation. These questions should allow for extensive research of the area of investigation using available resources that are credible and academic in nature. Some of these questions may include:

What is the relationship between the financial security of individuals and a nation’s economy?

What factors affect economic prosperity in developing nations?

What is the most effective way for a developing nation to increase its economic standing?

Why are developed nations wealthier than developing nations?

What are some ways in which formerly developing nations have increased their economic standing?

- ① Although these sample questions are focused on the issue of global wealth and power distribution, consider reminding students they may draw on a wide range of other types of issues surfaced from *Guns, Germs, and Steel*.

① Explain to students that they will discuss source credibility further in 12.3.1 Lesson 16.

Explain to students that the questions above allow for interesting and rich research in the area of investigation and contribute to a deeper understanding about it.

- ▶ Students listen and follow along with the modeling.

① Consider engaging students in the model vetting process by asking for additional questions that would lead to an understanding of the model area of investigation.

Explain to students that the third part of the Area Evaluation Checklist calls for an explanation of how the area of investigation is relevant to a larger issue and whether it supports argument. Remind students that at the beginning of the research process, one of the issues surfaced in *Guns, Germs, and Steel* was Yali's question about wealth and power distribution across different nations. The model area of investigation was derived from the issue of global wealth and power distribution. The question of how developing nations can increase their own wealth may support multiple claims since it was not resolved in the text.

- ▶ Students listen and follow along with the modeling.

Explain to students that the fourth part of the Area Evaluation Checklist calls for the researcher to illustrate the reason for his/her curiosity and why the issue is valuable to explore. Explain to students that one reason a researcher may be interested in this issue is because many nations, primarily developing nations, struggle to attain a level of economic prosperity similar to that of developed nations.

- ▶ Students listen and follow along with the modeling.

The last section asks students to evaluate their answers in the previous boxes and determine whether they want to select this area of investigation as their focus for research.

What does it mean to evaluate the strength of an area of investigation?

💬 Student responses may include:

- Determine if there are multiple claims about the issue.
- Decide whether there is enough about the area of investigation to investigate.
- Determine whether there is a basic understanding of the issue.
- Ensure there is interest in the issue.

Next, model for students how to evaluate and select the potential area of investigation by writing on the bottom of the Area Evaluation Checklist: "In *Guns, Germs, and Steel*, Jared Diamond explores the idea of global economic inequity, and my research will explore this issue further using modern-day examples. This area of investigation is strong and appropriate for further research because its answer has far-reaching consequences, including finding possible answers that will help developing nations improve their economic status. Also, there is no clearly defined solution at this point, though there are multiple

perspectives and claims about this issue, including the value of investing in technology and human capital, particularly women, to increase prosperity. I plan to select this as my area of investigation.”

► Students follow along with the modeling.

① Remind students that an area of investigation provides multiple claims about a debatable issue.

① Consider modeling how to vet one of the other two model areas of investigation from 12.3.1 Lesson 9. Students may benefit from seeing multiple areas of investigation vetted to craft the richest areas of investigation possible.

① Consider providing the definition of *human capital*: “the collective skills, knowledge, or other intangible assets of individuals that can be used to create economic value for the individuals, their employers, or their community.”

Instruct students to vet their 2–3 areas of investigation from 12.3.1 Lesson 9 independently, using the Area Evaluation Checklist.

► Students independently vet their areas of investigation using the Area Evaluation Checklist.

① Students need one Area Evaluation Checklist for each area of investigation.

Explain to students that they should now decide which vetted area of investigation produces the richest and most interesting area of investigation for exploration/research. Instruct students to examine their Area Evaluation Checklists for each area of investigation.

► Students examine the Area Evaluation Checklists and select an area of investigation.

Instruct students to form pairs and discuss their selected areas of investigation.

💬 Student responses may include:

- The impact of technological diffusion (the Internet) on geographical isolation interests me because the Internet plays a vital role in connecting our global society. My pre-searches revealed multiple perspectives on this issue, from entrepreneurs who want to wire the entire world to some nations who want to keep themselves off the grid. The cost to invest in Internet infrastructure is high, so this question of whether or not it is valuable and beneficial to connect those nations not currently connected to the web is an important one.
- During the pre-searches, I learned some of the background knowledge necessary to support my understanding of this issue, such as what constitutes intellectual property and how it is protected in the United States and the United Kingdom, and learning the differences

between trademarks, patents, and copyrights. Several important terms related to this issue are *open innovation*, *interoperability*, and *commercial advantage*. This issue is currently unresolved and is worth investigating because innovation is one of the key factors in the economic success of a nation. I plan to select “intellectual property laws and innovation” as my area of investigation.

Lead a brief whole-class discussion of students’ areas of investigation.

- ① Consider displaying students’ names and areas of investigation so that students can identify and reach out for support from peers working with related areas of investigation.
- ① Students have encountered various academic and domain-specific words as they conducted their individual pre-searches earlier in 12.3.1. Consider having peers define or explain these words as needed when discussing their selected areas of investigation.

Activity 5: Quick Write

15%

Instruct students to respond briefly in writing to the following prompt:

Describe how you arrived at your specific area of investigation through the vetting process you conducted in the lesson. Explain how the Area Evaluation Checklist led you to select your specific area of investigation.

Remind students to practice the skills outlined in W.11-12.4, to which they were introduced in 12.1.1 Lesson 2. Instruct students to use the Area Evaluation Checklist to guide their written responses.

- ① If necessary, consider reviewing the components of W.11-12.4, which include producing clear, coherent writing that employs organization and style appropriate to the task, purpose, and audience.
 - ▶ Students listen and read the Quick Write prompt.
- ① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from the Area Evaluation Checklist.
- 🗨 See the High Performance Response at the beginning of this lesson.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to reflect on their research processes completed during the lesson and complete a multimedia journal entry in response to the following prompt:

How have you decided to organize your research and why? Why is your selected area of investigation compelling to you, and why is it worth investigating?

Additionally, instruct students to search for two sources related to their selected area of investigation. Instruct students to prepare to discuss how the two sources connect to their selected area of investigation in the following lesson, 12.3.1 Lesson 15.

- ▶ Students follow along.

Homework

Reflect on your research process completed during the lesson and complete a multimedia journal entry in response to the following prompt:

How have you decided to organize your research and why? Why is your selected area of investigation compelling to you, and why is it worth investigating?

Additionally, search for at least two more sources related to your area of investigation. Prepare to discuss how the two sources connect to your selected area of investigation in the following lesson, 12.3.1 Lesson 15.

Area Evaluation Checklist

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Vet 2–3 areas of investigation using the following checklist. Check areas that meet the checklist’s criteria and include an explanation in the comments section.

| Area Evaluation Checklist | | ✓ | Comments |
|--|--|--------------------------|----------|
| I. COHERENCE OF AREA What is the area of investigation? | The researcher can speak and write about the area of investigation in a way that makes sense to others and is clearly understood. | <input type="checkbox"/> | |
| II. SCOPE OF AREA What do you need to know to gain an understanding of the area of investigation? | The questions necessary to investigate for gaining an understanding require more than a quick review of easily accessed sources. The questions are reasonable enough so that the researcher is likely to find credible sources that address the issue in the time allotted for research. | <input type="checkbox"/> | |
| III. RELEVANCE OF AREA TO ARGUMENT Are there multiple claims that compose the area of investigation? | The area of investigation is relevant to an argument because multiple claims can be made about that area of investigation. | <input type="checkbox"/> | |
| IV. INTEREST IN AREA Why are you interested in this area of investigation? | The researcher is able to communicate genuine interest in the area of investigation. Gaining an understanding of the area would be valuable for the student. | <input type="checkbox"/> | |

Evaluate the strength of your selected area of investigation. Explain whether you plan to use this as your final issue and explain why or why not.

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Model Area Evaluation Checklist

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Vet 2–3 areas of investigation using the following checklist. Check areas that meet the checklist’s criteria and include an explanation in the comments section.

| Area Evaluation Checklist | | ✓ | Comments |
|--|--|--------------------------|---|
| I. COHERENCE OF AREA What is the area of investigation? | The researcher can speak and write about the area of investigation in a way that makes sense to others and is clearly understood. | <input type="checkbox"/> | Increasing wealth in developing nations |
| II. SCOPE OF AREA What do you need to know to gain an understanding of the area of investigation? | The questions necessary to investigate for gaining an understanding require more than a quick review of easily accessed sources. The questions are reasonable enough so that the researcher is likely to find credible sources that address the issue in the time allotted for research. | <input type="checkbox"/> | Quite a few questions would work for this area of investigation, including the following: What is the relationship between the financial security of individuals and a nation’s economy? What factors affect wealth in developing nations? What is the most effective way for a developing nation to increase its economic standing? Why are developed nations wealthier than developing nations? |
| III. RELEVANCE OF AREA TO ARGUMENT Are there multiple claims that compose the area of investigation? | The area of investigation is relevant to an argument because multiple claims can be made about that area of investigation. | <input type="checkbox"/> | Several claims about this area of investigation exist, such as investment in human capital, specifically women, improves economic prosperity, or that investment in technology increases wealth in developing nations. |
| IV. INTEREST IN AREA Why are you interested in this area | The researcher is able to communicate genuine interest in the area of investigation. Gaining an understanding of the area would be | <input type="checkbox"/> | The area of investigation interests me because many developing nations struggle to attain economic equality with |

| | | |
|-------------------|---------------------------|---|
| of investigation? | valuable for the student. | developed nations. Identifying the best way to increase wealth in developing nations is a worthwhile pursuit. |
|-------------------|---------------------------|---|

Evaluate the strength of your selected area of investigation. Explain whether you plan to use this as your final issue and explain why or why not.

In *Guns, Germs, and Steel*, Jared Diamond explores the idea of global economic inequity, and my research will explore this issue further using modern-day examples. This area of investigation is strong and appropriate for further research because its answer has far-reaching consequences, including finding possible answers to help developing nations improve their economic status. Also, there is no clearly defined solution at this point, though there are multiple perspectives and claims about this issue, including the value of investing in technology and human capital, particularly women, to increase prosperity, so I plan to select this as my area of investigation

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12.3.1**Lesson 15****Introduction**

In this lesson, students learn how to generate specific inquiry questions to frame their research. Students were introduced to inquiry questions in the first half of 12.3.1. In this lesson, they learn how to craft specific inquiry questions for their selected areas of investigation developed in 12.3.1 Lesson 14.

In the beginning of the lesson, students engage in a research process check-in, during which they review the Student Research Plan Handout. This plan serves as a guide to the research process and a place to reflect on next steps. Next, students review inquiry questions from previous lessons and help generate inquiry questions for their peers' areas of investigation. Individually, students use a Specific Inquiry Questions Checklist to vet the inquiry questions brainstormed by their peers and finalize a list of at least 5 specific inquiry questions that guide their research. Student learning is assessed via two specific inquiry questions generated during this lesson that guide student research.

For homework, students continue to craft, vet, and refine 5 additional specific inquiry questions for their areas of investigation using the Specific Inquiry Questions Checklist. Additionally, students search for at least two more sources related to their area of investigation and prepare to discuss how the two sources connect to their selected area of investigation in the following lesson, 12.3.1 Lesson 16.

Standards

| Assessed Standard(s) | |
|-----------------------|---|
| RI.11-12.1.a | Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain. a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s). |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| Addressed Standard(s) | |
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in |

| | |
|--|--|
| | groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. |
|--|--|

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via two specific inquiry questions generated during this lesson that guide student research.</p> <p>① The inquiry questions developed depend on students' specific areas of investigation. Students' two specific inquiry questions are assessed using the Specific Inquiry Questions Checklist criteria.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Align to the criteria detailed in the Specific Inquiry Questions Checklist. See Model Specific Inquiry Questions Checklist for a High Performance Response. <p>① See Model Specific Inquiry Questions Checklist at the end of the lesson.</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards: <ul style="list-style-type: none"> Standards: RI.11-12.1.a, W.11-12.7, SL.11-12.1 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Student Research Plan 4. Inquiry Questions Review 5. Small-Group Brainstorm 6. Vetting Specific Inquiry Questions 7. Finalizing Specific Inquiry Questions and Assessment 8. Closing | <ol style="list-style-type: none"> 1. 5% 2. 10% 3. 10% 4. 10% 5. 25% 6. 20% 7. 15% 8. 5% |

Materials

- Copies of the Student Research Plan Handout for each student
- Copies of the Specific Inquiry Questions Checklist for each student

① Differentiation Consideration: Student copies of the Posing Inquiry Questions Handout (refer to 12.3.1 Lesson 4)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ▶ | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ① | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standards for this lesson: RI.11-12.1.a and W.11-12.7. In this lesson, students learn how to generate specific inquiry questions to frame their research. First, students engage in a research process check-in and review the Student Research Plan Handout. Then, students work in small groups to help generate specific inquiry questions for their peers' areas of investigation. Using the Specific Inquiry Questions Checklist to vet the brainstormed inquiry questions, students finalize a list of at least 5 specific inquiry questions to guide their research. Students turn in two of these specific inquiry questions for assessment purposes.

- ① Consider reminding students of their work with RI.11-12.1.a in 12.3.1 Lesson 4, in developing factual, interpretive, and evaluative questions for further exploration of an issue.
- ① Consider reminding students of their work with W.11-12.7 in 12.3.1 Lesson 9 and Lesson 14, in conducting research to answer a question and narrowing or broadening inquiry when appropriate.
 - ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the first part of the previous lesson's homework assignment. (Reflect on your research processes completed during the lesson and complete a multimedia journal entry in response to the following prompt: How have you decided to organize your research and why? Why is your selected area of investigation compelling to you, and why is it worth investigating?) Instruct students to talk in pairs about their responses to their multimedia journal entry.

💬 Student responses vary according to the research conducted.

- ① Consider checking in with students on an individual basis during the research process to formatively assess their application of research skills and offer targeted feedback.

Instruct students to take out their responses to the second part of the previous lesson's homework assignment. (Continue to search for at least two more sources related to your area of investigation. Prepare to discuss how the two sources connect to your selected area of investigation for the following lesson.) Instruct students to talk in pairs about two sources they identified and explain how the two sources connect to their area of investigation.

💬 Student responses vary based on individual research, but may include:

- My area of investigation is "The impact of technological diffusion (the Internet) on geographical isolation." The first source is on the BBC website and is called "The Last Places on Earth without the Internet." This article describes a significant divide in Internet usage between connected nations and those that are geographically isolated, and provides

- information about how companies like Google and O3b networks have projects to bring the Internet to those who are geographically isolated. This article is interesting because it describes access to the Internet as not being completely positive. At the end, the author states that “the tendrils of the ultimate network are ... difficult to escape.” The second article is from the McKinsey Institute and it is much more positive about Internet expansion in geographically isolated nations. It is from 2011 and describes how the Internet is responsible for 3.4% of the GDP in developed economies. It also describes how the Internet “drives business transformation and economic modernization.”
- My area of investigation is “intellectual property laws and innovation.” Although I found a large number of sources, two of them really grabbed my attention. The first is from a paper written by Bronwyn H. Hall and prepared for Microsoft. This paper first defines the terms “open source” and “intellectual property,” and then specifically describes the push and pull of each idea—open source and intellectual property protection—on innovation. The second is a research study that I found in a journal called *The Journal of Political Economy*, but this paper was too complex; so instead, I found a *Science Daily* article based on the research in that study. The takeaway from the study is that intellectual property laws can actually reduce innovation by 20–30%, because the laws create too many restrictions for new innovations to spread easily into the market.

- ① Consider collecting the homework to assess students’ research progress.
- ① Throughout the rest of 12.3.1, sample student responses will come from the model areas of investigation first discussed in 12.3.1 Lesson 9. These sample responses will demonstrate how a variety of issues could have been derived from *Guns, Germs, and Steel*.

Activity 3: Student Research Plan

10%

Distribute the Student Research Plan Handout to each student. Explain that the Student Research Plan Handout can be used when students complete their multimedia journal entries or to reflect on their progress as they complete steps in the research process.

Explain to students that this plan helps them track their research progress by describing the research process outcomes at each step. Remind students that the research process is iterative. There are specific steps that are “completed,” but many steps in the process need to be repeated or revisited because research develops and builds on itself and can lead to different paths that may need to be explored.

- ▶ Students listen and examine the Student Research Plan Handout.

Instruct students to examine Part 1 of the Student Research Plan Handout. Remind students that some of these research processes were conducted in earlier lessons in the first half of 12.3.1, such as surfacing issues, developing potential inquiry questions, pre-searches, and crafting areas of investigation.

- ▶ Students examine Part 1 of the Student Research Plan Handout.

① Students may use the Student Research Plan Handout as a guide for the reflective multimedia journal entries they create over the course of 12.3.1.

Instruct students to keep the Student Research Plan Handout in their research materials and refer to it as necessary as they progress with their research during 12.3.1.

- ▶ Students file their Student Research Plan Handouts in their research materials.

Activity 4: Inquiry Questions Review

10%

Instruct students to Turn-and-Talk to review their inquiry questions by answering the following question:

What are key components of effective inquiry questions?

💬 Student responses may include:

- The questions should lead to rich and relevant knowledge and information.
- They should be questions you want to answer.
- They are questions that can be explored through research.
- They should be questions that are clear and easily understood.
- The questions should lead to more questions.
- They are questions to which you do not already know the answer.

① **Differentiation Consideration:** If students need help with this review, instruct them to refer to the Posing Inquiry Questions Handout from 12.3.1 Lesson 4.

① **Differentiation Consideration:** Consider writing notes from the discussion for students to see and apply during the small-group brainstorm.

Remind students that they posed inquiry questions earlier in 12.3.1 Lesson 4 as an exploratory process to identify general areas of interest and confirm that an area of investigation could be supported through research. Those questions were more general in nature. Now that students have established an area of investigation, the role and nature of the inquiry questions will change, becoming more specific and serving as the “frame” to guide the exploration of the area of investigation. Explain to students that the focus of the next activity, the small-group brainstorm, is to generate inquiry questions. Students should try to think about specific inquiry questions, but the goal of the brainstorm is to generate a large number of questions. Later in the lesson, students will vet the questions for specificity.

- ▶ Students listen.

Explain to students that throughout the rest of 12.3.1, the class will use the “Increasing wealth in developing nations” area of investigation to model the research process. Inform students that this area

of investigation is a model only and that they are required to follow their own inquiries as established by the area of investigation they selected in the previous lesson. Instruct students to form pairs to Turn-and-Talk about three possible inquiry questions that might frame effective research for this model area of investigation.

💬 Student responses may include:

- What factors affect developing nations' wealth?
- What is the relationship between the financial security of individuals and a nation's economy?
- What is the most effective way for a developing nation to increase its economic standing?
- How does a nation increase its global standing?
- Can investment in women really improve the overall wealth of a nation?

Lead a whole-class discussion about possible inquiry questions and write them on the board or chart paper as examples for students to see.

① At this point in the lesson, the sample student responses do not need to be ideal inquiry questions. Later in the lesson, students vet questions and refine them into stronger and more specific inquiry questions that yield more than yes/no answers.

Activity 5: Small-Group Brainstorm

25%

Inform students they are going to participate in a small-group brainstorm to help them generate inquiry questions that explore as many potential aspects of their individual area of investigation as possible. The goal is for each student to walk away from the brainstorm with a plentiful number of questions that can later be condensed and refined to frame their specific area of investigation. Remind students that the questions could be seeking factual answers, explanation, understanding, evaluation, or a combination of some or any of these.

Explain the directions for the small-group brainstorm. Each student in the small group presents his or her area of investigation to the group. The group then generates as many inquiry questions as possible for that student's area of investigation. The student presenting an area of investigation records all the questions the group has brainstormed. The process continues until all students have presented their individual areas of investigation and the rest of the group has brainstormed questions.

▶ Students listen.

① Consider reminding students that in this lesson, they continue the work of collaborative discussion outlined in SL.11-12.1, taught in previous modules and in earlier lessons in 12.3.1.

Instruct students to transition into small groups and complete the inquiry question brainstorm for each student in the group.

💬 Student questions vary based on individual areas of investigation.

- ① **Differentiation Consideration:** Students learned about crafting inquiry questions in 12.3.1 Lesson 4. However, if students struggle during the small group activity to brainstorm effective inquiry questions, consider providing the Specific Inquiry Questions Checklist to support students who are struggling. Recommend that students consider the checklist's criteria when brainstorming possible inquiry questions.
- ① Encourage students to build on and borrow questions from each other as they brainstorm. Many questions may be related since all of the students generated their areas of investigation from *Guns, Germs, and Steel*.
- ① Consider explaining to students that they should not worry about the specificity of the questions right now. For the purpose of the small-group brainstorm, students need to help their peers generate as many inquiry questions as possible for their areas of investigation.
- ① Consider placing students in small groups that should remain consistent throughout Module 12.3. It may be helpful to form groups ahead of time to maximize the range of different research issues and questions within each group. The goal of these groups is to create small communities of inquiry/research teams that provide support and are accountable to one another. Students should know about their teammates' areas of investigation. Students should share claims and evidence that arise from their individual inquiries and learn from each other's research processes, which they may potentially use to refine their own areas of investigation and inquiry questions.

Activity 6: Vetting Specific Inquiry Questions

20%

Transition students into a whole-class discussion and distribute the Specific Inquiry Questions Checklist to each student. Explain to students that in this part of the lesson they use the Specific Inquiry Questions Checklist to vet, select, and refine at least 5 specific inquiry questions from the previous small-group brainstorm activity.

- ▶ Students listen and examine the Specific Inquiry Questions Checklist.

Model for students how to use the Specific Inquiry Questions Checklist. Post or project the following question brainstormed in the Inquiry Questions Review (Activity 4):

What factors affect developing nations' wealth?

Model for students how to evaluate the question using the Specific Inquiry Questions Checklist.

Instruct students to look at criterion number 1: "Does the question have an appropriate scope or purpose? Does it focus on an important aspect of the area of investigation?" Explain to students that this question focuses on an aspect of the area of investigation because it asks about the factors that affect developing nations' wealth. However, it may not have an appropriate scope because the response may simply

generate a list of factors. A way to revise this question would be to focus on a single factor and its effect on a single nation's wealth.

Instruct students to look at criterion number 2 on the Specific Inquiry Questions Checklist: "Is the question useful? Will it lead to meaningful inquiry?" Explain to students that the question is useful, and will likely lead to further inquiry. For example, students may identify a number of factors, and then pose more questions about how the different factors affect wealth and which factor is most effective or efficient in increasing a nation's wealth. For example:

"How can education be used to develop a more high-functioning workforce?"

"How can technology increase developing nations' participation in global economics?"

"How can healthcare improve a developing nation's economy?"

Instruct students to look at criterion number 3: "Is the question answerable through research?" Explain to students that this question is answerable through research. Researchers could find information regarding cases in which developing nations gained more wealth, and these cases may include specific facts and statistics regarding the factors that positively affected their economies. They could also find theoretical models for increasing wealth in developing nations.

Instruct students to look at criterion number 4: "Is your question understandable or clear?" Explain to students that the question is clear and understandable because it is a simple, straightforward question that requires a factual response. It could, however, be narrowed to include a subset of factors, such as technological, political, or social factors.

Instruct students to look at criterion number 5: "Does your question require multiple answers and possibly more questions?" Explain to students that the question is likely to elicit multiple answers, including a wide variety of factors that impact wealth in developing countries. The answers could easily lead to more questions about each of the factors and their relative impact on nations' economies.

Instruct students to look at criterion number 6: "Is your question's answer unknown to you?" Explain to students that the answer to this question is partially known. Factors such as political structure, technological advantage, cultural knowledge, life expectancy, and rate of innovation, among other factors described at length in *Guns, Germs, and Steel*, impact the wealth of developing nations. However, how investment in one or more of these factors can impact the nation's economy is not known.

- ▶ Students follow along.

Ask students the following question:

How could you rephrase this question to generate richer inquiry?

☞ Student responses may include:

- How can investment in human capital affect a developing nation's economy?

- What factors contribute to increases in a nation's wealth?
- How can a developing nation stimulate its economy through technology?

Point out that the original question could be answered by a list of possible factors. Model for students how to tailor the inquiry question to make it more specific, to focus on an aspect of the model area of investigation, and to make it require more than a list of possible factors. Explain to students that a way to alter the question is to think about the type of answers they want. Beginning a question with the word *can* requires the answer to be yes or no. Beginning a question with *what* or *which* also limits the response to a single answer or list of words or terms. Changing the beginning of the question can alter the answer by giving you more information: How can investment in human capital affect a developing nation's economy?

- ▶ Students follow along.

Guide students through the Specific Inquiry Questions Checklist to vet the second inquiry question from Activity 4 (What is the relationship between the financial security of individuals and a nation's economy?) by having them check off the appropriate categories on their checklist.

- ▶ Students independently practice vetting the new inquiry question by using the Specific Inquiry Questions Checklist.

🗨 See the Model Specific Inquiry Questions Checklist for possible student responses.

- ① **Differentiation Consideration:** If students need additional support, consider having students practice in pairs vetting another question from the Inquiry Questions Review (Activity 4).

Activity 7: Finalizing Specific Inquiry Questions and Assessment

15%

Instruct students to individually examine their list of inquiry questions generated from the small-group brainstorm activity and use the Specific Inquiry Questions Checklist to select, vet, and refine at least 5 specific inquiry questions for assessment.

- ① This process is appropriate for a lesson assessment because students previously crafted inquiry questions in several lessons in the first half of 12.3.1.

Instruct students to choose two of the richest or strongest specific inquiry questions and copy the questions on a separate sheet of paper. Students will turn in this paper for their assessment.

- ▶ Students complete the inquiry question assessment.
- ① Assess each student's two specific inquiry questions using the language of the Specific Inquiry Questions Checklist to provide feedback.
- ① **Differentiation Consideration:** If students struggle to choose the richest or strongest specific inquiry questions, instruct them to think about choosing the inquiry questions that might lead to the richest inquiry or multiple sources of information.

Collect each student's two specific inquiry questions.

Instruct students to file the remaining specific inquiry questions in their research materials.

① The Specific Inquiry Checklist serves as the assessment for this lesson.

Activity 8: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to continue to craft, vet, and refine 5 additional specific inquiry questions for their areas of investigation using the Specific Inquiry Questions Checklist. Additionally, instruct students to search for at least two more sources related to their area of investigation. Inform students to prepare to discuss how the two sources connect to their selected area of investigation in the following lesson, 12.3.1 Lesson 16.

- ▶ Students follow along.

Homework

Continue to craft, vet, and refine 5 additional specific inquiry questions for your area of investigation using the Specific Inquiry Questions Checklist. Additionally, search for at least two more sources related to your area of investigation. Prepare to discuss how the two sources connect to your selected area of investigation in the following lesson, 12.3.1 Lesson 16.

Student Research Plan Handout

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

| Research process | Process outcomes | Associated materials | Standards |
|----------------------------------|--|--|---|
| Part 1: Initiating Inquiry | <ul style="list-style-type: none"> Generates, selects, and refines inquiry questions to explore issues Develops areas of investigation from the research-issue exploration Develops inquiry questions about areas of investigation Conducts pre-searches of areas of investigation Arrives at a research-based area of investigation by vetting areas of investigation Generates specific inquiry questions for the selected area of investigation | <ul style="list-style-type: none"> Surfacing Issues Tool (optional) Posing Inquiry Questions Handout Pre-Search Tool (optional) Area Evaluation Checklist Specific Inquiry Questions Checklist | W.11-12.7: Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| Part 2: Gathering Information | <ul style="list-style-type: none"> Plans for searches by determining key words/phrases and finding credible and relevant sources Assesses sources for how credible, relevant, and accessible they are Annotates sources and records notes that help answer the inquiry questions | <ul style="list-style-type: none"> Potential Sources Tool (optional) Assessing Sources Handout Taking Notes Tool (optional) Research Frame (optional) Conducting Independent Searches Checklist | W.11-12.7: Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |

| Research process | Process outcomes | Associated materials | Standards |
|--|---|--|---|
| | <ul style="list-style-type: none"> Evaluates arguments using an evidence-based arguments checklist Builds an initial Research Frame with a problem-based question to guide independent searches Conducts searches independently | <ul style="list-style-type: none"> Evidence-Based Arguments Checklist | W.11-12.8: Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
| Part 3: Organizing and Synthesizing Inquiry | <ul style="list-style-type: none"> Organizes, connects, and synthesizes evidence to develop evidence-based claims about inquiry questions and inquiry paths Further organizes, connects, and synthesizes evidence-based claims about inquiry paths and the problem-based question Reviews and synthesizes the research to develop a written evidence-based perspective | <ul style="list-style-type: none"> Forming Evidence-Based Claims Tool Organizing Evidence-Based Claims Tool Evidence-Based Claims Criteria Checklist Forming Counterclaims Tool Evidence-Based Perspective Rubric | W.11-12.7: Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |

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Specific Inquiry Questions Checklist

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Write 5 specific inquiry questions that relate to your research issue. Then vet each question using the 6 criteria below. Use the vetting process to help you revise and strengthen your specific inquiry questions.

Area of Investigation:

Question #1:

Question #2:

Question #3:

Question #4:

Question #5:

| Criteria | Q1 | Q2 | Q3 | Q4 | Q5 |
|--|----|----|----|----|----|
| 1. Does the question have an appropriate scope or purpose? (Does it focus on an important aspect of the area of investigation?) | | | | | |

| Criteria | Q1 | Q2 | Q3 | Q4 | Q5 |
|--|----|----|----|----|----|
| 2. Is the question useful? Will it lead to meaningful inquiry? | | | | | |
| 3. Is the question answerable through research? | | | | | |
| 4. Is the question understandable or clear? | | | | | |
| 5. Does the question require multiple answers and possibly more questions? | | | | | |
| 6. Is your question's answer unknown to you? | | | | | |

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Model Specific Inquiry Questions Checklist

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Write 5 specific inquiry questions that relate to your research issue. Then vet each question using the 6 criteria below. Use the vetting process to help you revise and strengthen your specific inquiry questions.

Area of Investigation: Increasing wealth in developing nations

Question #1: What factors affect developing nations' wealth?

Question #2: What is the relationship between the financial security of individuals and a nation's economy?

Question #3: What is the most effective way for a developing nation to increase its economic standing?

Question #4: How does a nation increase its global standing?

Question #5: Can investment in women really improve the overall wealth of a nation?

| Criteria | Q1 | Q2 | Q3 | Q4 | Q5 |
|---|---|--|---|--|--|
| 1. Does the question have an appropriate scope or purpose? (Does it focus on an important aspect of the area of investigation?) | Mostly. The question relates to the area of investigation. However, it may not have an appropriate scope because the response may simply generate a list of possible factors. The | Unsure. It seems like this question might have a predictable answer: If the citizens have financial security the overall economy will be prosperous because people can | Yes, this question has an appropriate scope and purpose. It focuses specifically on what nations can do to improve their economies. | No, this question is too broad. It is not limited to any particular factor and it is not clear what is meant by "global standing." | Yes, the question has an appropriate scope and purpose. It limits the inquiry to a specific aspect of developing wealth in a nation, investing in human capital, and specifically in |

| Criteria | Q1 | Q2 | Q3 | Q4 | Q5 |
|--|---|--|---|--|--|
| | question may need to be limited to a specific factor. | invest in the economy. Based on my pre-searches, though, the relationship is very complex and may yield interesting research. | | | women. |
| 2. Is the question useful? Will it lead to meaningful inquiry? | Yes, the question is useful, and will likely lead to further inquiry into the different factors. It will also allow for more questions about how each factor affects wealth and which is most effective or efficient in developing a nation's wealth. | This is a useful question because it is important to see the connections between individuals and the overall economy. If individuals are financially secure, the economy should be stronger because they will be able to spend money and buy from one another. | Maybe. This question is useful because many nations want to improve their economic standing. However, it may not lead to meaningful inquiry because it is about how the countries are ranked. It might be more useful to ask about the overall economy and leave economic standing out of it. | This question is similar to question #3, so I probably only need one of these questions. I could focus on the economic security of a country instead of global standing. | This question relates to the area of investigation, but it is probably not going to be very useful because it will yield a yes or no answer. |
| 3. Is the question answerable through research? | Yes, I could find information regarding cases in which developing | This question can probably be answered through research. I could find | Yes, it can be answered through research. I could identify several cases | Maybe, although it may be difficult to find data on a nation's "global | No, this is more difficult to research because it could only lead to opinions |

| Criteria | Q1 | Q2 | Q3 | Q4 | Q5 |
|---|--|---|--|---|--|
| | nations have experienced the effects of various factors on the economy. I could also find theoretical models for increasing wealth in developing nations that isolate specific factors to determine their effects. | information regarding cases in which nations made investments in improving the financial security of its citizens, and these cases may include specific facts and statistics to show the effect on the overall economy. | and determine which method was most effective for improving a country's economy. | standing," or how it achieves a better global standing. | about whether investment in women can or cannot improve the overall economy. I need to revise my question. |
| 4. Is the question understandable or clear? | Yes, the question is clear and understandable because it is a simple, straightforward question that requires a factual response. It could, however, be narrowed. | Although the question appears clear, the response may not be. The relationship may be complicated and may vary with other factors that I do not plan to investigate. | Yes, it is understandable and clear because it asks a direct, factual question about ways to improve an economy. | No, it is not clear what is meant by "global standing." I need to revise this question to be more specific. | Yes, it is understandable because it asks for a definitive answer. |

| Criteria | Q1 | Q2 | Q3 | Q4 | Q5 |
|--|--|--|---|---|---|
| 5. Does the question require multiple answers and possibly more questions? | Yes, this question does elicit multiple answers, including factors that impact wealth in developing countries, leading to more questions about each of the factors and their relative impact, positive or negative, on a nation's economy. | Yes, there are likely to be many answers to this question and it leads to questions about the relative value of investment in the financial security and wellbeing of individuals to the improvement of the overall economy. | This question appears to require only a single answer, though it will generate multiple perspectives. It does raise questions about the value of economic standing and the impact on a society when the nation does commit to economic improvement. | Somewhat, although it may not lead to more questions. There are probably many methods for improving the economy, wealth, or life expectancy of a nation's citizens, but not much inquiry about the "global standing" of the nation. | No, this question will only have two answers: yes or no. There are many perspectives on the answer to this question, though. I need to rephrase the question so it does not begin with "can." |
| 6. Is your question's answer unknown to you? | The answer to this question is partially known. How investment in one or more of these factors can impact the nation's economy is not known. | Yes, I do not know the answer. | Yes, I do not know the answer. | Yes, I do not know the answer. | The answer to this question is partially known based on my pre-searches. My sources identify investment in women as a powerful economic strategy. |

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12.3.1**Lesson 16****Introduction**

In this lesson, students continue to refine their inquiry questions as they begin to frame their research by planning for independent searches. Students learn how to select inquiry questions, plan search locations, and use key words and phrases to conduct effective and efficient research. Additionally, students learn how to assess sources formally for credibility, accessibility, and relevance.

Students search for credible, accessible, and relevant sources using key words or phrases from their selected inquiry question and record source information for promising sources. Throughout the lesson, teachers and students are encouraged to collaborate with librarians/media specialists as partners in the research process. Student learning is assessed via a Quick Write at the end of the lesson: Choose two potential sources for your area of investigation. Discuss the credibility of each potential source and describe how the sources demonstrate multiple perspectives on the selected area of investigation.

For homework, students evaluate three more potential sources and record information regarding how the sources either meet or do not meet the criteria for being credible, accessible, and relevant, using the Assessing Sources Handout as a guide. In addition, students complete another multimedia journal entry, responding to the following prompts: How has the process of assessing sources affected your potential resources and research process in general? What is your plan for finding more credible, accessible, or relevant resources if necessary?

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
| Addressed Standard(s) | |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry |

| | |
|--|---|
| | when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
|--|---|

Assessment

Assessment(s)

Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, using evidence from their research.

- Choose two potential sources for your area of investigation. Discuss the credibility of each potential source and describe how the sources demonstrate multiple perspectives on the selected area of investigation.
- ① Consider using the relevant portions of the 12.3.1 Research Rubric and Checklist to assess the Quick Write in this lesson.

High Performance Response(s)

A High Performance Response should:

- Identify two potential sources for your area of investigation and assess the credibility of each source (e.g., The first source is an article from 2012 posted on the website of the International Monetary Fund. This article is credible because it is recent and the authors are experts, as they are senior directors in related fields at the World Bank, a very well reputed organization. Also, the authors do not appear to be biased in their selection of facts; they provide facts that counter their argument, such as evidence that some aspects of the gender gap have closed in some countries. The second source is a fact sheet that was created by a non-expert but compiled from expert sources. The facts and statistics are current, from recently published sources. Based on the “Why Am I Doing This?” section of the website, the author may be biased towards proving that poverty is the most critical social ill.).
 - Describe how the sources demonstrate multiple perspectives on the selected area of investigation (e.g., The first source presents the solution that investment in the education, health, and independence of women will improve a developing economy. The second source does not present a specific solution, but explores different problems caused by poverty, such as access to clean water, education, child mortality, access to fuel, and debt. It also provides statistics that support a growing trend of inequality between the rich and poor.).
- ① The evidence in this High Performance Response came from model source #1: “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty (<http://www.imf.org/external/pubs/ft/fandd/2012/03/revenga.htm>), and model source #2:

“Poverty Facts and Stats” by Anup Shah (<http://www.globalissues.org/article/26/poverty-facts-and-stats>).

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|---|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.8, W.11-12.7 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Planning for Searches Assessing Sources Quick Write Closing | <ol style="list-style-type: none"> 10% 10% 25% 40% 10% 5% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (refer to 12.3.1 Lesson 3) (optional)
- Student copies of the Specific Inquiry Questions Checklist (refer to 12.3.1 Lesson 15)

- Copies of the Assessing Sources Handout for each student
- Copies of the Potential Sources Tool for each student (optional)
- Student copies of the 12.3.1 Research Rubric and Checklist (refer to 12.3.1 Lesson 9)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

10%

Begin by reviewing the agenda and assessed standard for this lesson: W.11-12.8. Students begin the lesson by learning how to select inquiry questions, plan search locations, and use key words and phrases to conduct effective and efficient research. Then, students learn how to assess sources formally for credibility, accessibility, and relevance.

- Students look at the agenda.

❗ **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard W.11-12.8. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

💬 Student responses should include:

- This standard is about gathering information from multiple sources.
- *Authoritative* looks like the word *authority*, so it must mean that the information is from a credible or academic source. The research must come from a location that has authority regarding the issue.

- Each source should be assessed to see if it relates to our individual areas of investigation. Each source needs to be *relevant*, which means that it should examine an aspect of the area of investigation or the whole area of investigation.
 - We should assess the strengths and limitations of each source for its potential to support the task and purpose of research, answer a problem-based question, and discover multiple perspectives about an issue, as well as inform the audience—those who will be reading the paper.
 - It is important not to cheat or plagiarize.
 - It is important to avoid overreliance on one single source, meaning there should be evidence from multiple sources.
- ① **Differentiation Consideration:** Consider providing students with the following definitions: *authoritative* means “substantiated or supported by documentary evidence and accepted by most authorities in a field” and *plagiarism* means “an act or instance of using or closely imitating the language and thoughts of another author without authorization, and the representation of that author's work as one’s own, as by not crediting the original author.”
- ① In the following unit, 12.3.2, students learn more about the importance of citations and how to use citations to avoid plagiarism when they write.

Explain to students that the standard W.11-12.8 works together with W.11-12.7 to guide the inquiry-based research conducted in 12.3.1.

► Students listen.

- ① Standard W.11-12.7 was introduced in 12.3.1 Lesson 9. Consider engaging students in a brief discussion of the relationship between W.11-12.8 and W.11-12.7.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the first part of the previous lesson’s homework assignment. (Continue to craft, vet, and refine 5 additional specific inquiry questions for your area of investigation using the Specific Inquiry Questions Checklist.) Instruct students to form pairs and discuss how they refined their 5 specific inquiry questions using the Specific Inquiry Questions Checklist.

💬 Student responses vary according to the research conducted, but may include:

- My area of investigation is the impact of technological diffusion (the Internet) on geographical isolation. I used the Specific Inquiry Questions Checklist to vet 5 additional inquiry questions, making them specific and complex:
 1. How do physical barriers to the Internet affect diffusion?

2. What national attitudes prevent a nation from being open to connectivity?
 3. What physical barriers prevent the infrastructure to connectivity?
 4. What is the impact of the lack of technological diffusion on an overall economy?
 5. When a nation is provided connectivity, what additional challenges does it have to maintain connectivity?
- The Specific Inquiry Questions Checklist helped me refine these questions so that they elicit rich responses. For example, I started out with the question: “Can attitudes keep a nation from being open to the Internet?” This question has a limited scope of inquiry and elicits a yes/no response. I revised the question to “What national attitudes prevent a nation from being open to connectivity?”

① Students should use the language of the Specific Inquiry Questions Checklist to frame their responses.

Instruct students to take out their responses to the second part of the previous lesson’s homework assignment. (Search for at least two more sources related to your area of investigation. Prepare to discuss how the two sources connect to your selected area of investigation in the following lesson.) Instruct students to talk in pairs about their sources and how they connect to their selected area of investigation.

💬 Student responses vary according to the research conducted.

① Consider collecting the homework to assess students’ research progress.

Activity 3: Planning for Searches

25%

Explain to students that they are ready to plan for effective searches to conduct formal research now that they have established an area of investigation and crafted specific inquiry questions.

Inform students that when planning for effective inquiry-based research, there are several steps to follow:

- Select a focus inquiry question.
- Determine where to look for sources.
- Choose key words or phrases to begin the search.

Share with students that effective searches begin with a focus. The type of research they are conducting in 12.3.1 is inquiry-based; the specific inquiry questions students develop for the overarching area of investigation guides the research focus. For this reason, the first step in planning for productive searches is to select an inquiry question to focus the research.

Explain to students the following guidelines for selecting inquiry questions to focus research:

- Move from general inquiry questions to specific.
- Move from questions that are easily answered to more complex questions with more interesting answers.
- As needed, group similar questions into themes or categories.
- Remember that the questions can always evolve as knowledge and understanding deepens.
 - ▶ Students listen.

Model for students how to select inquiry questions by displaying the following three model questions focused on increasing wealth in developing nations:

How can investment in human capital affect a developing nation's economy?

How can investment in empowering women improve the overall wealth of a nation?

What are effective ways for a developing nation to improve its economy and thereby increase its economic prosperity?

Explain to students that the question “How can investment in human capital affect a developing nation's economy?” is the best question to focus the research because it is specific enough to generate concrete answers, but general enough to generate rich information. The second question focuses on women only and so may be too specific as a starting point. The third question may be too broad and general.

- ▶ Students examine the three model questions and follow along.

Explain that the second step in planning an effective search is to determine the best locations (physical or virtual) for finding information about the selected inquiry question. Remind students that resources available in their school and public libraries provide access to databases such as NOVEL New York (<http://novelnewyork.org/>), which allow students to search for articles on their area of investigation using a variety of different search criteria.

Provide students with the following guiding questions and sample responses to help them select and locate the right sources:

What is my area of investigation and where could I find sources?

- ☞ If I am looking at increasing wealth in developing nations, possible fields of inquiry are wealth, inequality, poverty, developing nations, investment, human capital, or economic prosperity. I can search either in those sections of the library or through online sources or websites that specialize in these fields.

What type of sources should I be looking for based on the type of information I want?

- ☞ If I am looking for details about increasing wealth in developing nations, I should investigate news articles, historical documents, academic journals, or federal and international reports. If I am looking for cases in which individual nations have improved their own economic standing, I could look at news articles about developing nations, international case studies or reports on specific projects designed to improve a nation's economy, or websites that advocate specific types of investment in developing nations.

- ① Encourage students to enlist the assistance of a librarian/media specialist as they determine the best location(s) to find information.

Inform students that the third step in planning an effective search is selecting the best key words and phrases for the online search. Explain that to determine key words and phrases they should consider the specific words they use to describe the area of investigation as well as the inquiry question itself. Both the area of investigation and the inquiry question contain words, concepts, and phrases students can use to begin searching.

- ▶ Students listen and follow along.

Demonstrate an online search with key words, concepts, or phrases using the following model question.

“How can investment in human capital affect a developing nation’s economy?”

Based on this question and the previous discussion about selecting key words and phrases, this question could lead to the use of phrases like “economic benefits of human capital investments,” “economic impact of human capital investment in developing nations,” or “human capital development in developing nations.”

- ▶ Students listen.

Inform students to use specific content-area vocabulary that emerges from their pre-searches and developing understandings of the issue, rather than general, less-specific terms. Conduct two model searches as described below, and display the online search results for students to see. Instruct students to take brief notes on the results. Point out that the following searches differ only in the academic language used.

- Enter the search phrase: “increasing a nation’s wealth by training people.”
- Examine results of the search.
- Change the search phrase: “economic benefits of human capital investments.”
- Examine results of the search.

- ▶ Students listen and take notes.

① Consider using an electronic white board or document camera to display the search results.

① Consult with a school librarian/media specialist for additional search phrase ideas if needed.

Instruct student pairs to discuss the following question:

Are these search results going to produce effective research?

Alternate between the two searches, giving students an opportunity to compare results. Provide students with time to take brief notes.

- ▶ Students look at the searches and discuss the question.

Lead a brief discussion of the question.

💬 Student responses vary according to the search engine used, but may include:

- The first search term returned several articles that were appropriate for investigation, such as articles from newspapers about inequality across different countries and the difference that a skilled workforce can make in economic prosperity. However, this term appeared to return several opinion articles and results that are meant for educational purposes, like lesson plans and college syllabi.
- The second search term returned academic articles in the field of economics that analyze the return on investment in human capital. This term also returned economic reports from various nonprofit organizations that are investing in human capital in developing nations.

① Students may also conduct searches using Google Scholar to yield further complex sources.

Inform students that substituting a key word with a synonym or a similar word leads to more and sometimes different results. For example, students could enter the search words: “developing countries,” “emergent nation,” or “underdeveloped nation,” instead of “developing nation.”

- ▶ Students listen.

Activity 4: Assessing Sources

40%

Explain to students that they have begun to establish an understanding of the importance of planning for efficient searches. They now focus on assessing potential sources for credibility, accessibility, and relevance. Explain that it is important to assess potential sources first before reading closely in order to maximize research and avoid wasting time on resources that do not contribute to deeper understanding.

Distribute the Assessing Sources Handout to students and instruct them to read it.

- ▶ Students read the Assessing Sources Handout.

Ask student pairs to discuss the following question:

What are the three categories used to evaluate every potential source?

- 💬 The handout evaluates potential sources for credibility, accessibility (and interest level), and relevance (including richness).

Remind students that they identified a variety of sources in the pre-searches they have completed thus far. In this lesson, they narrow their searches by looking for credible, accessible, and relevant sources for a specific area of investigation, while being mindful of the steps for planning effective and efficient research as discussed earlier in the lesson.

Direct students to look at the heading of the first section of the Assessing Sources Handout, “Assessing a Source Text’s Credibility.” Define the word *credibility* (form of the word *credible*) as “the quality of being believable or worthy of trust.”

- ▶ Students listen.

Explain to students that sources with *credibility* are those that have proven their worth through multiple reviews from other authorities in the field and extensive research on an issue. Credible sources have employed the same inquiry methods of research that the students are currently using. When considering credibility, the handout takes into account a source’s publisher, publication date, author, and type, because each of these is an important component of credibility. Explain that these factors are important because a source becomes less credible if it comes from a profit-based group, has outdated information, or is written by someone without expertise in the field.

Direct students’ attention back to the model searches conducted earlier in the lesson using the search phrase “increasing wealth in developing nations.” Select two sources to open. Use the Assessing Sources Handout, model for students how to quickly scan a Web page and assess the credibility of each source, without having to read the source in its entirety. Reinforce that students need to pay particular attention to details about the publisher (and possible connections to the issue), the date of publication, the author’s credentials (and connections to the issue), and the type of source.

- ▶ Students reference the Assessing Sources Handout, scan the displayed source, and discuss the source’s credibility.
- ① Point out to students that the first items listed on a search results page are often paid advertisements, separated only subtly from the rest of the results.
 - ① Ideally, the two model sources selected exemplify one credible source and one unreliable source so students can assess the differences.
 - ① Advise students to ask the teacher, librarian, or media specialist if they are not certain about the credibility of a source.

- ① Refer back to the search page and inform students of the differences between web addresses that end in .org, .com, .gov, and .edu. These are referred to as “top-level domains.” Discuss that .org, .gov, and .edu websites can often be considered credible because they come from nonprofit, government, or education organizations respectively and typically provide more objective information that is not profit-driven, as can be the case with .com addresses. This is not a rule, however, and credibility cannot be judged solely on a website’s top-level domain.
-

Direct students to look at the second section of the Assessing Sources Handout underneath “Assessing a Source Text’s Accessibility and Interest Level.” Define the term *accessible* as “easy to approach or use.” Explain to students that *accessible* sources are those that are comprehensible based on a reader’s background knowledge and understanding. Additionally, *accessible* sources should be interesting to the reader and align with established inquiry questions. Open one of the model sources used in the previous exercise and discuss as a group how it meets or does not meet the criteria for being accessible.

- ▶ Students reference the Assessing Sources Handout, scan the source, and discuss accessibility of the source.
 - ① Make sure students understand that evaluating a source for accessibility is subjective, depending on an individual’s reading ability and interest level. If, after reading two paragraphs of the source, students cannot comprehend the information or has no interest in what is being communicated, it is not an accessible source.
 - ① **Differentiation Consideration:** Consider providing students with a recommended Lexile® range based on individual reading abilities. Remind students it is possible to use online databases such as NOVEL New York to search for articles by Lexile® range, which may help target research and allow students to search among articles that are both relevant and accessible.
-

Direct students to look at the third section of the Assessing Sources Handout underneath “Assessing a Source Text’s Relevance and Richness.” Remind students that *relevant* sources are those that are related to the inquiry question and provide accurate, useful, and rich information on the issue with connections to other sources. *Relevant* sources should further a researcher’s purpose and provide well-supported information. Open the model source used in the previous exercise and discuss as a group how it meets or does not meet the criteria for being relevant.

- ▶ Students reference the Assessing Sources Handout, scan the source, and discuss the relevance of the source.
- ① The term *relevant* was introduced in 12.3.1 Lesson 6.

Based on the information they learned from the Assessing Sources Handout, ask students to think of example sources that might not be credible, accessible, or relevant.

💬 Student responses may include:

- Wikipedia might not be a credible source because it is a crowd-sourced website to which many people who may not have expertise or authority on the issue can contribute.
- High-level scholarly articles written for professionals might be inaccessible because the text could be too complex to understand.
- A research study or article that is 20 years old might not be relevant because the information it contains may no longer reflect the most current understandings about the issue.

- ① Remind students that in addition to assessing each source individually, they should look at their sources collectively to ensure that their selected sources demonstrate multiple perspectives or opinions on their area of investigation. Students were introduced to the term *perspectives* in 12.3.1 Lesson 9; *perspectives* means “how people understand an issue, including their relationships to and analyses of the issue.”
-

Instruct students to take out their potential sources from the homework from 12.3.1 Lessons 14 and 15. Instruct students to assess their two sources for credibility, accessibility, and relevance using the Assessing Sources Handout as a guide.

💬 Student responses vary according to the research conducted.

- ① Instruct students to number their sources to keep them organized.
- ① **Differentiation Consideration:** Consider modeling how to assess a model source using the Assessing Sources Handout as a guide if students need additional support.
- ① Students are not expected to read the source texts closely at this point. The purpose of this activity is to help students assess credible, accessible, and relevant sources to use again later.
- ① **Differentiation Consideration:** Consider distributing the Potential Sources Tool if necessary, and allowing students to assess their sources using the tool. A completed Model Potential Sources Tool is included at the end of the lesson; consider distributing it to students to use as an example as they begin independent searching.

Activity 5: Quick Write

10%

Instruct students to respond briefly in writing to the following prompt:

Choose two potential sources for your area of investigation. Discuss the credibility of each potential source and describe how the sources demonstrate multiple perspectives on the selected area of investigation.

Remind students to use the 12.3.1 Research Rubric and Checklist to guide their written responses.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from their sources.

🗨 See the High Performance Response at the beginning of this lesson.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to evaluate three more potential sources and record information regarding how the sources either meet or do not meet the criteria for being credible, accessible, and relevant, using the Assessing Sources Handout as a guide.

Additionally, instruct students to complete another multimedia journal entry, responding to the following prompts: How has the process of assessing sources affected your potential resources and research process in general? What is your plan for finding more credible, accessible, and relevant resources if necessary?

① **Differentiation Consideration:** Consider instructing students to use the Student Research Plan Handout to guide their multimedia journal entries. The Student Research Plan Handout was distributed in 12.3.1 Lesson 15.

- ▶ Students follow along.

Homework

Evaluate three more potential sources and record information regarding how the sources either meet or do not meet the criteria for being credible, accessible, and relevant, using the Assessing Sources Handout as a guide.

Additionally, complete another multimedia journal entry, responding to the following prompts: How has the process of assessing sources affected your potential resources and research process in general? What is your plan for finding more credible, accessible, and relevant resources if necessary?

ASSESSING SOURCES

ASSESSING A SOURCE TEXT'S CREDIBILITY

Look at the information you can find about the text in the areas below, and consider the following questions to assess a source text's credibility:

| PUBLISHER | DATE | AUTHOR | TYPE |
|--|--|--|---|
| <ul style="list-style-type: none"> What is the publisher's relationship to the topic area? What economic stake might the publisher have in the topic area? What political stake might the publisher have in the topic area? | <ul style="list-style-type: none"> When was the text first published? How current is the information on the topic? How does the publishing date relate to the history of the topic? | <ul style="list-style-type: none"> What are the author's qualifications/credentials relative to the topic area? What is the author's personal relationship to the topic area? What economic/political stakes might the author have in the topic area? | <ul style="list-style-type: none"> What type of text is it: explanation, informational article, feature, research study, op/ed, essay, argument, other? What is the purpose of the text with respect to the topic area? |

ASSESSING A SOURCE TEXT'S ACCESSIBILITY AND INTEREST LEVEL

Consider your initial experience in reading the text, how well you understand it, and whether it seems interesting to you:

| ACCESSIBILITY TO YOU AS A READER | INTEREST AND MEANING FOR YOU AS A READER |
|---|---|
| <ul style="list-style-type: none"> Am I able to read and comprehend the text easily? How do the text's structure and formatting either help or hinder me in reading it? Do I have adequate background knowledge to understand the terminology, information, and ideas in the text? | <ul style="list-style-type: none"> Does the text present ideas or information that I find interesting? Which of my Inquiry Paths will the text provide information for? Which inquiry questions does the text help me answer? How? |

ASSESSING A SOURCE TEXT'S RELEVANCE AND RICHNESS

Using your Research Frame as a reference, answer the following questions:

| RELEVANCE TO TOPIC & PURPOSE | RELEVANCE TO AREA OF INVESTIGATION | SCOPE AND RICHNESS |
|---|--|---|
| <ul style="list-style-type: none"> What information does the text provide on the topic? How might the text help me accomplish the purpose for my research? Does the text provide accurate information? | <ul style="list-style-type: none"> How is the text related to the specific area I am investigating? Which of my paths of inquiry might the text provide information for? Which inquiry questions might the text help me address? How? | <ul style="list-style-type: none"> How long is the text and what is the scope of the topic areas it addresses? How extensive and supported is the information it provides? How does the information in the text relate to other texts? |

Name Topic

Area of Investigation

| | | | |
|--|----------------|-------------------|--|
| SOURCE | Title: | Location: | |
| # | Author: | Text Type: | Publication Date: |
| General Content / Key Ideas / Personal Comments: | | | Connection to Inquiry Paths: |
| Credibility: <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | | | Relevance/Richness: <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low |
| Accessibility/Interest: <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | | | |

| | | | |
|--|----------------|-------------------|--|
| SOURCE | Title: | Location: | |
| # | Author: | Text Type: | Publication Date: |
| General Content / Key Ideas / Personal Comments: | | | Connection to Inquiry Paths: |
| Credibility: <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | | | Relevance/Richness: <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low |
| Accessibility/Interest: <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | | | |

| | | | |
|--|----------------|-------------------|--|
| SOURCE | Title: | Location: | |
| # | Author: | Text Type: | Publication Date: |
| General Content / Key Ideas / Personal Comments: | | | Connection to Inquiry Paths: |
| Credibility: <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | | | Relevance/Richness: <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low |
| Accessibility/Interest: <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | | | |



Name Topic Increasing wealth in developing nations

Area of Investigation Increasing wealth in developing nations

| | | | |
|--|---|--|--|
| SOURCE | Title: Empowering Women is Smart Economics | Location: http://www.imf.org/external/pubs/ft/fandd/2012/03/revenga.htm | |
| #1 | Author: Ana Revenga & Sudhir Shetty | Text Type: Article | Publication Date: 2012 |
| General Content / Key Ideas / Personal Comments: This article makes a strong case for global gender equality by investing in women specifically. The article explains that gender equality can have positive outcomes for the economy when nations invest in education, healthcare measures, and empower women to have more economic control over their own lives. This article also provides some important explanations of technical terms, like "gender gap" and the word "development" as it relates to gender equality. | | | Connection to Inquiry Paths: |
| Credibility: <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | | Relevance/Richness: <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | Accessibility/Interest: <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low |

| | | | |
|--|---------------------------------------|--|--|
| SOURCE | Title: Poverty Facts and Stats | Location: http://www.globalissues.org/article/26/poverty-facts-and-stats | |
| #2 | Author: Anup Shah | Text Type: Fact sheet | Publication Date: January 07, 2013 |
| General Content / Key Ideas / Personal Comments: This page includes facts and statistics about poverty and the economies of developing countries. The author, according to the "Why Am I Doing This?" page, does not have many qualifications, but this page may be credible because he lists his sources, and they appear to be from sites with higher credibility. There are some opinions that suggest the author's bias ("being meek and weak in life makes these dying multitudes even more invisible in death"). | | | Connection to Inquiry Paths: |
| Credibility: <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low | | Relevance/Richness: <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low | Accessibility/Interest: <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low |

| | | | |
|---|---|--|--|
| SOURCE | Title: Evidence for Action: Gender Equality and Economic Growth | Location: https://www.chathamhouse.org/ | |
| #3 | Author: John Ward, Bernice Lee, Simon Baptist, and Helen Jackson | Text Type: Report | Publication Date: 2010 |
| General Content / Key Ideas / Personal Comments: This report describes the idea that achieving gender equality in developing nations can help nations achieve the United Nations' Millennium Development Goals, which include eradicating poverty and hunger, promoting universal primary education, and committing to a global partnership for economic development. The report was written by expert authors and contains many statistics and facts but is lengthy and difficult to read in some parts. | | | Connection to Inquiry Paths: |
| Credibility: <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | | Relevance/Richness: <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | Accessibility/Interest: <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low |

12.3.1**Lesson 17****Introduction**

In this lesson, students continue to develop their research skills as they learn how to read important sources closely for selected inquiry questions using annotation and note taking in “Empowering Women Is Smart Economics” by Ana Revenga and Sudhir Shetty. This key step in the research process enables students to deepen their understanding of their research by showing them how to begin making connections to an area of investigation, as well as how to synthesize their understanding of the information.

Students begin the lesson with modeled annotation and practice based on an inquiry question. This annotation informs further instruction and practice on note taking for research purposes. Student learning is assessed via a Quick Write at the end of the lesson: Select an annotation and relevant notes from your work in this lesson. Explain how the annotation/relevant notes address the specific inquiry question: How can investment in human capital affect a developing nation’s economy?

For homework, students annotate and take notes for two more sources found in 12.3.1 Lesson 16 and prepare to discuss at least two notes that address a selected inquiry question.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
| Addressed Standard(s) | |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |

Assessment

| Assessment(s) |
|--|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from the text.</p> <ul style="list-style-type: none"> Select an annotation and relevant notes from your work in this lesson. Explain how the annotation/relevant notes address the specific inquiry question: How can investment in human capital affect a developing nation's economy? <p>① Consider using the relevant portions of the 12.3.1 Research Rubric and Checklist to assess the Quick Write in this lesson.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Select an annotation and relevant notes (e.g., Question mark beside "Since 1980, women have been living longer than men in all parts of the world. But across all developing countries, more women and girls still die at younger ages relative to men and boys, compared with rich countries" (par. 7). Why do women die younger in developing countries?). Explain how the annotation and relevant notes address the specific inquiry question: How can investment in human capital affect a developing nation's economy? (e.g., A developing nation that wants to improve its economy first must address factors that lead to the shortened lives of women and girls. The premature deaths of women represent a great loss to their families, and a loss of resources to their countries. Explaining that these "3.9 million girls and women" are "missing" (par. 7) instead of dead is a powerful way to describe the potential human capital that is lost in their absence.). |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of

investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards & Text: <ul style="list-style-type: none"> Standards: W.11-12.8, W.11-12.7 Model Source Text #1: “Empowering Women Is Smart Economics” by Ana Revenga and Sudhir Shetty | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Annotating Sources Taking Notes Quick Write Closing | <ol style="list-style-type: none"> 5% 10% 35% 35% 10% 5% |

Materials

- Student copies of the 12.3.1 Research Rubric and Checklist (refer to 12.3.1 Lesson 9)
- Student copies of the Assessing Sources Handout (refer to 12.3.1 Lesson 16)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and assessed standard for this lesson: W.11-12.8. In this lesson, students further their research process by practicing annotation and note taking for research.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the first part of the previous lesson's homework assignment. (Evaluate three more potential sources and record information regarding how the sources either meet or do not meet the criteria for being credible, accessible, and relevant using the Assessing Sources Handout as a guide.) Instruct students to form pairs and discuss how their additional sources meet the criteria for being credible, accessible, and relevant.

- 💬 Student responses vary according to the research conducted. Students should use the language of the Assessing Sources Handout in their discussion.

Lead a brief whole-class discussion of student pair discussions.

- ① Consider collecting the homework to monitor students' research progress.

Instruct students to take out their responses to the second part of the previous lesson's homework assignment. (Complete another multimedia journal entry responding to the following prompts: How has the process of assessing sources affected your potential resources and research process in general? What is your plan for finding more credible, accessible, and relevant resources if necessary?) Instruct student pairs to discuss their multimedia journal entries from the previous lesson.

- ▶ Student pairs discuss their journal entries from the previous lesson.
- ① Consider checking in with students on an individual basis during the research process to formatively assess their application of research skills and offer targeted feedback.
- ① **Differentiation Consideration:** Consider instructing students to reflect on Part 2 of the Student Research Plan Handout by writing a few sentences about their research process and next steps based on the process outcomes described in Part 2, specifically regarding planning for searches and assessing sources. Instruct students to use the language of the research standards (W.11.12.7 and W.11-12.8) when writing their responses.

Activity 3: Annotating Sources

35%

Explain to students that once they identify credible, accessible, and relevant sources, the next step in the research process is to read the sources closely, with an eye toward selecting sources that further their research and help to answer the inquiry question guiding that specific search process.

Inform students that reading closely for the purpose of gathering and analyzing information and evidence is done in two steps: annotating and taking notes. Both annotating and taking notes aid in further assessing the usefulness of each source.

- ▶ Students listen.

① Remind students that a librarian/media specialist can be used as a resource throughout 12.3.1.

Explain to students that some of the purposes of annotating informational text for research differ slightly from the purposes of annotating a literary text. Remind students that when annotating informational texts for research they should look for:

- Key words and concepts
- Information that answers inquiry questions
- Initial impressions of the information
- Areas for possible further exploration
- Connections to other sources

- ▶ Students listen.

Explain that the same annotations used in previous modules are used in Module 12.3. Review the annotation codes from the previous modules:

- Box unfamiliar words.
- Star (*) important or repeating ideas.
- Put a question mark (?) next to a section you are questioning or confused about, and write your question down.
- Use an exclamation point (!) for ideas that strike or surprise you in some way, and provide a brief note explaining the connection.

- ▶ Students listen.

① Remind students that in addition to using the codes, it is important that students mark the text with their thoughts as they relate to the codes.

Remind students of the following annotation specific to informational texts:

- Use numbers in the margin to indicate a sequence of points to trace the development of an argument.

Finally, introduce the following two annotation codes, which are also used for informational text:

- Add an arrow (→) to make connections between points.
- Underline areas that represent major points. If a passage is too long to underline, use vertical lines in the margin.
 - ▶ Students listen.

① Consider displaying all annotation codes for students to see.

Display model source #1: “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty. Instruct students to read and annotate the first 9 paragraphs of this text excerpt (from “Not long ago women faced tremendous barriers” to “fewer women participate in formal politics, especially at higher levels”) with the specific inquiry question in mind: How can investment in human capital affect a developing nation's economy? Remind students to mark their thinking directly on the source, next to their coding.

💬 Student responses may include:

- Question mark beside “Women earn less and are less economically productive than men almost everywhere across the world” (par. 2). Why are women less productive? Does this statement connect to their higher risk of death?
- Underline the sentence “Greater gender equality can enhance economic productivity, improve development outcomes for the next generation, and make institutions and policies more representative” (par. 3), because this statement seems to be a major point in the article and aligns to the inquiry question regarding human capital and economic development.
- Star beside “Corrective policies will yield substantial development payoffs if they focus on persistent gender inequalities that matter most for welfare” (par. 4), because this is an important idea that relates back to earlier statements in paragraph 2 about the negative consequences of gender inequality, and it speaks to the importance of investing in human capital with “[c]orrective policies.”
- Underline the statement “To be effective, these measures must target the root causes of inequality without ignoring the domestic political economy” (par. 4), because this seems to be a major point that ties together the issues of gender equality and the economy. The statement also suggests that “measures” might mean investing in human capital since they are targeting “root causes of inequality.”

- Question mark beside “Since 1980, women have been living longer than men in all parts of the world. But across all developing countries, more women and girls still die at younger ages relative to men and boys, compared with rich countries” (par. 7). Why do women die younger in developing countries?
- A star beside the sentence “about 3.9 million girls and women under 60 are ‘missing’ each year in developing countries” (par. 7), because explaining that these girls and women are “missing” instead of dead is a powerful way to describe the potential human capital that is lost in their absence.
- A vertical line beside “Yet women everywhere tend to earn less than men (World Bank, 2011—especially Chapter 5). The reasons are varied. Women are more likely than men to work as unpaid family laborers or in the informal sector” (par. 8), because these sentences offer an example for why there is not gender equity in human capital development, which then affects economic development.

① **Differentiation Consideration:** Consider using another model source if this one does not fit student or class needs.

Lead a brief whole-class discussion of the annotation practice to confirm that students identified important details, recorded initial impressions, established connections, and identified other areas of research.

Activity 4: Taking Notes

35%

Explain to students that the next step in the research process is to use their annotations to identify pertinent details, quotes, and personal reactions to record in their notes. The notes students choose to record should represent the annotations that are the most relevant to their selected inquiry question, as well as their personal reactions, insights, and/or analysis about how a given source relates to the inquiry question or the overarching area of investigation. Consider explaining to students that the notes they transcribe may be direct quotes or paraphrased content from their sources, but their final argument-based research papers should include both quotes and paraphrases.

► Students listen.

- ① Students may print and annotate hardcopies of texts, or electronically annotate text using the comment feature in Microsoft Word or other programs that support electronic or online annotation.
- ① **Differentiation Consideration:** Consider providing students with brief descriptions of various note-taking methods (e.g., Cornell note-taking system, mapping, and/or outlining) to allow them to determine a system best suited to their research approach.

Inform students that regardless of the method they use to take notes, their notes should:

- Reflect their richest and most relevant annotations.
- Contain precise information about where an annotation is located within a source, including the number or title of the source and the page/paragraph number.
- Record details, ideas, or information that helps to answer the inquiry question.
- Record personal reactions and insights, as well as analysis about how a given source relates to the inquiry question or the overarching area of investigation.

Using the first annotation from the previous activity, briefly model the note-taking process by recording the title of the model source, the paragraph number where the annotation is found, information relevant to the inquiry question, and personal reactions/comments/analysis. Display or distribute the following model notes.

- “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty; paragraph 2; the fact that “[w]omen earn less and are less economically productive than men almost everywhere across the world” is surprising and makes me think how improvements to women’s productivity (i.e., investment in human capital) would inevitably impact developing nations’ economies in a positive way.
 - ▶ Students follow along.

Using paragraphs 1–9 of their annotated model text, instruct students to record notes using the selected inquiry question: How can investment in human capital affect a developing nation’s economy? When finished, direct students to discuss their entries with another student ([W.11-12.7](#)).

- ▶ Students record notes before discussing with a peer.

🗨 Student responses may include:

- “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty; paragraph 3; this article states that “Greater gender equality can enhance economic productivity, improve development outcomes for the next generation, and make institutions and policies more representative,” which directly responds to my inquiry question and supports the idea that a country’s prosperity is connected to gender equality, which is an aspect of human capital investment.
- “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty; paragraph 4; stating that “[c]orrective policies will yield substantial development payoffs if they focus on persistent gender inequalities that matter most for welfare” shows that gender equality is important not only for the improved lives of women, but for everyone.
- “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty; paragraph 4; the quote “To be effective, these measures must target the root causes of inequality without ignoring the domestic political economy” offers guidance about how to tackle

- gender inequality issues. What are the exact “measures” and what are the “root causes”? And how could addressing inequality “ignor[e] domestic political economy”?
- “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty; paragraph 7; “Since 1980, women have been living longer than men in all parts of the world. But across all developing countries, more women and girls still die at younger ages relative to men and boys, compared with rich countries” (par. 7). What do rich countries do differently than poor countries to keep females alive longer? And why are poor countries able to keep men alive at higher rates than women? The text explains that one reason for the higher death rate is the “HIV/AIDS pandemic” (par. 7), but what else is causing early deaths for women?
 - “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty; paragraph 7; To say that 3.9 million women are “missing” instead of dead underscores their lost potential in terms of human capital and the economy.
 - “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty; paragraph 8; “Yet women everywhere tend to earn less than men (World Bank, 2011—especially Chapter 5). The reasons are varied. Women are more likely than men to work as unpaid family laborers or in the informal sector.” This quote explains one factor related to gender inequality and leads to further exploration about the nature of women’s employment and how it could be improved, thus contributing to economic growth.

Lead a brief whole-class discussion of student responses.

Activity 5: Quick Write

10%

Instruct students to respond briefly in writing to the following prompt:

Select an annotation and relevant notes from your work in this lesson. Explain how the annotation/relevant notes address the specific inquiry question: How can investment in human capital affect a developing nation’s economy.

Remind students to use the relevant portions of 12.3.1 Research Rubric and Checklist to guide their written responses.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from their annotations and notes.
- 🗣 See the High Performance Response at the beginning of this lesson.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to annotate and take notes for two more sources found in 12.3.1 Lesson 16. Instruct students to be prepared to discuss at least two notes that address a selected inquiry question.

- ① Advise students to obtain hard copies of at least two of their potential sources found in the homework from 12.3.1 Lesson 16 to use for their homework assignment.
- ① Consider instructing students to number their inquiry questions before beginning the annotation/ note-taking process. These numbers should then be recorded on students' notes as a way to help them keep their inquiry questions organized for later use.
 - ▶ Students follow along.

Homework

Annotate and take notes for two more sources found in 12.3.1 Lesson 16. Be prepared to discuss at least two notes that address a selected inquiry question.

12.3.1**Lesson 18****Introduction**

In this lesson, students learn how to evaluate an evidence-based argument. Students learn to identify and assess the necessary components of an effective argument. This work prepares students to begin forming their own evidence-based arguments in 12.3.2.

Students begin the lesson with a brief discussion about the components of an effective argument. Small groups of students then examine two evidence-based arguments, assessing the quality of each argument using the Evidence-Based Arguments Checklist. Student learning is assessed via completion of the Evidence-Based Arguments Checklist, which students submit with their evaluation notes at the end of the lesson.

For homework, students find two potential sources and evaluate the arguments in the sources using the Evidence-Based Arguments Checklist. Students include detailed comments and textual evidence to support their choices in the “Comments” section of the Evidence-Based Arguments Checklist for each potential source.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| CCRA.R.8 | Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. |
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
| Addressed Standard(s) | |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |

| | |
|------------|---|
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. |
|------------|---|

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via completion of the Evidence-Based Arguments Checklist, which students submit with their evaluation notes at the end of the lesson.</p> <p>① The Evidence-Based Arguments Checklist serves as the assessment for this lesson.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <p>① See the Model Evidence-Based Arguments Checklist.</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards & Text: <ul style="list-style-type: none"> Standards: CCRA.R.8, W.11-12.8, W.11-12.7, SL.11-12.1 Model Source Text #1: “Empowering Women Is Smart Economics” by Ana Revenga and Sudhir Shetty | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Effective Arguments Discussion Evidence-Based Arguments Checklist Argument Evaluation Activity and Assessment Closing | <ol style="list-style-type: none"> 5% 10% 20% 30% 30% 5% |

Materials

- Copies of the Evidence-Based Arguments Checklist for each student (at least four copies each)
- Chart paper

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standards for this lesson: CCRA.R.8 and W.11-12.8. In this lesson, students discuss and evaluate evidence-based arguments by completing an Evidence-Based Arguments Checklist.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Annotate and take notes for two more sources found in 12.3.1 Lesson 16. Be prepared to discuss at least two notes that address a selected inquiry question.) Instruct student pairs to discuss two notes that address a selected inquiry question.

- 💬 Student responses vary depending on individual research questions/problems and research.

Lead a brief share out of student discussions.

- ① Consider collecting homework to monitor students' research progress.

Activity 3: Effective Arguments Discussion

20%

Remind students that an *argument* is a composition of precise claims about an issue, including relevant and sufficient evidence and valid reasoning. Inform students that as they continue in their research, they should look for effective arguments related to their areas of investigation. Lead a discussion to develop students' understanding of what an effective argument is. To thoroughly evaluate an argument, determine whether it is effective, and develop their own perspective on the issue, students must consider the strengths and weaknesses of the argument.

Use the following questions to review the work previously completed in 12.3.1 on argument, central claims, and perspective.

What is *perspective*?

- 💬 How one understands an issue, including his/her relationship to and analysis of the issue.

What is a *central claim*?

- 💬 An author or speaker's main point about an issue in an argument.

- ① The central claim of an argument also may be called a thesis or a position (the author or speaker's stance). The central claim also may imply the author or speaker's point of view or purpose (RI.11-12.6).

How is an *argument* related to a *central claim*?

💬 Student responses should include:

- A *central claim* is an author's main point or statement about an issue.
- An *argument* is the text as a whole and it is composed of a series of precise claims supported by relevant and sufficient evidence and valid reasoning.
- A person might use several supporting claims to defend his/her central claim.

- ① **Differentiation Consideration:** If students struggle, consider providing definitions of each of the terms and leading a discussion on the differences apparent in the terms. Remind students that they did not identify Diamond's central claim in *Guns, Germs, and Steel* because they did not read and analyze the entire book.

Explain to students that some of the sources identified in preliminary searches may contain one or more central claims. Explain that thorough evaluation of these central claims is important in determining the merit of a source and whether or not it can contribute to an understanding of an area of investigation. Guide students through the following questions to strengthen their understanding of arguments and how to evaluate them.

What makes an argument effective?

💬 Student responses should include:

- An effective argument clearly states claims.
- It contains significant evidence that is relevant and sufficient to the argument's claims.
- A strong line of reasoning makes an argument effective.

What might make an argument ineffective?

💬 Student responses should include:

- It uses a confusing structure.
- The evidence is unrelated and does not support the argument.
- The argument ignores other perspectives.
- The argument does not include effective reasoning, so relationships are missing among the evidence, supporting claims, and central claim.

- ① **Differentiation Consideration:** Consider reviewing what constitutes relevant and sufficient evidence and valid reasoning, to which students were introduced in 12.3.1 Lessons 6, 8, 11, and 12.

Lead a brief whole-class discussion of student responses.

Activity 4: Evidence-Based Arguments Checklist

30%

Distribute the Evidence-Based Arguments Checklist to students. Explain that students use this checklist to evaluate central claims, supporting claims, evidence, and reasoning in sources as they build their understanding of an effective argument's components.

- ▶ Students listen.

Lead students through an examination of the Evidence-Based Arguments Checklist, focusing on the various criteria present on the checklist. Explain to students that the Evidence-Based Arguments Checklist is composed of 4 major sections:

- Content and Analysis
- Command of Evidence
- Coherence and Organization
- Control of Language and Conventions

Explain that these 4 sections comprise the support structure of the argument. As a strong central claim is supported by strong supporting claims, a strong argument is supported by strong content and analysis, command of evidence, coherence and organization, and control of language and conventions. Explain that the purpose of completing the Evidence-Based Arguments Checklist is to identify the sections in which the source provides strong or weak examples of an evidence-based argument. Learning to identify effective components of an argument enables students to strengthen their own work by searching for strong arguments in 12.3.1 and writing strong arguments in 12.3.2.

- ▶ Students listen and follow along.

Explain that students work in pairs to examine a model argument and practice completing the first section of the Evidence-Based Arguments Checklist. Display the model source, “Empowering Women Is Smart Economics” by Ana Revenga and Sudhir Shetty, from 12.3.1 Lesson 17.

- ▶ Students listen.

Explain to students that each section of the Evidence-Based Arguments Checklist consists of several smaller components or subsections. Instruct students to examine the first section of the Evidence-Based Arguments Checklist: “Content and Analysis.” Explain to students that this section is further broken down into 4 components or subsections: “Clarity and Relevance,” “Conformity to Sources,” “Understanding of the Issue,” and “Acknowledgement of Other Perspectives.” The goal of these 4 subsections is to identify the strength of the author’s content by examining the use of varied sources

and clear claims, and identifying if the author possesses a deep and thorough understanding of the issue, supported by broad research. Instruct students to follow along on their Evidence-Based Arguments Checklist.

- ▶ Students follow along on their Evidence-Based Arguments Checklist.

Explain that each subsection has a sentence that explains what an ideal example of this technique would look like. For example, a well-executed example of “Clarity and Relevance” “purposefully states a central claim that is linked to a clearly identified context (topic, problem, issue) that establishes its relevance.” Instruct students that they can use this as a guideline and reference for examining a text. Students should use the box beside each of these components or subsections to indicate with a check mark whether they find this component present in the argument.

Examine the “Comments” section with students. Inform students that this column is where they need to explain their reasoning for their observations and provide evidence when necessary. Some arguments might require careful close reading to evaluate whether or not they fulfill a category, so it is essential that students justify their evaluation in this section. In the “Comments” section, students should write additional notes about where they found the information in the text and how the author fulfills this section of the checklist. This section provides students the opportunity to defend their decisions.

- ▶ Students follow along.

Instruct students to transition into pairs and complete the “Content and Analysis Section” of the Evidence-Based Arguments Checklist for model source #1 (“Empowering Women is Smart Economics”). Remind students to check boxes (when applicable) and write comments next to each component or subsection.

💬 Student responses may include:

- **Clarity and Relevance:** Revenga and Shetty present the claim that “[g]reater gender equality can enhance economic productivity, improve development outcomes for the next generation, and make institutions and policies more representative” (par. 3). The authors establish the relevance of this claim by showing how the claim is rooted in the gender gap that remains in low- and middle-income countries. They explain that 40 percent of the world’s workforce is comprised of women and thus “overall productivity will increase if their skills and talents are used more fully” (par. 11). They explain further that when women have “greater control over household resources” (par. 12), children benefit by receiving better food and education and that when women play larger roles in policymaking there is “greater provision of public goods” (par. 13). Since both the claim and its relevance are clearly presented, this model source addresses the component of clarity and relevance.
- **Conformity to Sources:** Revenga and Shetty present a perspective that arises from a range of diverse, credible, and significant sources, including articles from the World Bank, the

Food and Agriculture Organization of the United Nations, and a background paper for the World Development Report 2012. Because the model source uses such diverse resources for support, it achieves the component of conformity to sources.

① **Differentiation Consideration:** Remind students of the word *credible* from 12.3.1 Lesson 16 (“worthy of belief or confidence; trustworthy”).

- **Understanding of the issue:** In the model text, Revenga and Shetty build a series of valid claims that support one another and contribute to their central claim. They begin by acknowledging that although the gender gap has improved, gender inequity is still prevalent. The authors then discuss the current state of global gender issues with facts and statistics for support, before addressing 5 specific priorities for consideration. The series of claims and analysis show that Revenga and Shetty have a broad knowledge and comprehensive understanding of the issue. Revenga and Shetty present a perspective based on a comprehensive understanding of the issue, past and present, and establish valid claims that emerge from reasoned analysis, and therefore demonstrate the component of understanding the issue.
- **Acknowledgement of other perspectives:** In the model text, Revenga and Shetty do not clearly establish or acknowledge any opposing claims. Because of this lack of a significant counterclaim, the source does not meet the criteria for acknowledging other perspectives.

Lead a brief whole-class discussion of student responses.

① **Differentiation Consideration:** If students need additional support in preparation for independent use of the Evidence-Based Arguments Checklist, consider modeling how to complete the Content and Analysis subsections or instructing student pairs to complete the rest of the checklist’s sections.

Activity 5: Argument Evaluation Activity and Assessment

30%

Explain to students that they are going to work in groups to evaluate at least two arguments by completing an Evidence-Based Arguments Checklist.

Similar to the model text from the previous activity, post 3–4 model arguments around the classroom for students to examine.

① Consider posting arguments that contain varying levels of sophistication with regard to the Evidence-Based Arguments Checklist; consider including some arguments that fail to provide a command of evidence or sufficient analysis.

Explain that in this activity, students examine the posted arguments and use the Evidence-Based Arguments Checklist to evaluate each argument. In addition, students provide textual evidence for their

evaluation by including where they find evidence of the arguments' strengths/weaknesses in the "Comments" section of the Evidence-Based Arguments Checklist (W.11-12.7).

- ▶ Students listen.

Create groups of 4–5 students. Each group evaluates two posted arguments using the Evidence-Based Arguments Checklist. Each group should discuss the arguments and collaborate to determine the strengths and weaknesses of each argument.

Assign each group a posted argument with which to start, and then instruct each group to move clockwise after the first half of this activity to examine the next model argument.

- ▶ Student groups complete the Evidence-Based Arguments Checklist for two posted arguments.
- ① Consider reminding students of their previous work with standard SL.11-12.1, which requires that students participate in collaborative discussions, building on each other's ideas and expressing their own clearly and persuasively.
-

Each individual student should complete two Evidence-Based Arguments Checklists, one for each of the two assigned arguments. Instruct students to turn in their completed checklists at the end of the lesson.

- ① **Differentiation Consideration:** Depending on student needs, consider adjusting the number of argument evaluations required for this lesson assessment or assigning specific model arguments to specific groups.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to find two potential sources and evaluate the arguments in the sources using the Evidence-Based Arguments Checklist. Ask students to include detailed comments and textual evidence to support their choices in the "Comments" section of the Evidence-Based Arguments Checklist for each potential source.

- ① **Differentiation Consideration:** Some of the issues students are researching may yield complex or inaccessible texts. To address this concern, consider recommending that students make use of free databases accessible through <http://novelnewyork.org/>, such as Grolier, Gale, and ProQuest; these databases allow searches by subject/keyword, and students may filter the searches so that only texts within certain Lexile® ranges are returned. Consider collaborating with a librarian or media specialist to access these databases and create filtered searches that support students' reading levels.
- ▶ Students follow along.

Homework

Find two potential sources and evaluate the arguments in the sources using the Evidence-Based Arguments Checklist. Include detailed comments and textual evidence to support your choices in the “Comments” section of the Evidence-Based Arguments Checklist for each potential source.

Evidence-Based Arguments Checklist

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Evaluate Evidence-Based Arguments by examining the components designated on the checklist. Identify whether or not the argument contains the appropriate section components and make a check mark if the component is present. Provide your evidence and the location where the component appears in the “Comments” section.

| | |
|--------------|--|
| Text: | |
|--------------|--|

| Argument sections | Section components | <input type="checkbox"/> | Comments |
|----------------------|--|--------------------------|----------|
| Content and Analysis | Clarity and relevance: Purposefully states a central claim that is linked to a clearly identified context (topic, problem, issue) that establishes its relevance | <input type="checkbox"/> | |
| | Conformity to sources: Presents a perspective that arises from ideas and evidence found in a range of diverse, credible, and significant sources | <input type="checkbox"/> | |
| | Understanding of the issue: Presents a perspective based on a comprehensive understanding of the issue, and establishes a series of valid claims that emerge from | <input type="checkbox"/> | |

| Argument sections | Section components | <input type="checkbox"/> | Comments |
|-----------------------------------|---|--------------------------|----------|
| | reasoned analysis | <input type="checkbox"/> | |
| | Acknowledgement of other perspectives: Recognizes opposing or alternate claims and distinguishes these claims from the stated perspective | <input type="checkbox"/> | |
| Command of Evidence | Reasoning: Links evidence and claims together logically in ways that lead to the conclusions expressed in the central claim | <input type="checkbox"/> | |
| | Use of evidence: Supports the central claim and each supporting claim with valid inferences based on credible evidence | <input type="checkbox"/> | |
| | Thoroughness and objectivity: Represents a comprehensive understanding of the issue where the argument's claims and supporting evidence fairly addresses relevant counterclaims and discusses conflicting evidence | <input type="checkbox"/> | |
| Coherence and Organization | Relationship among parts: Establishes clear and logical relationships between supporting | <input type="checkbox"/> | |

| Argument sections | Section components | <input type="checkbox"/> | Comments |
|--|---|--------------------------|----------|
| | claims and a central claim | <input type="checkbox"/> | |
| | Effectiveness of structure: Adopts an organizational strategy, including an introduction and conclusion, which clearly and effectively communicates the argument | <input type="checkbox"/> | |
| Control of Language and Conventions | Clarity of communication: Is communicated clearly and coherently; the writer's opinions are clearly distinguished from objective summaries and statements | <input type="checkbox"/> | |
| | Word choice/vocabulary: Uses domain-specific terminology appropriately and precisely | <input type="checkbox"/> | |
| | Style/voice: Maintains a formal and objective tone appropriate to the intended audience; the use of words, phrases, clauses, and varied syntax draws attention to key ideas and reinforces relationships among ideas | <input type="checkbox"/> | |

| Argument sections | Section components | <input type="checkbox"/> | Comments |
|-------------------|---|--------------------------|----------|
| | Responsible use of evidence: Cites evidence in a responsible manner that anticipates the audience's knowledge level, concerns, values, and possible biases; quotes sufficient evidence exactly, or paraphrases accurately, referencing precisely where the evidence can be found | <input type="checkbox"/> | |
| | Conventions of writing: Illustrates consistent command of standard, grade level–appropriate writing conventions | <input type="checkbox"/> | |

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Model Evidence-Based Arguments Checklist

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Evaluate Evidence-Based Arguments by examining the components designated on the checklist. Identify whether or not the argument contains the appropriate section components and make a check mark if the component is present. Provide your evidence and the location where the component appears in the “Comments” section.

| | |
|--------------|--|
| Text: | “Empowering Women is Smart Economics” by Ana Revenga and Sudhir Shetty (Model Source #1) |
|--------------|--|

| Argument sections | Section components | <input type="checkbox"/> | Comments |
|-----------------------------|---|-------------------------------------|---|
| Content and Analysis | Clarity and relevance: Purposefully states a central claim that is linked to a clearly identified context (topic, problem, issue) that establishes its relevance | <input checked="" type="checkbox"/> | Revenga and Shetty present the claim that “[g]reater gender equality can enhance economic productivity, improve development outcomes for the next generation, and make institutions and policies more representative” (par. 3). The authors establish the relevance of this claim by showing how the claim is rooted in the gender gap that remains in low- and middle-income countries. They explain that 40 percent of the world’s workforce is comprised of women and thus “overall productivity will increase if their skills and talents are used more fully” (par. 11). They explain further that when women have “greater control over household resources” (par. 12), children benefit by receiving better food and education and that when women play larger roles in policymaking there is “greater provision of public goods” (par. 13). Since both the claim and its relevance are clearly presented, this model source addresses the component of clarity and relevance. |

| Argument sections | Section components | <input type="checkbox"/> | Comments |
|----------------------------|--|-------------------------------------|--|
| | Conformity to sources: Presents a perspective that arises from ideas and evidence found in a range of diverse, credible, and significant sources | <input checked="" type="checkbox"/> | Revengea and Shetty present a perspective that arises from a range of diverse, credible, and significant sources, including articles from the World Bank, the Food and Agriculture Organization of the United Nations, and a background paper for the World Development Report 2012. Because the model source uses such diverse resources for support, it achieves the component of conformity to sources. |
| | Understanding of the issue: Presents a perspective based on a comprehensive understanding of the issue, and establishes a series of valid claims that emerge from reasoned analysis | <input checked="" type="checkbox"/> | In the model text, Revengea and Shetty build a series of valid claims that support one another and contribute to their central claim. They begin by acknowledging that although the gender gap has improved, gender inequity is still prevalent. The authors then discuss the current state of global gender issues with facts and statistics for support, before addressing 5 specific priorities for consideration. The series of claims and analysis show that Revengea and Shetty have a broad knowledge and comprehensive understanding of the issue. Revengea and Shetty present a perspective based on a comprehensive understanding of the issue, past and present, and establish valid claims that emerge from reasoned analysis, and therefore demonstrate the component of understanding the issue. |
| | Acknowledgement of other perspectives: Recognizes opposing or alternate claims and distinguishes these claims from the stated perspective | <input type="checkbox"/> | In the model text, Revengea and Shetty do not clearly establish or acknowledge any opposing claims. Because of this lack of a significant counterclaim, the source does not meet the criteria for acknowledging other perspectives. |
| Command of Evidence | Reasoning: Links evidence and claims together logically in ways that lead to the conclusions expressed in | <input checked="" type="checkbox"/> | Revengea and Shetty provide clear and coherent reasoning to link their evidence and claims, and clearly explain how the evidence and claims relate to the central claim. The authors provide reasoning such as, “Many |

| Argument sections | Section components | <input type="checkbox"/> | Comments |
|-----------------------------------|---|-------------------------------------|--|
| | the central claim | <input type="checkbox"/> | gender disparities remain even as countries develop, which calls for sustained and focused public action” (par. 4), and “Corrective policies will yield substantial development payoffs if they focus on persistent gender inequalities that matter most for welfare. To be effective, these measures must target the root causes of inequality without ignoring the domestic political economy” (par. 4). |
| | Use of evidence: Supports the central claim and each supporting claim with valid inferences based on credible evidence | <input checked="" type="checkbox"/> | Revengea and Shetty provide valid inferences about credible evidence to support the central claim and supporting claims. For example, the authors provide many examples of why investing in women generates economic growth, including “Elimination of barriers against women working in certain sectors or occupations could increase output by raising women’s participation and labor productivity by as much as 25 percent” (par. 11). |
| | Thoroughness and objectivity: Represents a comprehensive understanding of the issue where the argument’s claims and supporting evidence fairly addresses relevant counterclaims and discusses conflicting evidence | <input type="checkbox"/> | Because Revengea and Shetty do not address relevant counterclaims and conflicting evidence, the article cannot be considered thorough or objective. |
| Coherence and Organization | Relationship among parts: Establishes clear and logical relationships between supporting claims and a central claim | <input checked="" type="checkbox"/> | Revengea and Shetty draw a clear and logical progression of ideas throughout the article. They start by describing the current state of the global gender gap, reinforcing their claim with statistics about the “[m]ixed progress” of gender equality, and move to a discussion of gender and development before providing related policy recommendations. |

| Argument sections | Section components | <input type="checkbox"/> | Comments |
|--|---|-------------------------------------|---|
| | Effectiveness of structure: Adopts an organizational strategy, including an introduction and conclusion, which clearly and effectively communicates the argument | <input checked="" type="checkbox"/> | Revenge and Shetty use an effective organizational structure. Beginning with a strong opening that draws the reader in, the article acknowledges that progress has been made in gender-equity issues, but goes on quickly to explain the reason why “large gender gaps remain” and the ramifications of those gaps for women and girls in the developing world (par. 2). The article concludes with a quote from a Hanoi man that simply and effectively communicates the authors’ argument about the benefits of “closing gender gaps” (par. 25). |
| Control of Language and Conventions | Clarity of communication: Is communicated clearly and coherently; the writer’s opinions are clearly distinguished from objective summaries and statements | <input type="checkbox"/> | Although this article communicates clearly and coherently, the writers’ opinions are not easy to distinguish from summaries and statements. For example, the following sentences seem like they could be a reflection of the authors’ opinions, but the sentences could also be rooted in fact, so it is difficult to know for certain: “Closing the gap in well-being between males and females is as much a part of development as is reducing income poverty. Greater gender equality also enhances economic efficiency and improves other development outcomes” (par. 10). Because of such ambiguity, this article does not reflect clarity of communication. |
| | Word choice/vocabulary: Uses domain-specific terminology appropriately and precisely | <input checked="" type="checkbox"/> | The authors use a variety of domain-specific terminology (e.g., “gender gaps” (par. 2), “gender disparities,” (par. 4), and “gender equality” (par. 3)) appropriately and precisely to provide context and detail. |

| Argument sections | Section components | <input type="checkbox"/> | Comments |
|-------------------|---|-------------------------------------|--|
| | Style/voice: Maintains a formal and objective tone appropriate to the intended audience; the use of words, phrases, clauses, and varied syntax draws attention to key ideas and reinforces relationships among ideas | <input checked="" type="checkbox"/> | Revenge and Shetty maintain a consistent formal tone throughout the entirety of the article. In addition, they vary their syntax and use words, phrases, and clauses to effectively keep readers engaged, drawing attention to key ideas and points about the importance of working to close the global gender gap. The following sentence demonstrates the authors' attention to tone, varied syntax, and phrasing: "Every aspect of gender equality—access to education and health, economic opportunities, and voice within households and society—has experienced a mixed pattern of change over the past quarter century" (par. 5). |
| | Responsible use of evidence: Cites evidence in a responsible manner that anticipates the audience's knowledge level, concerns, values, and possible biases; quotes sufficient evidence exactly, or paraphrases accurately, referencing precisely where the evidence can be found | <input checked="" type="checkbox"/> | The article cites evidence, including relevant quotes, paraphrases, graphics, and a table, that further develop and explain the authors' ideas. The evidence anticipates the audience's knowledge level, concerns, and values. |
| | Conventions of writing: Illustrates consistent command of standard, grade level-appropriate writing conventions | <input checked="" type="checkbox"/> | The writing in the article consistently adheres to the appropriate conventions. |

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12.3.1**Lesson 19****Introduction**

In this lesson, students construct a research frame to guide their research. Students begin the lesson by refining inquiry questions from 12.3.1 Lesson 15, based on search results from 12.3.1 Lessons 16–18. Students learn to group their inquiry questions thematically to develop inquiry paths. Using the thematically grouped inquiry questions, students learn how to create a research frame, which serves as a springboard and reference for future research. Student learning in this lesson is assessed via a research frame submitted during the lesson’s closing. Additionally, students craft a problem-based question based on their area of investigation and inquiry paths to guide the rest of their research.

For homework, students select 1–2 of their strongest inquiry questions to pursue through independent research by following the research steps outlined in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments). Additionally, students record another multimedia journal entry in response to the following prompt: Explain how your inquiry paths examine various aspects of your problem-based question.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| Addressed Standard(s) | |
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |

Assessment

| Assessment(s) |
|---|
| <p>Student learning in this lesson is assessed via a research frame, submitted during the lesson closing.</p> <p>① The Research Frame Tool serves as the assessment for this lesson.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should include:</p> <ul style="list-style-type: none"> • High-level inquiry paths • A range of inquiry paths, encompassing content and coverage of the problem-based question • Inquiry paths that are distinct from one another • Inquiry paths that are equally important • Questions within the inquiry paths that address appropriate scope and utility <p>① See the Model Research Frame Tool at the end of this lesson.</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> • None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> • None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> • None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|-------------|
| <p>Standards:</p> <ul style="list-style-type: none"> • Standards: W.11-12.7, W.11-12.8 | |

| Learning Sequence: | |
|---|--------|
| 1. Introduction of Lesson Agenda | 1. 5% |
| 2. Homework Accountability | 2. 10% |
| 3. Introduction to Inquiry Paths and the Research Frame | 3. 35% |
| 4. Research Frame Tool and Assessment | 4. 30% |
| 5. Crafting a Problem-Based Question | 5. 10% |
| 6. Closing | 6. 10% |

Materials

- Copies of the Research Frame Tool for each student (optional)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and assessed standard for this lesson: W.11-12.7. Students begin the lesson by thematically grouping inquiry questions to create inquiry paths. Students then use the categorized inquiry questions to craft a research frame to inform their future research.

- Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Find two potential sources and evaluate the arguments in the sources by using the Evidence-Based Arguments

Checklist. Include detailed comments and textual evidence to support your choices in the “Comments” section of the Evidence-Based Arguments Checklist for each potential source.) Instruct students to form pairs and discuss how the checklist deepened their understanding of the argument within one of their sources.

☞ Student responses vary depending on individual research questions/problems and research.

① Consider collecting the homework to monitor students’ research progress.

Activity 3: Introduction to Inquiry Paths and the Research Frame

35%

Explain to students that the research frame is a formal plan or guide in which students organize their specific inquiry questions by theme in order to create inquiry paths. Each inquiry path explores or investigates one aspect of the area of investigation. Explain to students that the next step in conducting independent searches is to construct a research frame that will guide their searches in the next two lessons (12.3.1 Lessons 20 and 21). Explain that before they can create the research frame, students must refine the inquiry questions developed in 12.3.1 Lesson 15, based on the research they have done thus far.

► Students listen.

Instruct students to take out their specific inquiry questions from 12.3.1 Lesson 15 and use the following guiding questions to refine their specific inquiry questions:

How do the preliminary search results affect your current inquiry questions?

What new inquiry questions are emerging as a result of the preliminary searches? What inquiry questions might need to be eliminated already?

How can the inquiry questions be refined to reflect the search results?

► Students work independently to refine their inquiry questions from 12.3.1 Lesson 15.

☞ Student responses vary based on their individual research questions/problems and research.

① **Differentiation Consideration:** Consider referring students to the vetting process for inquiry questions taught in 12.3.1 Lesson 15 for additional support.

Explain to students that the next step in developing the research frame is to categorize the refined inquiry questions into inquiry paths. Explain that an inquiry path is a list of specific inquiry questions, categorized thematically by an overarching description or question. Explain that to develop inquiry paths, students should look for common themes or patterns among the various inquiry questions. Then, they can determine a label for this inquiry path with an overarching question or description.

- ▶ Students listen.

① **Differentiation Consideration:** Consider providing students with the following definition:
thematically means “according to topic, subject, or idea.”

Display the following model inquiry questions:

What kinds of successful training are used to develop a productive workforce?

What is the role of government in ensuring high-quality education for all?

What is the best form of education for people in developing nations to ensure gains in economic prosperity (e.g., traditional classrooms, online learning, vocational training)?

How is technology being used to increase developing nations’ participation in global economics?

What forms of technology would be most beneficial for economic development?

In what specific ways does technology stimulate a developing nation’s economy?

- ▶ Students examine the model inquiry questions.

Model for students how to analyze the inquiry questions for common themes or patterns by annotating the model questions. Explain to students that the first three questions focus on the impact of education on a developing nation’s economy. The last three questions focus on the use of technology in a developing nation. Suggest that the inquiry path for the first three questions might include all questions that focus on education and its impact on a developing nation’s economy.

- ▶ Students follow along.

Instruct students to determine themes or patterns among their inquiry questions and categorize them accordingly. Instruct students to write possible inquiry path questions/descriptions for the categorized inquiry questions. Explain that although students may be tempted to first come up with the path and then group their questions accordingly, this method would ignore the research they did and create paths that are not based on the research findings. The themes should emerge from the research, rather than the inquiry questions being forced into pre-determined themes.

- ▶ Students work independently to create and record inquiry paths from their inquiry questions.

① Students can do this by physically arranging questions on their desk or by taking notes.

① **Differentiation Consideration:** Consider distributing the Research Frame Tool to students who need additional support in constructing the research frame.

Inform students that the next step in constructing the research frame is to record the categories of inquiry questions they grouped as inquiry paths. Each inquiry path should be given a title, written in the

form of a question or a description. These inquiry paths should be distinct from each other, but closely related.

Model how to develop the research frame using the model inquiry question and inquiry paths discussed previously in the lesson. Model listing the grouped inquiry questions into inquiry paths beneath a title, written in the form of an over-arching question or description.

- **Model inquiry path:** How does education increase a developing nation's economic prosperity?
 - **Inquiry path questions:** What kinds of successful training are used to develop a productive workforce? What is the role of government in ensuring high-quality education for all? What is the best form of education for people in developing nations to ensure gains in economic prosperity (e.g., traditional classrooms, online learning, vocational training)?
 - **Model inquiry path:** How does education increase a developing nation's economic prosperity?
 - **Inquiry path questions:** How is technology being used to increase developing nations' participation in global economics? What forms of technology would be most beneficial for economic development? In what specific ways does technology stimulate a developing nation's economy?
- Students follow along.

Activity 4: Research Frame Tool and Assessment

30%

Explain that the assessment for this lesson is the independent completion of a research frame. Instruct students to craft a research frame by grouping or categorizing inquiry questions by theme, and titling each inquiry path with an overarching question or description. Instruct students to follow the steps modeled in the previous activity to complete the research frame (W.11-12.8).

- Students independently construct a research frame.
- ① Remind students that a completed research frame should contain at least three inquiry paths that follow from the problem-based question.
 - ① Some students may be tempted to first come up with the path and then group their questions accordingly. Remind students that when they do that, they ignore their own research and their paths will not be grounded in their findings. Some students may still have problems organizing their questions; you may choose to group these students with peers who are researching similar issues to work together to form inquiry paths.
 - ① Consider reminding students that the research frame is not *static* (meaning “showing little or no change; lacking movement”). The research frame continues to evolve as the research evolves with future searches. Remind students this is the iterative and cyclical nature of inquiry-based research.

Activity 5: Crafting a Problem-Based Question

10%

Explain to students that throughout 12.3.1 they have explored an area of investigation that is composed of multiple claims and issues. Using their completed research frames, students craft a problem-based question that will focus their research for the rest of 12.3.1 and lead to a research-based argument paper in 12.3.2. Explain to students that a problem-based question is an overarching question that is crafted from the area of investigation and the related inquiry paths established in the research frame. Additionally, a problem-based question should lead to the most rich and interesting argument research.

Remind students that the model area of investigation is “increasing wealth in developing nations” and the model inquiry paths for the research frame are as follows:

How does education increase a developing nation’s economic prosperity?

How does technology play a role in a developing nation’s economic prosperity?

How does health care contribute to a developing nation’s prosperity?

Explain that a model problem-based question can be crafted by examining these inquiry path questions and revising the area of investigation as a question that yields argument. For example, explain to students that the three inquiry paths all describe different ways in which a developing nation could increase wealth, leading to the problem-based question:

What is the most effective way for a developing nation to increase its economic prosperity?

Direct students to the model research frame and display the model problem-based question.

Explain to students that, based on the various inquiry paths and all the searches up to this point, this is the problem-based question that yields the richest and most interesting argument research because there are many possible answers that directly address the inquiry questions/paths in the research frame.

- ▶ Students follow along.

Activity 6: Closing

10%

Display and distribute the homework assignment. For homework, instruct students to select 1–2 of their strongest inquiry questions to pursue through independent research, following the research steps outlined in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments).

Instruct students to select and copy 1–2 of their strongest inquiry questions from the research frame and record these on a separate sheet of paper to take home for homework purposes.

- ▶ Students select and record 1–2 of their strongest inquiry questions.

Collect the research frame for assessment purposes.

- ① See the High Performance Response for assessment criteria.
- ① Return research frames to students in the next lesson (12.3.1 Lesson 20).
- ① **Differentiation Consideration:** If students have been using search tools (Potential Sources Tool), consider distributing additional tools for the homework assignment.

Additionally, instruct students to record another multimedia journal entry by responding to the following prompt:

Explain how your inquiry paths examine various aspects of your problem-based question.

- ① Consider instructing students to use the Student Research Plan Handout to guide their multimedia journal entries. The Student Research Plan Handout was distributed in 12.3.1 Lesson 15.
- ▶ Students follow along.

Homework

Select 1–2 of your strongest inquiry questions to pursue through independent research by following the research steps outlined in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments).

Additionally, record another multimedia journal entry in response to the following prompt:

Explain how your inquiry paths examine various aspects of your problem-based question.

Name

Topic

Area of Investigation

| INQUIRY PATH | INQUIRY PATH | INQUIRY PATH |
|--|--|--|
| Reference: IP # | Reference: IP # | Reference: IP # |
| Name this Inquiry Path in the form of a brief description or question: | Name this Inquiry Path in the form of a brief description or question: | Name this Inquiry Path in the form of a brief description or question: |
| List all the questions in this Inquiry Path: | List all the questions in this Inquiry Path: | List all the questions in this Inquiry Path: |

Name Topic

Area of Investigation What is the most effective way for a developing nation to increase its economic prosperity?

| INQUIRY PATH | INQUIRY PATH | INQUIRY PATH |
|---|--|--|
| Reference: IP # 1 | Reference: IP # 2 | Reference: IP # 3 |
| Name this Inquiry Path in the form of a brief description or question: How does education increase a developing nation's economic prosperity? | Name this Inquiry Path in the form of a brief description or question: How does technology play a role in a developing nation's economic prosperity? | Name this Inquiry Path in the form of a brief description or question: How does healthcare contribute to a developing nation's economic prosperity? |
| List all the questions in this Inquiry Path: <ol style="list-style-type: none"> How does education relate to the development of human capital? What kinds of successful training are used to develop a productive workforce? What does quality education look like? What is the role of government in ensuring high quality education for all? What societal factors detract from a country's ability to provide its people with high quality education? How can developing nations ensure equity in education? What is the best form of education for people in developing nations to ensure gains in economic prosperity? (e.g. traditional classrooms, online learning, vocational training)? What are the steps needed for developing nations to establish effective education programs? How does education play a role in the development of other human capital areas like technology and healthcare? | List all the questions in this Inquiry Path: <ol style="list-style-type: none"> How has the development of the internet affected developing nations' economies? How is technology being used to increase developing nations' participation in global economics? What forms of technology would be most beneficial for economic development? What is the most effective way to educate people in developing nations in using new technologies? How does the role of technology affect education? How does gender inequity impact a nation's utilization of technology? How does technology usage benefit all people in a developing country? Who should be most responsible for training people in developing countries to use new technology? What can a developing country do to combat resistance to the adoption of new technology? In what specific ways does technology stimulate a developing nation's economy? | List all the questions in this Inquiry Path: <ol style="list-style-type: none"> What forms of healthcare are most important in improving the economic prosperity of a developing nation? (e.g. immunizations, education, access to quality emergency medical care) In what specific ways do improvements in healthcare stimulate a developing nation's economy? How can education and technology be used to improve the healthcare of people in a developing nation? What factors contribute to increased life expectancy in developing nations? What are the steps needed to improve the healthcare system in a developing nation? How do issues of gender inequity affect healthcare in developing nations? How can a developing nation improve its healthcare if it has an unstable government? What role can outside nations play in improving the healthcare system of developing nations? How does healthcare play a role when developing nations choose to invest in human capital? |

12.3.1**Lesson 20****Introduction**

In this lesson, students begin to conduct searches independently using the research frame created in 12.3.1 Lesson 19. This lesson is the first of two lessons in which students conduct sustained, independent research during class, using a Conducting Independent Searches Checklist. The Conducting Independent Searches Checklist helps students focus on specific aspects of the search process. While researching, students consider how to use inquiry questions to drive research and continually assess sources for credibility and usefulness in answering inquiry questions.

Students begin the lesson by discussing the Conducting Independent Searches Checklist. Students then conduct research using the steps introduced in previous lessons. Student learning is assessed via a Quick Write at the end of the lesson: Choose one source and assess the strengths and limitations of that source in relation to an inquiry path.

For homework, students continue conducting searches independently, following the steps taught in Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments).

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
| Addressed Standard(s) | |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |

Assessment

| Assessment(s) |
|--|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, using evidence from their research.</p> <ul style="list-style-type: none"> Choose one source and assess the strengths and limitations of that source in relation to an inquiry path. <p>① Consider using the relevant portions of the 12.3.1 Research Rubric and Checklist to assess the Quick Write in this lesson.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Choose one inquiry path and one source (e.g., “How does education increase a developing nation’s economic prosperity?” and source #6). Assess the strengths and limitations of the source in relation to the inquiry path (e.g., This source discusses details about the beneficial effects of education, specifically the education of females, in a developing nation. The author supports his claims with evidence from multiple authoritative sources. The author goes into detail about the beneficial effect of education on multiple aspects of society, from health care to the economy. However, the author does not speak at great length about the direct effects education would have on a developing economy. He discusses the economy for only two paragraphs and discusses effects in broad strokes rather than specifics like higher wages or greater agricultural productivity. The piece also contains several typographical errors.). <p>① The evidence in this High Performance Response came from model source #6: “The Case for Universal Basic Education for the World’s Poorest Boys and Girls” by Gene B. Sperling (http://www.cfr.org/, search terms: Sperling, Case for Universal Basic Education, 2005).</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview



| Student-Facing Agenda | % of Lesson |
|---|--|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.8, W.11-12.7 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Conducting Independent Searches Checklist Independent Searches Quick Write Closing | <ol style="list-style-type: none"> 5% 10% 15% 55% 10% 5% |

Materials

- Copies of the Conducting Independent Searches Checklist for each student
- Student copies of the Assessing Sources Handout (refer to 12.3.1 Lesson 16)
- Computers with Internet connection (one for each student)
- Copies of the Potential Sources Tool for each student (refer to 12.3.1 Lesson 16) (optional)
- Copies of the Research Frame Tool for each student (refer to 12.3.1 Lesson 19) (optional)
- Student copies of the 12.3.1 Research Rubric and Checklist (refer to 12.3.1 Lesson 9)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |

| | |
|---|--|
|  | Indicates possible student response(s) to teacher questions. |
|  | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%


Begin by reviewing the agenda and assessed standard for this lesson: W.11-12.8. Students begin the lesson by discussing the Conducting Independent Searches Checklist and conduct research using the steps they learned in previous lessons. This lesson is the first of two independent search lessons (12.3.1 Lessons 20–21).

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%



Instruct students to take out their responses to the first part of the previous lesson's homework assignment. (Select 1–2 of your strongest inquiry questions to pursue through independent research by following the research steps outlined in Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments).) Instruct students to talk in pairs and discuss the homework from the previous lesson.

-  Student responses vary depending on individual research questions/problems and research.

 Consider collecting students' homework to monitor the progress of their research.

Instruct students to take out their responses to the second part of the previous lesson's homework assignment. (Additionally, record another multimedia journal entry in response to the following prompt: Explain how your inquiry paths examine various aspects of your problem-based question.) Instruct students to talk in pairs about their multimedia journal entry.

-  Student responses vary according to the research conducted.

-  Consider checking in with students on an individual basis during the research process to formatively assess their application of research skills and offer targeted feedback.
-  **Differentiation Consideration:** Consider instructing students to reflect on the relevant portions of Part 2 of the Student Research Plan by writing a few sentences about their research process and next steps based on the process outcomes described in Part 2 (annotating and taking notes on sources and building a research frame). Instruct students to use the language of the research standards (W.11.12.7 and W.11-12.8) when writing their responses.

Activity 3: Conducting Independent Searches Checklist

15%

Explain to students that this lesson begins a series of two lessons in which students conduct independent searches during class time and for homework. Inform students that each of these independent searches lessons (12.3.1 Lessons 20–21) includes all the steps of the research process taught in previous lessons.

- ▶ Students listen.

Display and distribute the Conducting Independent Searches Checklist. Explain to students that the Conducting Independent Searches Checklist synthesizes all the criteria for an effective search into one list and students should use the checklist to guide their research in all independent searches. Remind students that the skills necessary to meet the criteria have been taught throughout the previous lessons.

- ▶ Students examine the Conducting Independent Searches Checklist.

Instruct students to read the criteria in the Conducting Independent Searches Checklist. Instruct students to form pairs to discuss the specific actions called for by each criterion, as well as any questions they have about the criteria. Instruct student pairs to answer the following questions before sharing out with the class.

What specific action is required for criterion 1, “Uses inquiry questions to drive research and identify sources”?

- ☞ This criterion states that the inquiry questions should drive the research. Students should be searching for sources that provide information related to the inquiry questions. The research is based on inquiry or answering questions to gain a deeper understanding of the problem-based question.

What specific action is required for criterion 2, “Continually assesses sources for credibility; identifies the usefulness of a particular source and explains why a particular source does or does not help respond to an inquiry question”?

- ☞ This criterion describes how to assess sources by using the Assessing Sources Handout introduced in earlier lessons. It is important to get rid of any sources that are not credible, accessible, or relevant.

What specific action is required for criterion 3, “Determines if information is sufficient to address established inquiry paths and questions in the research frame and adjusts the search accordingly”?

- ☞ This criterion describes how to assess the research and determine if there is enough information to answer inquiry questions or address inquiry paths. Sometimes new questions emerge and some questions need to be eliminated based on the direction of the research. Sometimes additional sources need to be explored.

What specific action is required for criterion 4, “Reads sources closely, analyzes details and ideas, and records notes for each source to determine how it addresses inquiry questions and paths”?

- ☞ This criterion requires that students select key sources to read closely for information that addresses select inquiry questions and paths.

What specific action is required for criterion 5, “Makes decisions about the research direction based on reviews of annotation and notes and relevance to inquiry questions/paths. This may include discontinuing inquiry paths and adding inquiry paths/questions”?

- ☞ This criterion requires that students decide which inquiry paths and questions have been addressed by the research and making decisions about which direction to go with the research.

What specific action is required for criterion 6, “Marks key information in sources, takes notes of initial impressions, identifies additional research needs, and inserts codes to link to inquiry paths”?

- ☞ This criterion requires that students annotate and take notes on key sources, but also begin to analyze those sources for how they answer the selected inquiry question. This criterion also contributes to changes in research direction that might take place.

① Look for student understanding of the criterion’s action, its nonlinear nature, and the iterative processes of research.

Lead a brief whole-class discussion of students’ responses and questions.

Instruct students to use the Conducting Independent Searches Checklist to guide their research in this lesson and all subsequent independent searches.

- ▶ Students listen.

Explain to students that a key component in crafting an effective research-based argument paper is using a variety of credible sources. As students begin to identify key sources for their paper, they should keep in mind the variety of sources available and avoid overreliance on one source. A diversity of sources will allow students to craft an effective research-based argument paper by providing multiple perspectives, a variety of evidence, and differing audiences.

- ▶ Students listen.

Inform students that diversity within their sources can mean many different things. It is possible to have diversity of one sort and not of another. Diversity among sources can also include the medium of the source (e.g., video interviews or print articles); its format (e.g., newspaper article or academic text); and the cultural perspective of the author (e.g., an author from Canada or an author from Beirut). Explain to students that while it is not necessary that every source represent an entirely unique and varied

perspective, the more diverse and comprehensive sources they can reference, the stronger their papers will be.

Ask students the following questions to help solidify their understanding of source diversity.

What are some examples of a source list that is not diverse?

- 💬 Student responses may include:
 - All of the sources come from the same publication.
 - All of the sources come from the same country.
 - All of the sources are newspaper articles.

How can you ensure that your sources are diverse?

- 💬 Pay attention to the medium, perspective, and origin of each source.

Instruct students to keep these considerations in mind as they gather sources through this module. A diverse pool of potential sources provides a strong foundation for their claims and reasoning.

- ▶ Students listen.

Activity 4: Independent Searches

55%

Instruct students to work on their independent searches using the Conducting Independent Searches Checklist as a guide. Remind students of the research steps (planning for searches, assessing sources, annotating, taking notes, and evaluating arguments). Remind students to organize all search materials in their respective research materials. Instruct students to take out their research frames and any other pertinent search materials from the previous lessons that will be necessary in conducting the independent searches. (W.11-12.7)

Transition students to independent searches.

- ▶ Students complete independent searches using the research frame and the steps from previous lessons.
- ① Consider displaying the search steps from 12.3.1 Lessons 16–18 for students to see.
- ① Consider using the media center or library for this lesson so students have access to librarians or media specialists.
- ① Students need access to computers with Internet capacity for research purposes. Prepare for the lesson ahead of time by reserving space in rooms with technology access for all students.
- ① **Differentiation Consideration:** Consider encouraging students to work with the Potential Sources Tool and Research Frame Tool if they have used the tools in previous lessons.

Instruct students to consult the Conducting Independent Searches Checklist as a reminder of the components of the research process.

- ① **Differentiation Consideration:** Some of the issues students are researching may yield complex or inaccessible texts. To address this concern, consider recommending that students make use of free databases accessible through <http://novelnewyork.org/>, such as Grolier, Gale, and ProQuest; these databases allow searches by subject/keyword and students may filter the searches so that only texts within certain Lexile® ranges are returned. Consider collaborating with a librarian or media specialist to access these databases and create filtered searches that support students' reading levels.
- ① Remind students to consider print and non-text media when researching and to think about how visuals or auditory media can provide information or demonstrate information in ways different from text.

Activity 5: Quick Write

10%

Instruct students to respond briefly in writing to the following prompt:

Choose one source and assess the strengths and limitations of that source in relation to an inquiry path.

Remind students to use the 12.3.1 Research Rubric and Checklist to guide their written responses.

- ▶ Students listen and read the Quick Write prompt.
- ① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from their research conducted in this lesson.
- 🗣 See the High Performance Response at the beginning of this lesson.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to continue conducting searches independently, following the steps taught in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments).

- ① Students should bring to class their annotated sources and completed research tools as evidence of their independent research.
- ▶ Students follow along.

Homework

Continue conducting searches independently, following the steps taught in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments). Bring to class your annotated sources and completed research work from your searches.

Conducting Independent Searches Checklist

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Use this checklist to guide your independent searches to ensure that your research is effective.

| Criteria for conducting independent searches | Check |
|---|-------|
| 1. Uses inquiry questions to drive research and identify sources. | |
| 2. Continually assesses sources for credibility; identifies the usefulness of a particular source and explains why a particular source does or does not help respond to an inquiry question. | |
| 3. Determines if information is sufficient to address established inquiry paths and questions in the research frame and adjusts the search accordingly. | |
| 4. Reads sources closely, analyzes details and ideas, and records notes for each source to determine how it addresses inquiry questions and paths. | |
| 5. Makes decisions about the research direction based on reviews of annotation and notes and relevance to inquiry questions/paths. This may include discontinuing inquiry paths and adding inquiry paths/questions. | |
| 6. Marks key information in sources, takes notes of initial impressions, identifies additional research needs, and inserts codes to link to inquiry paths. | |

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12.3.1**Lesson 21****Introduction**

In this lesson, students continue to conduct searches independently using the research frame as a guide. This is the second and final lesson of the independent search process; it builds on the previous lesson by asking students to determine whether the research surfaced is sufficient to address their inquiry paths and questions, and adjust their searches accordingly. Additionally, students read sources closely, analyze details and ideas, evaluate a source's argument, and take notes for each source to determine how it addresses inquiry questions and paths.

Students begin by assessing their current search process and making strategic decisions about changes, additions, and deletions to the research frame. Based on this process, students update their research frames as needed. Students continue to research independently, using the steps previously taught in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments). Student learning is assessed via a Quick Write at the end of the lesson: Choose one source and assess its relevance in addressing a selected inquiry question.

For homework, students continue conducting searches independently, following the steps taught in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments). Additionally, students organize their research materials by inquiry path to prepare for the following lesson.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
| Addressed Standard(s) | |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating |

| | |
|--|---|
| | understanding of the subject under investigation. |
|--|---|

Assessment

Assessment(s)

Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, using evidence from their research.

- Choose one source and assess its relevance in addressing a selected inquiry question.
- ① Consider using the relevant portions of the 12.3.1 Research Rubric and Checklist to assess the Quick Write in this lesson.

High Performance Response(s)

A High Performance Response should:

- Choose one inquiry question and one source (e.g., “What does quality education look like?” and source #7).
- Assess the source’s relevance in addressing the selected inquiry question (e.g., Source #7 is a relevant source in relation to the inquiry question, “What does quality education look like?” The report was written by UNESCO, a specialized agency of the UN that researches global education with the goal of improving education for all. The report is titled, “2005 EFA Global Monitoring Report: Education for All: The Quality Imperative” and is a factual report that describes many facets of quality education including historical context and factors affecting quality education. In describing quality education, the report says, “[T]wo principal objectives are at stake: the first is to ensure the cognitive development of learners. The second emphasises the role of education in nurturing the creative and emotional growth of learners and in helping them to acquire values and attitudes for responsible citizenship. Finally, quality must pass the test of equity: an education system characterized by discrimination against any particular group is not fulfilling its mission” (Foreword). This statement directly addresses the selected inquiry question.).

- ① The evidence in this High Performance Response came from model source #7: “2005 EFA Global Monitoring Report: Education for All: The Quality Imperative” by UNESCO (<http://unesdoc.unesco.org/images/0013/001373/137333e.pdf>).

Vocabulary

Vocabulary to provide directly (will not include extended instruction)

- None.*

| Vocabulary to teach (may include direct word work and/or questions) |
|--|
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|---|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.8, W.11-12.7 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Independent Searches Quick Write Closing | <ol style="list-style-type: none"> 5% 20% 60% 10% 5% |

Materials

- Student copies of the Conducting Independent Searches Checklist (refer to 12.3.1 Lesson 20)
- Student copies of the Assessing Sources Handout (refer to 12.3.1 Lesson 16)
- Student copies of the Research Frame Tool (refer to 12.3.1 Lesson 19) (optional)
- Student copies of the Potential Sources Tool (refer to 12.3.1 Lesson 16) (optional)
- Computers with Internet connection (one for each student)
- Student copies of the 12.3.1 Research Rubric and Checklist (refer to 12.3.1 Lesson 9)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |

| | |
|-----------|---|
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ▶ | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: W.11-12.8. In this lesson, students assess their search process and making strategic decisions about changes, additions, and deletions to the research frame. Students continue to research independently, using the steps previously taught in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments).

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

20%

Instruct students to take out their responses to the previous lesson's homework assignment (Continue conducting searches independently, following the steps taught in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments). Bring to class your annotated sources and completed research work from your searches.) Instruct students to form pairs to discuss their responses.

- ▶ Student pairs discuss the homework from the previous lesson.
- 💬 Student responses vary depending on individual research questions/problems and research.
- ❗ Consider instructing students to use the Conducting Independent Searches Checklist to guide their discussions.
- ❗ Consider collecting the homework to assess students' research progress.

Remind students that this type of inquiry-based research is cyclical and nonlinear. Sometimes new inquiry paths develop and some inquiry paths are abandoned depending on the direction of the research. Instruct students to reflect on their research from the previous lesson's homework and assessment by thinking about how the research frame should change or stay the same.

Instruct students to form pairs. Post or project the following questions for student pairs to discuss:

Which inquiry paths deserve more attention and further development?

Which inquiry paths need to be discontinued or abandoned?

What new inquiry questions are emerging?

What new inquiry paths are emerging?

- Student responses vary depending on individual research questions/problems and research. Responses should address changes, additions, and deletions to inquiry questions/paths.

Instruct students to independently revise/refine their research frames based on their reflection.

- ▶ Students independently revise/refine their research frame.
- ① **Differentiation Consideration:** If students need additional support, consider modeling changes, additions, and deletions to the model research frame that was developed in 12.3.1 Lesson 19.
- ① Students can write their revisions directly on their current research frames or on an additional research frame.
- ① **Differentiation Consideration:** Some students may not need to alter their research frames as a result of their research, provided the research is sufficient to support the current research frame. Consider having these students peer review each other's research frames and research notes/tools to ensure that no alterations are necessary.

Activity 3: Independent Searches

60%

Remind students of the search steps from 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments). Remind students to use their Conducting Independent Searches Checklist to guide their independent searches (W.11-12.7).

- ① Consider displaying the search steps from 12.3.1 Lessons 16–18 for students to see.

Transition students to independent searches.

- ▶ Students work on independent searches.
- ① Consider using the media center or library for this lesson so students have access to librarians or media specialists.
- ① Students need access to computers with Internet capacity for research purposes. Prepare for the lesson ahead of time by reserving space in rooms with technology access for all students.
- ① Consider using the Conducting Independent Searches Checklist to monitor students' progress.

- ▶ Students independently search for sources using their current research frames and the steps from 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments).
- ① **Differentiation Consideration:** Some of the issues students are researching may yield complex or inaccessible texts. To address this concern, consider recommending that students make use of free databases accessible through <http://novelnewyork.org> such as Grolier, Gale, and ProQuest; these databases allow searches by subject/keyword and students may filter the searches so that only texts within certain Lexile® ranges are returned. Consider collaborating with a librarian or media specialist with regard to accessing these databases and creating filtered searches that support students' reading levels.
- ① **Differentiation Consideration:** Consider encouraging students to work with the Potential Sources Tool and Research Frame Tool if they have used the tools in previous lessons.
- ① Remind students to continue considering print and media when researching and to think about how visuals or auditory media can provide information or demonstrate information in ways different from written text.
- ① Remind students to avoid overreliance on one source by collecting a variety of sources that offer diverse perspectives and a range of evidence and that target different audiences.
- ① Consider checking in with students on an individual basis during the research process to formatively assess their application of research skills and offer targeted feedback.

Activity 4: Quick Write

10%

Instruct students to respond briefly in writing to the following prompt:

Choose one source and assess its relevance in addressing a selected inquiry question.

Remind students to use the 12.3.1 Research Rubric and Checklist to guide their written responses.

- ▶ Students listen and read the Quick Write prompt.
- ① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using evidence from their research conducted in this lesson.
- 💬 See the High Performance Response at the beginning of this lesson.

Activity 5: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to continue conducting searches independently, following the steps taught in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments). In addition, instruct students to organize their research materials by inquiry path to prepare for the following lesson.

- ▶ Students follow along.

Homework

Continue conducting searches independently, following the steps taught in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments). Additionally, organize your research materials by inquiry path to prepare for the following lesson.

12.3.1

Lesson 22

Introduction

In this lesson, students analyze and synthesize their research to begin making claims about inquiry questions within an inquiry path. Students use at least two Forming Evidence-Based Claims Tools to develop claims about all inquiry paths on the research frame.

Students begin by choosing the inquiry path that surfaced the richest research, while also narrowing the focus to a single inquiry question within the selected inquiry path. Students then skim their research associated with that inquiry question, including annotated sources and notes. Students highlight the pertinent evidence directly on the annotated sources or their notes. Students then select details from the highlighted evidence to make claims about inquiry questions and inquiry paths by completing at least two Forming Evidence-Based Claims Tools. These initial claims are the foundation for the Evidence-Based Perspective that students will develop in 12.3.1 Lesson 27. Student learning is assessed via a Quick Write at the end of the lesson: Choose two evidence-based claims and explain how each evidence-based claim addresses one or more inquiry questions.

For homework, students complete the process of organizing, analyzing, and synthesizing their research, using at least two Forming Evidence-Based Claims Tools to develop claims about all inquiry paths on the research frame.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| W.11-12.9 | Draw evidence from literary or informational texts to support analysis, reflection, and research. |
| Addressed Standard(s) | |
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively |

| | |
|--|---|
| | to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
|--|---|

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, using evidence from their research.</p> <ul style="list-style-type: none"> Choose two evidence-based claims and explain how each evidence-based claim addresses one or more inquiry questions. <p>① Consider using the relevant portions of the 12.3.1 Research Rubric and Checklist to assess the Quick Write in this lesson.</p> |
| High Performance Response(s) |
| <p>Student responses vary according to the research conducted. A High Performance Response should:</p> <ul style="list-style-type: none"> Choose an evidence-based claim (e.g., “Various forms of technology spur economic growth across all levels of society. Broadband stimulates communication and access to information, and labor-saving technology improves quality of life and saves time.”). Explain how the evidence-based claim addresses an inquiry question (e.g., This evidence-based claim addresses the inquiry question, “In what specific ways does technology stimulate a developing nation’s economy?” This evidence-based claim responds to this question by explaining that technology stimulates an economy in a variety of ways. The claim also provides specific examples gleaned from details in the sources like the use of Broadband and laborsaving techniques.). Choose another evidence-based claim (e.g., “Education quality is determined by multiple factors, both inside and outside the classroom, including but not limited to cognitive development, skill development, and equity”). Explain how the evidence-based claim addresses an inquiry question (e.g., This evidence-based claim addresses the inquiry question “What does quality education look like?” The claim responds to this question by providing examples of the multiple ways one can define quality education. The claim explains that quality education is not limited to the classroom, it must foster cognitive and skill development, and it must be based on equity.). |

Vocabulary

| |
|---|
| Vocabulary to provide directly (will not include extended instruction) |
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards & Texts: <ul style="list-style-type: none"> Standards: W.11-12.7, W.11-12.9, W.11-12.8 Model Source Texts: “Human Capital Investment in the Developing World: An Analysis of Praxis” by Adeyemi O. Ogunade (Source # 5, http://www.uri.edu/, search terms: Analysis of Praxis, Ogunade); “2005 EFA Global Monitoring Report: Education for All: The Quality Imperative” by UNESCO (Source #7) | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Research Analysis Activity Research Synthesis Activity Quick Write Closing | <ol style="list-style-type: none"> 5% 10% 45% 25% 10% 5% |

Materials

- Highlighters (one for every student)
- Copies of the Forming Evidence-Based Claims Tool for each student (at least 6 per student)
- Student copies of the 12.3.1 Research Rubric and Checklist (refer to 12.3.1 Lesson 9)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ① | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and assessed standards for this lesson: W.11-12.7 and W.11-12.9. In this lesson, students choose an inquiry path that surfaced rich research and narrow the focus to a single inquiry question within the selected inquiry path. Students then review their research associated with that inquiry question, including annotated sources and notes. Students highlight the important evidence directly on the annotated sources or their notes, and select details from the highlighted evidence to record on their Forming Evidence-Based Claims Tools. Students are then able to make claims about the inquiry questions and inquiry paths. These initial claims serve as the foundation for the evidence-based perspective students develop in 12.3.1 Lesson 27.

- Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Continue conducting searches independently, following the steps taught in 12.3.1 Lessons 16–18 (plan for searches, assess sources, annotate sources, record notes, and evaluate arguments). Additionally, organize your research materials by inquiry path to prepare for the following lesson.)

Ask students:

Which inquiry paths from your research frame surfaced the richest information from the source materials?

- 💬 Student responses may include:
 - I noticed that I had several relevant and useful resources for inquiry path 1. These references provided some answers to each of the inquiry questions within this path. So, inquiry path 1 seems to be the richest path in terms of information across multiple sources.

- I noticed that I was able to answer most questions within each inquiry path, thus, all inquiry paths led to rich information.

① Consider collecting the homework to assess students' research progress.

Activity 3: Research Analysis Activity

45%

Remind students that thus far they have focused on researching and analyzing sources for the individual questions in their inquiry paths. Explain that, in this next step, students take a more global perspective on their research by returning to the research frame and analyzing their evidence across multiple sources to see if they can answer some of their inquiry questions. Inform students that the goal of this activity is to understand what the research says about each inquiry path now that the research is mostly complete.

- ▶ Students listen.

① After this lesson's activities, some students may continue researching if they have not yet found enough evidence to directly support a claim about each inquiry path.

Instruct students to follow specific steps to analyze the research in order to think about their developing understanding about each inquiry path. Display and explain each step:

- Step 1: Review the research frame and analyze each inquiry path. Choose an inquiry path that surfaced the richest research across multiple sources. This inquiry path is now your focus inquiry path.
- Step 2: Analyze the focus inquiry path and circle inquiry questions within the path that led to the most useful and relevant research.
- Step 3: Choose one of the circled inquiry questions and skim all the research associated with that one inquiry question, highlighting evidence and details that answer the chosen inquiry question. This step may include reading or skimming across multiple sources for one inquiry question. Ensure that you do not rely too much on any one source.
- Step 4: Repeat this process for as many questions as possible in each inquiry path, even for inquiry paths that did not yield the most interesting or rich research.

① Students may use the inquiry path question itself to analyze research associated with that path.

- ▶ Students listen and examine the steps.

① After the modeling of each step, students use their own research to complete the step independently.

Display the model research frame (from 12.3.1 Lesson 19) for students to see.

- ▶ Students examine the model research frame.

① The model research frame is located in 12.3.1 Lesson 19.

Model for students how to follow the research analysis steps. Remind students that step 1 is to “Review the research frame and analyze each inquiry path. Choose an inquiry path that surfaced the richest research across multiple sources. This inquiry path is now your focus inquiry path.”

Explain to students that while all paths have surfaced rich research, the richest research comes from inquiry path 1:

Inquiry path #1: How does education increase a developing nation’s economic prosperity?

This path includes a wide variety of evidence from sources that represent multiple perspectives and synthesis of these perspectives.

- ▶ Students listen and follow along with the modeling.

Model for students how to complete step 2: Analyze the focus inquiry path and circle inquiry questions within the path that led to the most useful and relevant research. Explain to students that they should examine the focus inquiry path (inquiry path 1) and all the questions within it, and think about the independent searches they conducted. Explain to students that the inquiry questions within inquiry path 1 that were answered through research include the following:

How does education relate to the development of human capital?

What does quality education look like?

How does education play a role in the development of other human capital areas like technology and healthcare?

Circle the questions for students to see.

- ▶ Students listen and follow along with the modeling.

Explain to students that step 3 in the research analysis process is to choose one of the circled inquiry questions, skim all the research associated with the chosen inquiry question, and highlight evidence and details that answer the chosen inquiry question. This step may include reading across multiple sources for one inquiry question. Ensure that you do not rely too much on any one source.

Model for students how to use the inquiry question “What does quality education look like?” to guide the research analysis. Demonstrate how to skim through a source to find, read, and highlight key evidence associated with the chosen inquiry question. Skim through source #7 and discuss which evidence to highlight for the chosen inquiry question.

- ▶ Students listen and follow along with the modeling.

The following are examples of possible highlighted evidence to model from source #7 (“EFA Global Monitoring Report 2005: Education for All – The Quality Imperative” by UNESCO).

- “The quantity of children who participate is by definition a secondary consideration: merely filling spaces called ‘schools’ with children would not address even quantitative objectives if no real education occurred.” (pp. 28–29)
- “[E]ducation is a set of processes and outcomes that are defined qualitatively.” (p. 28)
- “[T]wo principal objectives are at stake: the first is to ensure the cognitive development of learners. The second emphasises the role of education in nurturing the creative and emotional growth of learners and in helping them to acquire values and attitudes for responsible citizenship. Finally, quality must pass the test of equity: an education system characterized by discrimination against any particular group is not fulfilling its mission.” (Foreword)

① Prior to this lesson, students annotated and recorded notes on all their sources; they do not need to read every source closely again, but can skim through for key evidence and details associated with the chosen inquiry question.

Instruct students to look at their individual research frames and follow the first three steps of the research analysis process by choosing one inquiry path on which to focus, circling inquiry questions, and finally choosing one focus inquiry question. Remind students to circle questions within the inquiry path that led to relevant and useful research.

- ▶ Students look at their individual research frames and choose a rich inquiry path on which to focus, circle inquiry question(s) within the path, and choose one focus inquiry question.
- ① Students can choose the inquiry path question itself to guide their research analysis.
- ① Instruct students to use highlighters to highlight evidence and details that answer the chosen inquiry question. Remind students they are looking for how their sources answer the chosen inquiry question.
- ① **Differentiation Consideration:** If students struggle with the analysis process, consider modeling with an individual student’s chosen inquiry question to highlight evidence and details that answer the question.

Activity 4: Research Synthesis Activity

25%

Introduce students to the Forming Evidence-Based Claims Tool, which they use to synthesize evidence for their focus inquiry question. Explain to students that it is important to think about how the information gathered through research connects, and what the research says about the focus inquiry question. Explain that this work helps students develop a deeper understanding of the research itself

and its connections to the problem-based question. Inform students that this work is the foundation for developing a perspective about their problem-based question in subsequent lessons.

- ▶ Students listen.

① Consider providing the following definition: *synthesize* means “to combine into a single or unified entity.”

Distribute at least 6 copies of the Forming Evidence-Based Claims Tool to all students.

- ▶ Students examine the Forming Evidence-Based Claims Tool.

Display a Model Forming Evidence-Based Claims Tool for all students to see. Model for students how to complete the top portion of the tool by writing the model sources #5 and #7, and the model inquiry question, “What does quality education look like?”

- ▶ Students follow along with the modeling.

Instruct students to complete the top portion of their blank Forming Evidence-Based Claims Tool, writing their chosen inquiry question and the numbers of the sources they analyzed in the previous activity.

- ▶ Students complete the top portion of their blank Forming Evidence-Based Claims Tool.

① Remind students of their work with numbering sources in 12.3.1 Lesson 16.

① After the modeling of each portion of the Forming Evidence-Based Claims Tool, students use their own research to complete the tool independently.

Model for students how to select details from the highlighted research analysis to complete the “Selecting Details” portion of the Forming Evidence-Based Claims Tool. Show students several highlighted pieces of evidence from sources #5 and #7. Explain to students that they should choose the most important evidence that answers the focus inquiry question. Model for students how to choose the most important details from the highlighted evidence. Write these details on the Model Forming Evidence-Based Claims Tool for students to see. These should include the following:

- “The quantity of children who participate is by definition a secondary consideration: merely filling spaces called ‘schools’ with children would not address even quantitative objectives if no real education occurred.” (pp. 28–29)
- “[E]ducation is a set of processes and outcomes that are defined qualitatively.” (p. 28)
- “[T]wo principal objectives are at stake: the first is to ensure the cognitive development of learners. The second emphasises the role of education in nurturing the creative and emotional growth of learners and in helping them to acquire values and attitudes for responsible citizenship. Finally,

quality must pass the test of equity: an education system characterized by discrimination against any particular group is not fulfilling its mission.” (Foreword)

- “[Quality education] includes experience; practical learning that take place on the job, as well as, non-traditional technical training regimens that enhance skill development.” (p. 3)

- ▶ Students listen and follow along with the model.

① The sources “Human Capital Development in the Developing World: An Analysis of Praxis” and “EFA Global Monitoring Report 2005: Education for All – The Quality Imperative” are referenced in the Model Forming Evidence-Based Claims Tool, but any source may be used to model using the Forming Evidence Based Claims Tool.

Instruct students to analyze the highlighted evidence from their research and select the most important details to answer their chosen inquiry question. Instruct students to write the selected details in the “Selecting Details” section of the tool. Remind students to write the source’s number on the reference line so they do not separate the resource from the evidence (W.11-12.8).

- ▶ Students analyze the highlighted evidence from their research and write the most important details on the Forming Evidence-Based Claims Tool.

Model for students how to complete the “Analyzing and Connecting Details” section of the Forming Evidence-Based Claims Tool. Instruct students to consider what the details say about the chosen inquiry question and the connections students can make among the details.

Model this thinking and write the following on the Model Forming Evidence-Based Claims Tool in the “Analyzing and Connecting Details” section for students to see: “Education is evaluated qualitatively, and quality is not the same thing as quantity. Providing students with lots of classroom time means nothing if the students are not developing cognitive skills. Quality is also determined by equity—how equal the education system is—as well as teaching students skills and values for responsible citizenship. Quality education also depends on experience.”

- ▶ Students follow along with the modeling.

Instruct students to practice using their own Forming Evidence-Based Claims Tools, by thinking about their details and how they are connected in light of their chosen inquiry question. Instruct students to write their thinking in the “Analyzing and Connecting Details” section on the Forming Evidence-Based Claims Tool.

- ▶ Students make connections between the important details and write these connections in the “Analyzing and Connecting Details” section on the tool.

Model for students how to develop a claim that answers the chosen inquiry question by completing the “Making a Claim” section of the Forming Evidence-Based Claims Tool. Instruct students to think about the conclusions or answers they are developing based on their analysis. Write the following claim on the Model Forming Evidence-Based Claims Tool in the “Making a Claim” section for students to see: Education quality is determined by multiple factors, both inside and outside the classroom, including but not limited to cognitive development, skill development, and equity.

- ▶ Students follow along with the modeling.

Instruct students to develop their own claims and write them on their tools in the “Making a Claim” section.

- ▶ Students develop a claim in the “Making a Claim” section on the tool.

Explain to students that for the previous analysis, they chose only one inquiry question to focus on. They can now analyze the rest of their research evidence and develop more claims about their other inquiry questions.

- ▶ Students listen.

Instruct students to review their focused inquiry path with the circled inquiry questions, and to continue to use the Forming Evidence-Based Claims Tool to develop claims about all the circled questions. Instruct students to begin developing claims for their focus inquiry path.

- ▶ Students use the Forming Evidence-Based Claims Tool to develop claims about the circled inquiry questions within the chosen inquiry path.

- ① Remind students to follow the steps of analyzing the research and the process of synthesis for each Forming Evidence-Based Claims Tool outlined in Activity 3 of this lesson.
- ① **Differentiation Consideration:** Students may feel comfortable forming claims without the support of the Forming Evidence-Based Claims Tool. If so, consider allowing students to work without the support of the tool.
- ① If students have chosen to focus on the inquiry path question itself, they should still be able to complete multiple Forming Evidence-Based Claims Tools because they should have sufficient evidence to analyze and make a variety of claims about the inquiry path question. (See the Model Evidence-Based Claim Tool responses at the end of the lesson for an example of this.)

Activity 5: Quick Write

10%

Instruct students to respond briefly in writing to the following prompt:

Choose two evidence-based claims and explain how each evidence-based claim addresses one or more inquiry questions.

Instruct students to develop their written responses from their Forming Evidence-Based Claims Tools. Remind students to use the 12.3.1 Research Rubric and Checklist to guide their written responses. Remind students to practice the skills outlined in W.11-12.2.4, to which they were introduced in Module 12.1.

① If necessary, consider reviewing the components of W.11-12.4, which include producing clear, coherent writing that employs organization and style appropriate to the task, purpose, and audience.

▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

▶ Students independently answer the prompt using the Forming Evidence-Based Claims Tools to guide their written responses.

🗣 See the High Performance Response at the beginning of this lesson.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to complete the process of organizing, analyzing, and synthesizing their research, using at least two Forming Evidence-Based Claims Tools to develop claims about all inquiry paths on the research frame.

① Students will need to complete at least 6 Forming Evidence-Based Claims Tools, two for each inquiry path on their research frame.

▶ Students follow along.

Homework

Complete the process of organizing, analyzing, and synthesizing your research, using at least two Forming Evidence-Based Claims Tools to develop claims about all inquiry paths on the research frame.

I read the sources closely and mark words and phrases that help me answer my question.

| | | |
|-------------------|-------------------|-------------------|
| Detail 1 (Ref.:) | Detail 2 (Ref.:) | Detail 3 (Ref.:) |
|-------------------|-------------------|-------------------|

What I think about the details and how I connect them:

My claim that answers my inquiry question:

Name Model Source(s) # 5 and 7

Inquiry Question: What does quality education look like?

SEARCHING FOR DETAILS

I read the sources closely and mark words and phrases that help me answer my question.

SELECTING DETAILS

I select words or phrases from my search that I think are the most important for answering my question. I write the reference next to each detail.

Detail 1 (Ref.: 7, p. 28-29)

"The quantity of children who participate is by definition a secondary consideration: merely filling spaces called 'schools' with children would not address even quantitative objectives if no real education occurred."

Detail 2 (Ref.: 7, Foreword)

"[T]wo principal objectives are at stake: the first is to ensure the cognitive development of learners."

Detail 3 (Ref.: 5, p. 3)

"[Quality education] includes experience: practical learning that take place on the job, as well as, non-traditional technical training regimens that enhance skill development."

ANALYZING AND CONNECTING DETAILS

I re-read parts of the texts and think about the meaning of the details and what they tell me about my question. Then I compare the details and explain the connections I see among them.

What I think about the details and how I connect them:

Education is evaluated qualitatively, and quality is not the same thing as quantity. Providing students with lots of classroom time means nothing if the students are not developing cognitive skills. Quality is also determined by equity—how equal the education system is—as well as teaching students skills and values for responsible citizenship. Quality education also depends on experience.

MAKING A CLAIM

I state a conclusion I have come to and can support with evidence from the texts after reading them closely.

My claim that answers my inquiry question:

Education quality is determined by multiple factors, both inside and outside the classroom, including but not limited to cognitive development, skill development, and equity.

Name Model Source(s) # 3 and 10

Inquiry Question: In what specific ways does technology stimulate a developing nation's economy?

SEARCHING FOR DETAILS

I read the sources closely and mark words and phrases that help me answer my question.

SELECTING DETAILS

I select words or phrases from my search that I think are the most important for answering my question. I write the reference next to each detail.

Detail 1 (Ref.: 10, p. 36)
Broadband Internet helps people "acquire skills ... and develop social networks ... facilitating peer-to-peer communities and their integration with the economy."

Detail 2 (Ref.: 10, p. 6)
In India, some farming villages are "using a common portal that links multimedia personal computers by satellite."

Detail 3 (Ref.: 3, p. 3)
Countries can "improve ... quality of life by investing in labour-saving technology."

ANALYZING AND CONNECTING DETAILS

I re-read parts of the texts and think about the meaning of the details and what they tell me about my question. Then I compare the details and explain the connections I see among them.

What I think about the details and how I connect them:

Technology is a broad term that includes mediums as different as broadband high-speed Internet and labour-saving technology like plows. But the common thread is that when communication is ignited, information spread, and efficiency increased, people develop skills and work together more efficiently within a country.

MAKING A CLAIM

I state a conclusion I have come to and can support with evidence from the texts after reading them closely.

My claim that answers my inquiry question:

Various forms of technology spur economic growth across all levels of society. Broadband stimulates communication and access to information, and labour-saving technology improves quality of life and saves time.

12.3.1**Lesson 23****Introduction**

In this lesson, students organize, analyze, and synthesize their claims using their Forming Evidence-Based Claims Tools from the previous lesson to develop comprehensive claims about each inquiry path in the research frame. This work directly prepares students to develop and write an Evidence-Based Perspective for the End-of-Unit Assessment (12.3.1 Lesson 27). Students build on the claims created in the previous lesson to develop comprehensive claims that reflect a deeper understanding of the inquiry paths and the problem-based question itself, and begin to develop a perspective on their issue.

Students begin the lesson by organizing the claims they created in the previous lesson, physically arranging the Forming Evidence-Based Claims Tools according to the inquiry paths they address. Students analyze and make connections between these specific claims and the supporting evidence to develop comprehensive claims about each inquiry path. Students use Organizing Evidence-Based Claims Tools to write the comprehensive claims about each inquiry path. Students then work in small groups to peer review one Organizing Evidence-Based Claims Tool using an Evidence-Based Claims Criteria Checklist. Students then synthesize the information from an Organizing Evidence-Based Claims Tool into a paragraph that explains the claim, the evidence that supports it, and how the claim supports a side of an issue from the problem-based question. Student learning is assessed via a Quick Write at the end of the lesson: Develop and explain a claim about an inquiry path or your problem-based question and support the claim using specific evidence and details from your research.

For homework, students review all of their Organizing Evidence-Based Claims Tools using the Evidence-Based Claims Criteria Checklist and, if necessary, revise their claims. Additionally, students reflect on their research process completed during the lesson and complete a multimedia journal entry in response to the following prompt: How is your perspective about your problem-based question evolving now that you have synthesized your research?

Standards

| Assessed Standard(s) | |
|----------------------|--|
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |

| | |
|------------------------------|---|
| W.11-12.9 | Draw evidence from literary or informational texts to support analysis, reflection, and research. |
| Addressed Standard(s) | |
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. |

Assessment

| |
|---|
| Assessment(s) |
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, using an Organizing Evidence-Based Claims Tool from the lesson.</p> <ul style="list-style-type: none"> Develop and explain a claim about an inquiry path or your problem-based question and support the claim using specific evidence and details from your research. <p>① Student responses are assessed using the Evidence-Based Claims Criteria Checklist.</p> |
| High Performance Response(s) |
| <p>Student responses will vary according to the individual's problem-based question and research. A High Performance Response should:</p> <ul style="list-style-type: none"> Develop and explain a claim about an inquiry path or the problem-based question (e.g., "Developing nations can become more prosperous by providing quality education and technology to all citizens." This claim points to the fact that <i>quality</i> education, technology, and equity are all important for developing countries seeking to become more economically prosperous.). Provide the most relevant and sufficient evidence from research to support the claim (e.g., Because what is important about education, economically speaking, is the skills one gains, quality education is important so that the workforce experiences high "cognitive development" (p. 29) demonstrated through specific skills, and is, thus, able to be "more productive" (p. ix). "[Quality education] includes experience; practical learning that takes place on the job, as well as, non-traditional technical training regimens that enhance skill development" (p. 3); that is, quality education includes, by definition, on-the-job training that will help develop a skilled workforce that contributes positively to a developing economy. Similarly, technology is important for developing countries because it allows workers to "acquire skills ... and develop social networks ... facilitating peer-to-peer communities and their integration with the economy" (p. 36). By allowing people to communicate more freely and with greater ease, all people become more active members of an |

economy. Active communication leads to growth: “[d]eploying broadband networks at the community and municipal levels has become an important factor in allowing local businesses to grow and remain competitive” (p. 38). Communication leads to competition, which is important because it drives innovation and investment, which in turn support a thriving economy.

① The evidence in this model response came from the following model sources:

- Source #3 “Evidence for Action: Gender Equality and Economic Growth” by John Ward, Bernice Lee, Simon Baptist, and Helen Jackson (<http://www.chathamhouse.org/>, search terms: Evidence for Action)
- Source #5 “Human Capital Investment in the Developing World: An Analysis of Praxis” by Adeyemi O. Ogunade
- Source #7 “2005 EFA Global Monitoring Report. “Education for All: The Quality Imperative” by UNESCO
- Source #10 “Economic Impacts of Broadband” by Christine Zhen-Wei Qiang and Carlo M. Rossotto with Kaoru Kimura in *Information and Communications for Development 2009: Extending Reach and Increasing Impact* by World Bank Publications (<https://openknowledge.worldbank.org/handle/10986/2636>)

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.7, W.11-12.9, W.11-12.4, SL.11-12.1 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Comprehensive Claims Assessing Claims Peer Review Quick Write Closing | <ol style="list-style-type: none"> 5% 10% 40% 25% 15% 5% |

Materials

- Student copies of the Forming Evidence-Based Claims Tools (refer to 12.3.1 Lesson 22)
- Copies of the Organizing Evidence-Based Claims Tools for each student (1-point, 2-point, and 3-point)
- Copies of the Evidence-Based Claims Criteria Checklist for each student

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| ☞ | Indicates possible student response(s) to teacher questions. |
| ⓘ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standards for this lesson: W.11-12.7 and W.11-12.9. Explain that in this lesson, students use the Organizing Evidence-Based Claims Tool to make comprehensive claims about inquiry paths and their problem-based question by identifying connections between the specific claims and evidence from the previous lesson (Forming Evidence-Based Claims Tools). Students then peer-review one Organizing Evidence-Based Claims Tool using the Evidence-Based Claims Criteria Checklist. Finally, students synthesize the information from an Organizing Evidence-Based Claims Tool into a written paragraph. This work directly prepares students to develop and write an evidence-based perspective for the End-of-Unit Assessment in 12.3.1 Lesson 27.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Complete the process of organizing, analyzing, and synthesizing your research, using at least two Forming Evidence-Based Claims Tools to develop claims about all inquiry paths on the research frame.) Instruct students to talk in pairs about the claims they developed.

- 💬 Student responses vary according to their individual inquiry paths and claims.

① Consider collecting the homework to assess students' research progress.

Instruct students to arrange all of their evidence-based claims by inquiry path on their desks.

① Students should have at least 6 evidence-based claims, two for each inquiry path.

Activity 3: Comprehensive Claims

40%

Explain that in this activity, students build on the claim-making process they started in the previous lesson by analyzing and synthesizing comprehensive claims about each inquiry path in the research frame. Students use the claims made in the previous lesson as a foundation to analyze and develop comprehensive claims about each inquiry path.

- ▶ Students listen.

Provide students with the following definition: *comprehensive* means “of large scope, covering or involving much, inclusive.” Explain that in this lesson, students combine the claims made in the previous lesson to create claims with a larger scope for each inquiry path. Explain that these new claims are more global and include multiple pieces of evidence.

- ① Explain to students that synthesizing multiple pieces of evidence to develop comprehensive claims allows students to create stronger claims because they are demonstrating that the claim is supported by sufficient evidence. These comprehensive claims provide a foundation for the evidence-based perspective in the End-of-Unit Assessment (12.3.1 Lesson 27). In addition, developing comprehensive claims across multiple sources is necessary for writing the central and supporting claims of the research-based argument paper in 12.3.2.
- ① At this point, students are making claims about their research. They will not begin to develop central claims until 12.3.2 Lesson 1. For the 12.3.1 End-of-Unit Assessment (12.3.1 Lesson 27), there are no central claims. Students just explain their developing perspective about the problem-based question.
 - ▶ Students listen.

Distribute a blank Organizing Evidence-Based Claims Tool to each student. Display the model research frame for students to see. Instruct students to examine the research frame and read the questions for inquiry paths 1 and 2: “How does education increase a developing nation’s economic prosperity?” and “How does technology play a role in a developing nation’s economic prosperity?”

- ① Some students might use a 2- or 3- Point tool depending on how many claims they made about each inquiry path in the previous lesson. For example, if students completed three Forming Evidence-Based Claims Tools for one inquiry path, they should use a 3-Point tool to connect the three claims into one comprehensive claim about the inquiry path. Remind students that they may need to return to their sources if additional evidence is necessary to support the comprehensive claim.
- ① The model research frame was introduced in 12.3.1 Lesson 19.
 - ▶ Students examine the Organizing Evidence-Based Claims Tool and read the questions for inquiry paths 1 and 2 on the Model Research Frame.

Explain to students that in the previous lesson, the class developed the following model claim about these inquiry paths.

- Education quality is determined by multiple factors, both inside and outside the classroom, including but not limited to cognitive development, skill development, and equity.
- ① Provide students with the other model claim from the second Forming Evidence-Based Claims Tool in 12.3.1 Lesson 22: Various forms of technology spur economic growth across all levels of society. Broadband stimulates communication and access to information, and laborsaving technology improves quality of life and saves time.
 - ▶ Students listen.
- ① The Model Forming Evidence-Based Claims Tools used in this part of the lesson are located in 12.3.1 Lesson 22.

Explain that in this activity, students analyze and make connections between the claims they made about their inquiry questions. Then they organize, analyze, and make connections between the Forming Evidence-Based Claims Tools completed for each inquiry path to create a comprehensive claim on an Organizing Evidence-Based Claims Tool.

- ▶ Students listen.

Display the Model Organizing Evidence-Based Claims Tool based on the model inquiry paths discussed above (“How does education increase a developing nation’s economic prosperity?” and “How does technology play a role in a developing nation’s economic prosperity?”). Explain to students that they can make a larger claim by connecting these two claims. Point out to students that this larger claim emerges from a combination of claims from two different inquiry paths (1 and 2). Direct students to the model claim in the Claim section of the tool: “Developing nations can become more prosperous by providing quality education and technology to all citizens.”

① The 2-point Model Organizing Evidence-Based Claims Tool is used as an exemplar in this lesson.

- ▶ Students follow along.
-

Instruct students to use an Organizing Evidence-Based Claims Tool to develop a comprehensive claim about each inquiry path on their research frame. They should use the 6 evidence-based claims they completed in the previous lesson. Remind students they have completed at least two of these tools for each inquiry path.

- ▶ Students use their Organizing Evidence-Based Claims Tools to form comprehensive claims about each inquiry path.

① **Differentiation Consideration:** Some students may be able to use an Organizing Evidence-Based Claims Tool to complete a comprehensive claim about the problem-based question as well as the inquiry paths.

Activity 4: Assessing Claims Peer Review

25%

Explain that in this activity, students assess one of their claims using the Evidence-Based Claims Criteria Checklist. Display and distribute the Evidence-Based Claims Criteria Checklist to all students.

- ▶ Students examine the Evidence-Based Claims Criteria Checklist.

Explain to students that the Evidence-Based Claims Criteria Checklist should be used to assess the Model Organizing Evidence-Based Claims Tool. Read through each criterion in the “Content and Analysis section,” check the boxes that apply, and write model comments. Explain and model the following:

- I am checking the first box for the “Content and Analysis” section, Clarity of the Claim. I am checking the box because the claim is clearly stated and understandable.

- I am checking the second box for the “Content and Analysis” section, Conformity to the Text, because I created the claim directly from the textual evidence and ideas I read about education and technology and their effects on developing nations’ economies.
- I am checking the third box for the “Content and Analysis” section, Understanding of the Topic, because my claim demonstrates sound thinking about both the issue of economic development and the problem-based question. The idea is not abstract and there is evidence to support it.

► Students follow along.

- ① **Differentiation Consideration:** Consider pointing out to students that the word *conformity* means “agreement”; the claim agrees with and is based upon the text, as indicated by the phrase “directly based upon” in the checklist.
- ① **Differentiation Consideration:** Consider providing students with the definition of *clarity*: “the state of being clear or transparent.”

Instruct students to assess the Model Organizing Evidence-Based Claims Tool for the next three sections of the Checklist: “Command of Evidence,” “Coherence and Organization,” and “Thoroughness and Objectivity.” Remind students to explain their thinking. Write students’ thoughts on the Evidence-Based Claims Criteria Checklist that is displayed.

► Students assess the Model Organizing Evidence-Based Claims Tool as a whole class, using the next three sections of the Evidence-Based Claims Criteria Checklist as a guide.

🗣 Student responses may include:

- **Command of evidence:** The claim has specific evidence supporting it, as demonstrated by the text quotes on the tool itself. Each piece of evidence can be used to directly support the claim. For example, broadband Internet helps people “acquire skills ... and develop social networks ... facilitating peer-to-peer communities and their integration with the economy,” which supports the claim about technology spurring economic growth.
- **Coherence and organization:** The specific points on the tool group the evidence; the evidence is easy to understand and follows a logical pattern, directly supporting each point and laying a clear foundation for the claim itself.
- **Thoroughness and objectivity:** There are 8 quotes, and each quote aims to support the overall claim and presents the perspective of the problem-based question. For example, there are diverse quotes on how technology contributes to a developing economy, including examples of broadband connection and laborsaving technologies.

- ① **Differentiation Consideration:** If students struggle with responses for “Thoroughness and objectivity,” consider providing the following definitions: *thoroughness* means “complete; attentive to detail and accuracy” and *objectivity* means “the state or quality of not being influenced by

personal feelings or prejudice.” The term *objective tone* will be defined in the next unit, 12.3.2, when students learn how to write objectively about research.

Instruct students to transition into small groups.

Explain to students that their discussions should continue the work of collaborative discussion outlined in SL.11-12.1, to which students were previously introduced. Remind students that these discussion strategies have been taught in previous modules.

Instruct students to provide one Organizing Evidence-Based Claims Tool to a peer in the small group to review using the Evidence-Based Claims Criteria Checklist. Each student should have one tool to review.

- ▶ Students exchange Organizing Evidence-Based Claims Tools with a peer within their group and review them using the Evidence-Based Claims Criteria Checklist.

Direct students to return the tool they reviewed to their peer once the review is complete.

Activity 5: Quick Write

15%

Instruct students to respond briefly in writing to the following prompt:

Develop and explain a claim about an inquiry path or your problem-based question and support the claim using specific evidence and details from your research.

Instruct students to develop their written response from the Organizing Evidence-Based Claims Tools. Remind students to use the Evidence-Based Claims Criteria Checklist to guide their written responses. Remind students to practice the skills outlined in W.11-12.4, to which they were introduced in Module 12.1.

- ① If necessary, consider reviewing the components of W.11-12.4, which include producing clear, coherent writing that employs organization and style appropriate to the task, purpose, and audience.

- ▶ Students listen and read the Quick Write prompt.

- ① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using the Organizing Evidence-Based Claims Tools and the Evidence-Based Claims Criteria Checklist to guide their responses.

- See the High Performance Response at the beginning of this lesson.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to review all of their Organizing Evidence-Based Claims Tools using the Evidence-Based Claims Criteria Checklist and, if necessary, revise their claims.

Additionally, instruct students to reflect on their research process completed during the lesson and complete a multimedia journal entry in response to the following prompt:

How is your perspective about your problem-based question evolving now that you have synthesized your research?

- ① Remind students that revising their Organizing Evidence-Based Claims Tools might require an additional round of research and analysis of both their annotated sources and their notes to find the most relevant and useful evidence possible.
- ① **Differentiation Consideration:** Consider reminding students that a *perspective* is how someone understands an issue, including his/her relationship to, and analysis of, the issue.
- ① **Differentiation Consideration:** Consider instructing students to use the Student Research Plan Handout to guide their multimedia journal entries if necessary. The Student Research Plan Handout was distributed in 12.3.1 Lesson 15.
 - ▶ Students follow along.

Homework

Review all of your Organizing Evidence-Based Claims Tools using the Evidence-Based Claims Criteria Checklist and, if necessary, revise your claims.

Additionally, reflect on your research process completed during the lesson and complete a multimedia journal entry in response to the following prompt:

How is your perspective about your problem-based question evolving now that you have synthesized your research?



Name Inquiry Path

| | | |
|--|--|--|
| CLAIM: | | |
| A Supporting Evidence (Reference:) | B Supporting Evidence (Reference:) | C Supporting Evidence (Reference:) |
| D Supporting Evidence (Reference:) | E Supporting Evidence (Reference:) | F Supporting Evidence (Reference:) |



Point 2

[illegible][illegible]

(Reference:)

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slightly textured appearance and is set against a dark background.

(Reference:)

[illegible][illegible]

The diagram illustrates the area of a rectangle. A vertical line segment on the left is labeled 'a', and a horizontal line segment at the top is labeled 'b'. The area to the right of the vertical line is labeled 'a', and the area below the horizontal line is labeled 'b'. The total area is labeled 'a * b'.

The figure shows a coordinate system with a vertical axis labeled "Time" and a horizontal axis labeled "Distance". The plot area contains several horizontal lines, indicating that at specific points in time, the distance remains constant over a range of values.

(Reference:)



Name Inquiry Path

| | | |
|---|---|---|
| CLAIM: | | |
| Point 1 | Point 2 | Point 3 |
| A Supporting Evidence (Reference:) | A Supporting Evidence (Reference:) | A Supporting Evidence (Reference:) |
| B Supporting Evidence (Reference:) | B Supporting Evidence (Reference:) | B Supporting Evidence (Reference:) |
| C Supporting Evidence (Reference:) | C Supporting Evidence (Reference:) | C Supporting Evidence (Reference:) |

Name Model Inquiry Path 1 and 2

| CLAIM: Developing nations can become more prosperous by providing quality education and technology to all citizens. | | | |
|--|--|---|---|
| Point 1 Education quality is determined by multiple factors, both inside and outside the classroom, including but not limited to cognitive development, skill development, and equity. | | Point 2 Various forms of technology spur economic growth across all levels of society. Broadband stimulates communication and access to information, and laborsaving technology improves quality of life and saves time. | |
| A Supporting Evidence <p>"The quantity of children who participate is by definition a secondary consideration: merely filling spaces called 'schools' with children would not address even quantitative objectives if no real education occurred."</p> <p>(Reference:7, p. 28-29)</p> | B Supporting Evidence <p>"[T]wo principal objectives are at stake: the first is to ensure the cognitive development of learners."</p> <p>(Reference:7, Foreword)</p> | A Supporting Evidence <p>Broadband Internet helps people "acquire skills ... and develop social networks ... facilitating peer-to-peer communities and their integration with the economy."</p> <p>(Reference:10, p. 36)</p> | B Supporting Evidence <p>In India, some farming villages are "using a common portal that links multimedia personal computers by satellite ... [and] these improvements have resulted in productivity gains for the farmers."</p> <p>(Reference:10, p. 6)</p> |
| C Supporting Evidence <p>"[Informal education] includes experience; practical learning that takes place on the job, as well as, non-traditional technical training regimens that enhance skill development."</p> <p>(Reference:5, p. 3)</p> | D Supporting Evidence <p>"A more productive workforce, through greater equality in employment and education, increases expected rates of return, which in turn generates a modest increase investment and promotes growth."</p> <p>(Reference:3, p. ix)</p> | C Supporting Evidence <p>Countries can "improve . . . quality of life by investing in labour-saving technology."</p> <p>(Reference:3, p. 3)</p> | D Supporting Evidence <p>"[D]eploying broadband networks at the community and municipal levels has become an important factor in allowing local businesses to grow and remain competitive."</p> <p>(Reference:10, p. 38)</p> |

| EVIDENCE-BASED CLAIMS CRITERIA CHECKLIST | | ✓ | COMMENTS |
|---|---|--------------------------|----------|
| I. CONTENT AND ANALYSIS <i>An EBC is a clearly stated inference that arises from reading texts closely.</i> | Clarity of the Claim: States a conclusion that you have come to after reading and that you want others to think about. | <input type="checkbox"/> | |
| | Conformity to the Text: Is based upon and linked to the ideas and details you have read. | <input type="checkbox"/> | |
| | Understanding of the Topic: Demonstrates knowledge of and sound thinking about a text or topic that matters to you and others. | <input type="checkbox"/> | |
| II. COMMAND OF EVIDENCE <i>An EBC is supported by specific textual evidence and developed through valid reasoning.</i> | Reasoning : All parts of the claim are supported by specific evidence you can point to in the text(s). | <input type="checkbox"/> | |
| | Use and Integration of Evidence: Uses direct quotations and examples from the text(s) to explain and prove its conclusion. | <input type="checkbox"/> | |
| | Thoroughness and Objectivity: Is explained thoroughly and distinguishes your claim from other possible positions. | <input type="checkbox"/> | |
| III. COHERENCE AND ORGANIZATION <i>An EBC and its support are coherently organized into a unified explanation.</i> | Relationship to Context: States where your claim is coming from and why you think it is important. | <input type="checkbox"/> | |
| | Relationships among Parts: Groups and presents supporting evidence in a clear way that helps others understand your claim. | <input type="checkbox"/> | |
| | Relationship to Other Claims: Can be linked with other claims to make an argument. | <input type="checkbox"/> | |
| IV. CONTROL OF LANGUAGE AND CONVENTIONS <i>An EBC is communicated clearly and precisely, with responsible use/ citation of supporting evidence.</i> | Clarity of Communication: Is clearly and precisely stated, so that others understand your thinking. | <input type="checkbox"/> | |
| | Responsible Use of Evidence: Quotes from the text accurately. | <input type="checkbox"/> | |

12.3.1**Lesson 24****Introduction**

In this lesson, students select one of their claims from the previous lesson and develop a claim that counters this original claim. First, students discuss the claim and possible counterclaims with peers. Students then identify evidence to support the selected counterclaim and record that information on the Forming Counterclaims Tool before engaging in a peer review. Students use the Evidence-Based Claims Criteria Checklist to evaluate a peer's counterclaim. Student learning is assessed via a Quick Write at the end of the lesson: Develop a counterclaim opposing your claim from the previous lesson and support it using specific evidence and details from your research. Reevaluate the original claim based on the counterclaim and determine whether the original claim should be revised.

For homework, students review all of their Organizing Evidence-Based Claims Tools and create an additional counterclaim using the Forming Counterclaims Tool. Students evaluate their original claims, based on their insight from their counterclaim work, to develop stronger claims and prepare for the End-of-Unit Assessment in 12.3.1 Lesson 27.

Standards

| Assessed Standard(s) | |
|-----------------------|---|
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| Addressed Standard(s) | |
| W.11-12.1.b | <p>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <p>b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.</p> |

| | |
|------------|---|
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. |
|------------|---|

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, using evidence from their research.</p> <ul style="list-style-type: none"> Develop a counterclaim opposing your claim from the previous lesson and support it using specific evidence and details from your research. Reevaluate the original claim based on the counterclaim and determine whether the original claim should be revised. <p>① Student responses are assessed using the Evidence-Based Claims Criteria Checklist.</p> |
| High Performance Response(s) |
| <p>Student responses vary according to the research conducted. A High Performance Response should:</p> <ul style="list-style-type: none"> Articulate a counterclaim that provides an alternate perspective to the original claim (e.g., Some countries are too poor to build and maintain solid educational and technological infrastructure, so these human capital investments cannot be made a priority). <p>① The original claim is “Developing nations can become more prosperous by providing quality education and technology to all citizens.”</p> <ul style="list-style-type: none"> Provide sufficient evidence to support the counterclaim (e.g., Developing nations cannot create an infrastructure for education and technology. Some countries are stuck in “a poverty trap, with local and national economies too poor to make the needed investments” (p. 29), such as education and technology. Additionally, many developing nations do not have the money to invest in human capital, as “[d]ozens of heavily indebted poor and middle-income countries are forced by creditor governments to spend large parts of their limited tax receipts on debt service, undermining their ability to finance investments in human capital and infrastructure” (p. 35).). Evaluate briefly the original claim by discussing the counterclaim and determine if the original claim should be revised or if the evidence is sufficient (e.g., After reviewing the evidence for the counterclaim and looking at my original claim, I believe that my original claim is still strong. Although it is true that countries may consider themselves too poor to make human capital investment a priority, long-term action is needed to break the cycle. Basic necessities are important in addressing the poverty problem in developing nations, but only as a short-term solution. As I discovered in my research, investments in human capital, through technology and |

education, can stimulate a long-term cycle of growth and development that will lead to sustainable economic growth.).

- ① See Model Forming Counterclaims Tool for a detailed model student response at the end of this lesson.
- ① The evidence in this High-Performance Response comes from model source #9: “Investing in Development: A Practical Plan to Achieve the Millennium Development Goals” by Jeffrey D. Sachs, et al (<http://www.unmillenniumproject.org/>, Google search terms: Millennium Project, Investing in Development, Sachs).

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|---|---|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.7, W.11-12.1.b, SL.11-12.1 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Developing Counterclaims Activity Counterclaims Peer Review Activity Quick Write Closing | <ol style="list-style-type: none"> 10% 10% 35% 25% 15% 5% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (refer to 12.3.1 Lesson 3) (optional)
- Copies of the Forming Counterclaims Tool for each student (two per student)
- Student copies of the Evidence-Based Claims Criteria Checklist (refer to 12.3.1 Lesson 23)
- Student copies of the Organizing-Evidence Based Claims Tools (refer to 12.3.1 Lesson 23)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ▶ | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

10%

Begin by reviewing the agenda and the assessed standard for this lesson: W.11-12.7. In this lesson, students continue to evaluate and strengthen their claims by learning how to craft counterclaims. As in the previous lesson, students participate in a peer review discussion to assess their counterclaims and students articulate a counterclaim for the lesson assessment.

- ▶ Students look at the agenda.

❗ **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standards W.11-12.1 and W.11-12.1.b. Instruct students to talk in pairs about what they think the standards mean. Lead a brief discussion about the standards.

💬 Student responses for W.11-12.1 should include:

- Write arguments to analyze issues or texts.

- Support claims with sufficient evidence and valid reasoning.
- Ask questions about areas of interest to form an argument.
- Research an issue to develop an argument.

💬 Student responses for W.11-12.1.b should include:

- Write arguments to analyze issues or texts.
- Support claims with evidence and reasoning.
- Use relevant evidence to write and support claims and counterclaims that accurately reflect an issue.
- Identify the strong points and shortcomings of each claim and counterclaim.
- Consider what the audience might already know or think about the issue before writing claims.

- ① Students practiced identifying relevant evidence in 12.3.1 Lessons 11 and 12. Remind students of their work with the concept of *limitations* in 12.3.1 Lesson 13.
- ① In 12.3.1 Lesson 25, students consider the audience's knowledge level, concerns, values, and possible biases as they begin to prepare an oral presentation of their claims, evidence, and reasoning.
- ① **Differentiation Consideration:** Consider asking the following question to support students in their understanding of W.11-12.1.b:

What does it mean to develop claims *fairly* and *thoroughly*?

💬 Student responses may include:

- Writers should review all evidence before writing claims in order to present an accurate and informed representation of the issue.
- Writers should take into account all the evidence when constructing a claim, even if not all the evidence supports the claim.
- The language used to construct the claim should be both strong and objective.

Explain to students that the purpose of this lesson is to deepen their understanding of claims and counterclaims.

- ▶ Students follow along.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Review all of your Organizing Evidence-Based Claims Tools using the Evidence-Based Claims Criteria Checklist and,

if necessary, revise your claims. Additionally, reflect on your research process completed during this lesson and complete a multimedia journal entry in response to the following prompt: How is your perspective about your problem-based question evolving now that you have synthesized your research?) Instruct students to form pairs and discuss their revised claims and responses to the multimedia journal entry prompts.

💬 Student responses vary depending on individual research questions/problems and research.

- ① Consider checking in with students on an individual basis during the research process to formatively assess their application of research skills and offer targeted feedback.
- ① **Differentiation Consideration:** Consider instructing students to reflect on Part 3 of the Student Research Plan by writing a few sentences about their research process and the work completed in the previous lesson (making an evidence-based claim about an inquiry path or problem-based question). Instruct students to use the language of the research standards (W.11.12.7 and W.11-12.8) when writing their responses.

Activity 3: Developing Counterclaims Activity

35%

Explain to students that along with making claims to support their argument, they must also acknowledge counterclaims that oppose their claims. Creating a counterclaim to a claim demonstrates a broad understanding of a problem-based question and acknowledges where there may be weaknesses in one's own perspective. Crafting counterclaims also provides an opportunity to identify areas for improvement in claims as well as acknowledge the multiple claims that can come from any problem-based question.

- ▶ Students listen.

Instruct students to take out the claims they revised for the previous lesson's homework. Explain to students that there are many ways to craft a counterclaim. Display and distribute the Forming Counterclaims Tool and instruct students to write their original claims on the tool.

- ▶ Students examine the tool and copy their original claims onto the tool.

- ① This is the claim from the previous lesson: "Developing nations can become more prosperous by providing quality education and technology to all citizens."

Explain and model the various ways that one might respond to an argument that emerges from a different perspective. It is important to consider a variety of possible counterclaims, though some counterclaims are more effective than others. Model for students effective types of counterclaims:

- An effective counterclaim may directly oppose a claim. For example, "Providing education and technology to all citizens will not improve the economic prosperity of a developing nation."

- An effective counterclaim may propose an alternate solution. For example, “A more effective way for developing nations to become prosperous is to redistribute wealth across all nations.”
 - An effective counterclaim may explore the limitations of the claim. For example, “Providing education and technology to all citizens will only improve the prosperity of those citizens with access to education and technology; those without access or with limited basic needs will not be able to take advantage of the economic opportunities afforded by education and technology.”
 - An effective counterclaim may offer opposing evidence that is both sufficient and relevant to the issue and from a credible source. For example, in the UN Millennium Goals report Sachs, et al. state that “dozens of heavily indebted poor and middle-income countries are forced by creditor governments to spend large parts of their limited tax receipts on debt service, undermining their ability to finance investments in human capital and infrastructure” (p. 35).
- ① This counterclaim, from a reliable source, points out that investments in human capital and infrastructure cannot be a nation’s priority when it is already indebted to other nations. This evidence undermines the original claim by identifying a weakness not addressed in the claim.
- An effective counterclaim may identify poor reasoning within the claim and a lack of logical evidence to support the claim. For example, “Citizens of the developed world who have graduated from ‘quality’ schools are not as prosperous as they should be, as there are huge gaps in income disparity in developed nations like the United States. How can quality education be the magic bullet to aid developing nations’ prosperity when developed nations still have major issues with income disparity?”
- ▶ Students listen and follow along with the modeling.
- ① Remind students that although counterclaims require students to approach a problem-based question from an opposite or divergent perspective, the process for writing a claim and a counterclaim is the same. Using relevant and sufficient evidence is as important in writing a counterclaim as it is in writing a claim.
- ① After the modeling of each portion of the Forming Counterclaims Tool, students use their own research to complete the tool independently.

Instruct students to Turn-and-Talk in pairs about possible counterclaims to their original claim as well as what type of counterclaim approach would be effective for this claim.

- Student responses vary according to the research conducted. Student responses may include:
 - My original claim is that developed nations should invest in technological infrastructure in developing nations to bridge the digital divide and contribute to economic growth. One

potential counterclaim that explores the limitations of the original claim is that providing technology to geographically isolated nations will incur the expense of maintenance of the technology. That is, if the technology breaks, who will be responsible for fixing it? Historically, the nation that received the technology, whether or not it wanted the technology, must then pay to fix it. Another counterclaim is that the infrastructure itself, such as wiring, towers, air conditioning or heat (to regulate the temperature of equipment), and electrical grids could damage the environment or upset a fragile ecological balance. Again, the region itself may have to pay to fix the damage and may suffer financial losses rather than economic growth due to the damage.

Instruct students to write their potential counterclaim onto the Forming Counterclaims Tool. Explain to students that, like any claim, this claim is subject to revision and review based on the evidence gathered. If the evidence does not fairly and thoroughly support the claim, students should revise the counterclaim or select a different one.

Direct students to the “Evidence” portion of the Forming Counterclaims Tool. Explain to students that this portion of the tool is used to record evidence from their research in order to develop and support their counterclaim fairly. Model for students a potential piece of evidence to support a model counterclaim.

- **Counterclaim:** Some countries are too poor to build and maintain solid educational and technological infrastructure, so these human capital investments cannot be made a priority.
- **Evidence:** “[D]ozens of heavily indebted poor and middle-income countries are forced by creditor governments to spend large parts of their limited tax receipts on debt service, undermining their ability to finance investments in human capital and infrastructure.” (p. 35)

Explain to students that this statement undermines the original claim by identifying a barrier (national debt) to investments in human capital through education and technology.

- ▶ Students follow along with the modeling.

Instruct students to work on their Forming Counterclaims Tools, examining their research sources for evidence to support their counterclaim. Remind students that their command of evidence should also reflect the type of counterclaim they are crafting in response to the claim made in the previous lesson. Also, students should select the counterclaim that is most fairly and thoroughly supported by evidence.

- ▶ Students work independently on the Forming Counterclaims Tool.

① To support students’ understanding, consider additional modeling on how to choose the most effective evidence for the type of counterclaim formulated.

- ① This evidence comes from model source #9: “Investing in Development: A Practical Plan to Achieve the Millennium Development Goals” by Jeffrey D. Sachs, et al.
-

Instruct students to look at the bottom portion of the Forming Counterclaims Tool. Explain to students that, after identifying supporting evidence for their counterclaims, they should briefly evaluate their original claims based on the counterclaim. Explain to students that the original claim may look weaker in light of the counterclaim, or the original claim may still be strong regardless of the alternate perspective. It may be necessary to improve the original claim if the counterclaim casts doubt on the original claim. Model for students an evaluation of an original claim based on a counterclaim.

- After reviewing the evidence for the counterclaim and looking at my original claim, I believe that my original claim is still strong. Although it is true that countries may consider themselves too poor to make human capital investment a priority, long-term action is needed to break the cycle. It is not necessarily true that basic necessities are more important or pivotal in solving the poverty problem in developing nations. As I discovered in my research, investment in human capital, through technology and education, is an effective start, and can stimulate a long-term cycle of growth and development that will lead to sustainable economic growth.
 - ▶ Students follow along with the modeling.

Instruct students to complete the “Evaluation of the Original Claim” portion of the Forming Counterclaims Tool.

- ▶ Students complete the final portion of the Forming Counterclaims Tool.

Activity 4: Counterclaims Peer Review Activity

25%

Instruct students to take out their Evidence-Based Claims Criteria Checklists from the previous lesson.

- ▶ Students take out their Evidence-Based Claims Criteria Checklists.

Instruct students to form small groups. Instruct students to work in their small groups to assess whether their counterclaim on the Forming Counterclaims Tool is appropriately supported.

- ▶ Students work in small groups to assess their counterclaims.

Explain to students that their discussions should continue the work of collaborative discussion outlined in SL.11-12.1.

- ① Remind students that in the Module Performance Assessment they will present their multimedia journals before engaging in discussion with the audience. This activity provides an opportunity to

begin preparing for the assessment presentation as they practice the skills inherent in the Speaking and Listening Standards.

Instruct students to give one of their Forming Counterclaims Tools to a peer in the small group, so that each student has one Forming Counterclaims Tool to review. Each student in the group should review a peer's Forming Counterclaims Tool using the Evidence-Based Claims Criteria Checklist.

- ▶ Students exchange Forming Counterclaims Tools with a peer within their group, and review the tool using the Evidence-Based Claims Criteria Checklist.

Ask students to return the Forming Counterclaims Tools to their peers once the review is complete.

Activity 5: Quick Write

15%

Instruct students to respond briefly in writing to the following prompt:

Develop a counterclaim opposing your claim from the previous lesson and support it using specific evidence and details from your research. Reevaluate the original claim based on the counterclaim and determine whether the original claim should be revised.

Instruct students to develop their written response from the Forming Counterclaims Tool. Remind students to use the Evidence-Based Claims Criteria Checklist to guide their written responses.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using the Forming Counterclaims Tool and the Evidence-Based Claims Criteria Checklist to guide their responses.
- 💬 See the High Performance Response at the beginning of this lesson.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to review all of their Organizing Evidence-Based Claims Tools and create an additional counterclaim using the Forming Counterclaims Tool. Instruct students to evaluate their original claims, based on their insight from their counterclaim work, to develop stronger claims and prepare students for the End-of-Unit Assessment in 12.3.1 Lesson 27.

- ① Remind students that revising the Organizing Evidence-Based Claims Tool(s) may require a final round of research and analysis of annotated sources and notes to find the most relevant and useful evidence possible.
- ▶ Students follow along.

Homework

Review all of your Organizing Evidence-Based Claims Tools and create an additional counterclaim using the Forming Counterclaims Tool. Evaluate your original claims, based on your insight from your counterclaim work, to develop stronger claims and prepare for the End-of-Unit Assessment in 12.3.1 Lesson 27.

Forming Counterclaims Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Use this tool to develop counterclaims for your comprehensive claims. Write down your original claim. Next, craft an opposing claim or counterclaim. Record evidence for the counterclaim on the tool. Then, use this information to evaluate the strength of your original claim.

| | |
|-----------------------------------|-------------------|
| Original claim: | Counterclaim: |
| | Evidence (ref.): |
| | Evidence (ref.): |
| Evaluation of the original claim: | |

Model Forming Counterclaims Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Use this tool to develop counterclaims for your comprehensive claims. Write down your original claim. Next, craft an opposing claim or counterclaim. Record evidence for the counterclaim on the tool. Then, use this information to evaluate the strength of your original claim.

| | |
|--|--|
| <p>Original claim:</p> <p>Developing nations can become more prosperous by providing quality education and technology to all citizens.</p> | <p>Counterclaim:</p> <p>Some countries are too poor to build and maintain solid educational and technological infrastructure, so these human capital investments cannot be made a priority.</p> |
| | <p>Evidence (ref. 9):</p> <p>“[D]ozens of heavily indebted poor and middle-income countries are forced by creditor governments to spend large parts of their limited tax receipts on debt service, undermining their ability to finance investments in human capital and infrastructure.” (p. 35)</p> |
| | <p>Evidence (ref. 9):</p> <p>Developing nations cannot create an infrastructure for education and technology. Some countries are stuck in “a poverty trap, with local and national economies too poor to make the needed investments” (p. 29).</p> |
| <p>Evaluation of the original claim:</p> <p>After reviewing the evidence for the counterclaim and looking at my original claim, I believe that my original claim is still strong. Although it is true that countries may consider themselves too poor to make human capital investment a priority, long-term action is needed to break the cycle. Basic necessities are important in addressing the poverty problem in developing nations but only as a short-term solution. As I discovered in my research, investments in human capital, through technology and education, can stimulate a long-term cycle of growth and development that will lead to sustainable economic growth.</p> | |

12.3.1

Lesson 25

Introduction

In this lesson, students refine and synthesize their claims and evidence from the previous lessons by preparing a brief presentation to share with their peers in the following lesson. This presentation helps students prepare for the End-of-Unit Assessment in 12.3.1 Lesson 27 by providing peer feedback on the effectiveness of their claims and evidence while also supporting the development of each student's research-based perspective on their individual problem-based question.

Students use the claims they developed in the last several lessons to draft a 2–3 minute presentation of one claim and the most compelling supporting evidence for that claim. In addition, students continue their work with W.11–12.1.b from the previous lesson by considering the audience's concerns, values, and potential biases, and revise their presentations with these considerations in mind. Student learning is assessed via a Quick Write at the end of the lesson: Explain how you addressed the audience's knowledge level, concerns, values, and possible biases in revising your presentation outline.

For homework, students finalize their oral presentations using the Presentation Checklist as a guide. Additionally, students practice delivering their presentation aloud (to themselves or to someone else) to identify errors in syntax, grammar, or logic, in preparation for the following lesson's small-group oral presentation.

① Students worked with SL.11–12.4 in Modules 12.1 and 12.2, specifically 12.1.1 Lesson 5 and the 12.1 and 12.2 Module Performance Assessments.

Standards

| Assessed Standard(s) | |
|----------------------|---|
| W.11–12.1.b | <p>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <p>b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.</p> |

| | |
|------------------------------|--|
| SL.11-12.4 | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range or formal and informal tasks. |
| Addressed Standard(s) | |
| W.11-12.1.a | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |

Assessment

| |
|---|
| Assessment(s) |
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, using evidence from their presentation outline.</p> <ul style="list-style-type: none"> Explain how you addressed the audience's knowledge level, concerns, values, and possible biases in revising your presentation outline. <p>i Student responses are assessed using the Presentation Checklist.</p> |
| High Performance Response(s) |
| <p>Student responses vary according to the research conducted. A High Performance Response should:</p> <ul style="list-style-type: none"> Explain how the presentation outline addresses the audience's knowledge level, concerns, values, and possible biases (e.g., My audience of peer researchers shares a basic understanding of my issue of global wealth and power distribution but may need definitions for certain terminology, such as “human capital” and “internal infrastructure” because both are unfamiliar phrases. My audience may also have concerns about my issue if I do not make my intent clear. They may think my goal is to describe how all countries need to be “Westernized,” so I need to clarify that my goal is to explore how developing countries can achieve greater health, wealth, and stability through |

their own internal development or human capital investments. I will also address the values and biases of my audience that might suggest investments in education and technology should not be the first priority in human capital development regarding developing nations by providing evidence that investment in education and technology are the most effective long-term solutions in improving the economic prosperity of developing nations.).

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.1.b, SL.11-12.4, W.11-12.1.a, W.11-12.7 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Presentation Preparation 4. Audience Discussion 5. Presentation Revisions 6. Quick Write 7. Closing | <ol style="list-style-type: none"> 1. 5% 2. 10% 3. 20% 4. 35% 5. 15% 6. 10% 7. 5% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (refer to 12.3.1 Lesson 3) (optional)
- Student copies of the Forming Counterclaims Tool (refer to 12.3.1 Lesson 24)
- Copies of the Presentation Checklist for each student

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and assessed standards for this lesson: W.11-12.1.b and SL.11-12.4. In this lesson, students refine and synthesize their claims and evidence from the previous lessons by preparing a presentation to be shared with their peers in the following lesson. This presentation helps students prepare for the End-of-Unit Assessment in 12.3.1 Lesson 27 by providing feedback on the effectiveness of their claims and evidence while also supporting the development of each student's research-based perspective on their individual problem-based question. Students consider the audience's concerns, values, and potential biases, and revise their presentations with these considerations in mind.

- Students look at the agenda.

❗ **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard W.11-12.1.a. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

- 💬 Student responses should include:

- Write arguments to analyze issues or texts.
- Explain why a claim is important or significant to the argument.
- Introduce precise, knowledgeable claims and clarify the difference between claims and counterclaims.
- Support claims with evidence and reasoning to link ideas coherently.
- Connect all of the parts of an argument logically.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Review all of your Organizing Evidence-Based Claims Tools and create an additional counterclaim using the Forming Counterclaims Tool. Evaluate your original claims, based on your insight from your counterclaim work, to develop stronger claims and prepare for the End-of-Unit Assessment in 12.3.1 Lesson 27.)

Instruct students to discuss the following question in pairs:

How did your counterclaims affect the strength of your claims?

- 💬 Student responses vary according to the research conducted. Students should use the language of the Forming Counterclaims Tool in discussion.
 - My claim was not affected by the counterclaim because my claim was still stronger, even though the counterclaim is reasonable and appropriate.
 - My original claim was that education quality is determined by classroom equity. I had to refine my claim because my counterclaim exposed a weakness in my claim, which is that quality education does not just exist inside a classroom, nor is there one single factor that determines its effectiveness. Now my claim is stronger: Education quality is determined by multiple factors, both inside and outside the classroom, including but not limited to cognitive development, skill development, and equity. This revised claim is stronger because it acknowledges that quality education is not limited to a classroom setting

① Consider collecting the homework to assess students' research progress.

Activity 3: Presentation Preparation

20%

Explain that in 12.3.1 Lesson 26, students will orally present one claim to a small group of peers in order to receive feedback on their claims and evidence before the End-of-Unit Assessment in 12.3.1 Lesson 27. Instruct students to select the strongest claim for their presentation and explain the claim using strong evidence and reasoning. Inform students that the presentation should be 2–3 minutes long.

- ① Encourage students to keep in mind the Module Performance Assessment as they practice the skills inherent in standard SL.11-12.4: presenting information, findings, and supporting evidence clearly and following a line of reasoning; addressing alternate or opposing perspectives; and ensuring the development, substance, and style of their presentations are appropriate to the purpose, audience, and task. Remind students that they will present and discuss their multimedia journals at the end of Module 12.3 and this activity provides an opportunity to continue preparing for the Module Performance Assessment.

- ▶ Students listen.

Explain that in order to have an effective presentation, students must first organize their information to create a presentation outline. Explain that the components of an effective presentation outline include:

- An engaging introductory statement
- A claim
- Evidence and reasoning
- A closing statement

Instruct students to refer to their revised claims from Homework Accountability and their Organizing Evidence-Based Claims Tools from 12.3.1 Lesson 23 to draft a presentation outline.

- 💬 Student responses vary according to the research conducted.

Explain to students that they are going to revise their presentation outlines following a discussion about audience.

Activity 4: Audience Discussion

35%

Explain to students that as they revise their presentations they need to consider their audience. Remind students that they worked with audience considerations in Module 12.1 when writing their personal narratives for the college admission essay.

Why is it important to consider an audience before creating a writing product or a presentation?

- 💬 Student responses may include:
 - Presenters should know the audience so that they provide the right information and the right level of detail about an issue based on what the audience may or may not already know.
 - Presenters should know the audience so that they can approach an issue with an audience's preconceptions or beliefs in mind, and address these concerns in the presentation.

Lead a brief whole-class discussion of student responses.

Explain that different audiences have different knowledge levels about particular subjects, different concerns about how subjects are treated, different values that may inform their understanding of the issue, and possible biases about issues. Inform students that effective writers take these considerations into account when they construct arguments. Explain to students that they are going to engage in a model activity demonstrating how to consider their audience's knowledge level, concerns, values, and potential biases when preparing a presentation. Model this process for students using for the area of investigation of increasing wealth in developing nations.

First, explain that *knowledge level* refers to the background knowledge an audience already has about an issue, and the information the audience needs to understand the presentation. Explain that an audience of peer researchers who have been investigating related issues may already know the term *developing nation*, although some peers studying slightly different issues may not. It is important to keep the audience in mind and define key terms in a presentation. However, because this is a very brief presentation, students should provide only critical background information and define only the most necessary terms.

- ▶ Students listen.

Students should consider what terms or ideas an audience of peer researchers who have been investigating related issues might not be familiar with, and what aspect of their research may need further explanation in the presentation. Instruct students to Turn-and-Talk in pairs to discuss the following question:

What are the knowledge demands of your issue, the knowledge level of your audience, and terms that you should explain in your presentation?

- 💬 Student responses vary according to the research conducted.

Display and distribute the Presentation Checklist. Instruct students to write key terms and ideas that may need further explanation on a sheet of paper or on their Presentation Checklist in the "Notes" box next to the line, "I have considered and addressed the knowledge level of my audience."

- ▶ Students record terms and ideas that need to be explained.

- 💬 Student responses may include:

- My listeners may not know the term *developing nations* so I will make sure to define what it means: "a nation where the average income is much lower than in industrial nations, where the economy relies on a few export crops, and where farming is conducted by primitive methods."

- For my issue, economic prosperity in the developing world, I will have to define several terms, including “human capital,” “quality education,” and *prosperity*.
 - My issue is about intellectual property and innovation, and there are several concepts I will have to explain to help my listeners in order to make sense of how the evidence connects to my claim, including the role of patents and copyright law and their effects on innovation.
-

Next, explain that *concerns* are matters that engage a person’s interest or care, or that affect a person’s welfare or happiness. Explain that within the issue of global wealth and power distribution there are many aspects to consider when addressing potential audience concerns. For example, the concept of wealth is relative to a person’s background or a nation’s prosperity. What is considered as wealthy in one country may be considered average or poor in another. Thus, one audience may be concerned about a nation’s wealth, while another may consider the nation already wealthy and may not consider additional wealth to be an important issue.

- ▶ Students follow along.

Explain that *values* are the moral principles and beliefs or accepted standards of a person or social group. Remind students that everyone has different values, and that the writer must anticipate the values of his or her audience. For the issue of global wealth and power distribution, some people may share the value that the pursuit of wealth and power is morally wrong. However, some may value the benefits that come from the pursuit of wealth or living in a prosperous country.

① Consider informing students that the audience’s values and concerns may overlap.

Instruct students to Turn-and-Talk to discuss the following question:

How will you anticipate and address your audience’s concerns and values in your presentations?

- ▶ Students Turn-and-Talk to discuss their audience’s concerns and values.
- 💬 Student responses may include:
 - When I mention my issue, global wealth and power distribution, my audience may initially misunderstand my focus. They may think my focus will be on wealthy and powerful countries in the world, when my focus is on improving the economic prosperity of developing countries instead. I want my audience to know that my goal is not to describe how all countries need to be “Westernized,” but to explore how developing countries can achieve greater health, wealth, and stability through their own internal development or human capital investments. I will need to make my focus clear at the beginning of the presentation and use accurate information that communicates my intent.

- My issue is economic prosperity in the developing world, and some people might be put off by what may seem to be a discussion about the pursuit of wealth. I plan to explain that the goal of my research is instead to address ways in which people in developing nations can experience longer, healthier lives and greater equity.
 - When discussing intellectual property, some audience members might be concerned about the dismissal of individual rights if I propose to eliminate copyright and trademarks. I will assure audience members that their concerns are legitimate, but innovation is often stalled because of patent laws and trademark regulations, and patent law does not always protect individual rights.
-

Explain that *biases* are particular tendencies or inclinations, especially those that prevent unprejudiced consideration of a question. Explain that *biases* may develop based on peoples' experiences. Instruct students to consider some of their own assumptions and biases about their own issues before they begin outlining their presentation. For example, one example of a bias is that developing nations should pattern their efforts for economic growth after some European nations and the United States (other developed nations).

- ▶ Students follow along.

Ask students to think about the potential biases an audience may have. Explain to students that it is important to address these biases by modifying the presentation if necessary. Explain that an effective presentation anticipates and addresses potential biases. For example, explaining that what works for one nation may not work for another because a multitude of complex factors contribute to a nation's level of wealth and power may address some biases.

Instruct student to Turn-and-Talk in their pairs to discuss the following question:

What potential biases may your audience have about your issue or central claim, and how will you address them?

💬 Student responses may include:

- Some people may be biased against making any changes to patent law because they feel laws are necessary to protect people. I will have to explain that laws in some cases actually prevent innovation and growth and therefore need to be changed or eliminated.
- My issue is global wealth and power distribution, and some people are more biased toward ideas of equal distribution of wealth, while others will be biased toward the idea that only the "most developed" should have wealth and power. I will have to make sure I am objective in this situation because I tend to think that all people should have equal access to wealth and power.

- A common bias is that only Western countries have the knowledge to create wealth and power, but people need to understand that throughout history, wealth and power have shifted broadly throughout the world.

Lead a brief whole-class discussion of student responses about the knowledge level, concerns, values, and potential biases of their audience.

Inform students that they will apply these audience considerations in revising their presentations, as well as when crafting their evidence-based perspectives in the End-of Unit Assessment (12.3.1 Lesson 27), and in their research-based argument papers in 12.3.2.

Activity 5: Presentation Revisions

15%

Instruct students to use the previous discussion and their Presentation Checklists to revise their presentation outlines. Inform students that they will use the Presentation Checklist to provide peer feedback in the following lesson, and they will use the feedback provided by their peers to revise and improve their claims in preparation for the End-of-Unit Assessment in 12.3.1 Lesson 27.

- ▶ Students listen.

① **Differentiation Consideration:** Consider instructing students to talk in pairs and discuss how the items on the checklist might influence their presentation’s introductory statement, claim, evidence, and concluding statement.

💬 Student responses may include:

- Given the length of the presentation (2–3 minutes), I will not be able to include all the evidence. I will need to consider what the strongest evidence is and how it can be tied together in the short timeframe.
- I have to think about my audience’s knowledge level, so I will have to include information to help my audience understand some of the terms and issues involved.
- My audience will be listening, so I should use keywords to guide my audience clearly through the ideas. My audience will not be able to “reread” if they miss something.
- When I convey my own perspective, I must be clear and distinct so it does not sound like I am just reading from my sources.
- I have to consider the knowledge level, concerns, values, and potential biases of an audience composed of peer researchers who have been investigating related issues and address them as necessary in the presentation.

Instruct students to revise their presentation outlines using the Presentation Checklist as a guide. Inform students that they have only 2–3 minutes to present, so they need to be clear and succinct in the information they present.

- ▶ Students gather their information and revise their presentations using the Presentation Checklist as a guide.
- ① Explain that there are many different ways to prepare for oral presentations. While some presenters like to jot down key talking points on notecards to serve as reminders, others prefer to work instead without notes and memorize their speeches or key parts of their speeches. Regardless of method, encourage students to be comfortable and confident as speakers, to maintain eye contact, and know the content well.
- ① Remind students that they are expected to use appropriate eye contact, adequate volume, and clear pronunciation in their presentation. Encourage them to practice in front of a mirror or with another person before they present to their peers.

Activity 6: Quick Write

10%

Instruct students to respond briefly in writing to the following prompt:

Explain how you addressed the audience's knowledge level, concerns, values, and possible biases in revising your presentation outline.

Instruct students to develop their written responses from their presentation outlines. Remind students to use the Presentation Checklist to guide their written responses.

- ▶ Students listen and read the Quick Write prompt.
- ① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using their presentation outlines and the Presentation Checklist to guide their responses.
- 🗣 See the High Performance Response at the beginning of this lesson.

Activity 7: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to finalize their oral presentations using the Presentation Checklist as a guide. Additionally, instruct students to practice delivering their presentation aloud (to themselves or to someone else) to identify errors in syntax,

grammar, or logic, in preparation for the following lesson's small-group oral presentation. Remind students that delivering the presentation aloud will also help them pace their presentation accordingly so it fits in the 2–3 minute requirement, and will help them become fluent in their delivery.

- ▶ Students follow along.

Homework

Finalize your oral presentation using the Presentation Checklist as a guide. Additionally, practice delivering your presentation aloud (to yourself or to someone else) to identify errors in syntax, grammar, or logic, in preparation for the following lesson's small-group oral presentation.

Presentation Checklist

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Review your presentation to ensure that it meets each criterion on this checklist. Make notes to describe how your presentation meets each criterion, or to explain how you will revise your presentation to meet the criterion.

| Component | Yes/No | Notes |
|---|--------|-------|
| 1. The presentation includes information, findings, and supporting evidence to support the claim. | | |
| 2. The speaker presents a clear and distinct perspective on the issue. | | |
| 3. The presentation is organized in a way that is logical and clear. | | |
| 4. The presentation is delivered using a formal tone that is appropriate to the purpose and audience. | | |
| 5. The presentation considers and addresses the knowledge level of the audience. | | |
| 6. The presentation considers and addresses the concerns and values of the audience. | | |
| 7. The presentation considers and addresses the potential biases of the audience. | | |

12.3.1

Lesson 26

Introduction

In this lesson, students build on their work from the previous lesson and deliver a 2–3 minute presentation of one of their research-based claims, supported by evidence and reasoning. This brief presentation prepares students for the End-of-Unit Assessment in 12.3.1 Lesson 27, in which they write an evidence-based perspective that synthesizes the research work completed in 12.3.1.

During the small group presentations, students listen to their peers' presentations before using the Presentation Checklist to provide feedback about the presenter's perspective, claim, evidence, organization, and audience considerations. Student learning is assessed via a Quick Write at the end of the lesson: Choose one or two pieces of feedback you received on your presentation and explain how the feedback will help you strengthen your claim, evidence, and reasoning.

For homework, students reread the Student Research Plan and use it as a guide to organize all sources, annotated copies, notes, tools, and assessments in preparation for the End-of-Unit Assessment in 12.3.1 Lesson 27. Additionally, students reflect on their claims from the previous lessons using a series of guiding questions.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.9 | Draw evidence from literary or informational texts to support analysis, reflection, and research. |
| SL.11-12.1.d | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task. |
| Addressed Standard(s) | |
| W.11-12.1.a,b | Write arguments to support claims in an analysis of substantive topics or texts, using |

| | |
|------------|---|
| | <p>valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <p>a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.</p> <p>b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience’s knowledge level, concerns, values, and possible biases.</p> |
| SL.11-12.3 | Evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used. |
| SL.11-12.4 | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range or formal and informal tasks. |

Assessment

Assessment(s)

Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, using evidence from their research.

- Choose one or two pieces of feedback you received on your presentation and explain how the feedback will help you strengthen your claim, evidence, and reasoning.

 Student responses are assessed using the Presentation Checklist.

High Performance Response(s)

Student responses vary according to the research conducted. A High Performance Response should:

- Identify specific feedback from a peer that will help strengthen the claims, evidence, and reasoning (e.g., One of my peers wrote, “I would like to know more about how poverty impacts developing nations.” This comment helps me realize that while the effects of poverty may be very well known to me as the researcher, if I do not make this clear as part of my presentation, my claims, reasoning, and evidence may not seem as important. If my audience does not fully understand how devastating poverty is in many nations, my suggestions for investing in human capital may not

mean as much. Another peer said that my presentation would have been more effective had I used fewer technical terms. I will be sure to explain more technical terms in my evidence-based perspective in the following lesson because I do not want the audience's lack of familiarity with these technical terms to prevent them from understanding my claims, evidence, and reasoning.).

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|---|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.9, SL.11-12.1.d, W.11-12.1.a,b, SL.11-12.3, SL.11-12.4 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Small-Group Presentations 4. Quick Write 5. Closing | <ol style="list-style-type: none"> 1. 10% 2. 10% 3. 60% 4. 15% 5. 5% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (refer to 12.3.1 Lesson 3) (optional)

- Student copies of the Presentation Checklist (refer to 12.3.1 Lesson 25)—students may need additional blank copies

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

10%

Begin by reviewing the agenda and the assessed standards for this lesson: W.11-12.9 and SL.11-12.1.d. Explain that in this lesson, students present their claims and supporting evidence in small groups while also providing feedback to their peers using the Presentation Checklist.

- Students look at the agenda.

❗ **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard SL.11-12.3. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

💬 Student responses should include:

- Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.
- Assess a speaker's stance, premises, links among ideas, word choice, points of emphasis, and tone.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Finalize your oral presentation using the Presentation Checklist as a guide. Additionally, practice delivering your presentation aloud (to yourself or to someone else) to identify errors in syntax, grammar, or logic, in preparation for the following lesson's small-group oral presentation.)

Instruct students pairs to discuss how they prepared for the presentation and share methods and strategies they used to support their preparation.

- 💬 Student responses vary depending on individual research questions/problems and research. Students should use the language of the Presentation Checklist in their discussion.
 - I prepared note cards so I could remind myself of key ideas during my presentation.
 - I practiced in front of a mirror, describing my claim and giving evidence and reasoning.
 - My parent/sibling/peer listened to me give my presentation and offered feedback. Together we made some additional notecards to fill in gaps where evidence and reasoning was needed.
 - I recorded myself on my cell phone and played it back, listening for where I said *um* a lot. I really tried to focus on remembering what I wanted to say in those sections.
 - I wrote out my presentation and read it to myself enough times to memorize it.

① Students may have used note cards, visual aids, pages of notes, or other supports for preparation. It is acceptable for students to use these during their presentations, as long as they are not reading word-for-word.

Activity 3: Small-Group Presentations

60%

Inform students that today's lesson focuses on the presentation of their claims and evidence, but also on how well students listen and provide feedback to their peers. Instruct students to take out their Presentation Checklists from the previous lesson, 12.3.1 Lesson 25 (W.11-12.1.a, b).

Explain to students that as they listen to their peers' presentations, they first must determine if the speaker successfully addressed the component and mark "yes" or "no" in the second column on the Presentation Checklist. Instruct listeners to record specific ideas for improving the presentation in the "Notes" box or third column of the checklist. Remind students that the goal of this presentation is to help each presenter improve his or her claim, evidence, and reasoning for the End-of-Unit Assessment in 12.3.1 Lesson 27.

Instruct students to form groups of 3–4. Explain that each student in the group will deliver a 2–3 minute presentation. While one student presents, the other students at the table listen carefully and complete Presentation Checklists, providing feedback for the student presenter.

- ▶ Students form groups and listen to each student presenter while providing individual feedback on the Presentation Checklists.
 - ① **Differentiation Consideration:** Consider providing students the option to informally deliver their presentations to a peer, receive initial feedback, revise or improve their presentations, and then present to the small groups.
 - ① Consider doing a model presentation/feedback session in a fishbowl setting. Organize one volunteer group in a center circle or at the front of the class while the other students sit in an outer ring or watch from their seats. Consider sitting with the listening group and taking notes on the Presentation Checklist for the first presenter, and sharing those notes with the class to model effective, targeted critical feedback. See the Model Presentation Checklist at the end of the lesson for possible student responses.
 - ① Consider setting a timer that provides a 30-second warning so that students have sufficient notice to conclude their presentations.
 - ① Peer assessment of presentations supports student engagement with SL.11-12.3, which addresses the evaluation of a speaker’s reasoning, and use of evidence, word choice, and tone.
 - ① Encourage students to keep in mind the Module Performance Assessment as they practice the skills inherent in standard SL.11-12.4: presenting information, findings, and supporting evidence clearly and following a line of reasoning; addressing alternate or opposing perspectives; and ensuring the development, substance, and style of their presentations are appropriate to the purpose, audience, and task. Remind students that they will present and discuss their multimedia journals at the end of Module 12.3 and that this activity provides an opportunity to continue preparing for the Module Performance Assessment.
-

When groups finish presenting, instruct students to gather their completed Presentation Checklists.

Instruct students to read through the feedback they received. Instruct students to synthesize and respond to peer comments and feedback, resolve contradictions, and determine what additional information or research is required to deepen their investigation. This information is important for the Quick Write in the next activity.

- ▶ Students review feedback to reflect on their presentations and prepare for the Quick Write.

Activity 4: Quick Write

15%

Instruct students to respond briefly in writing to the following prompt:

Choose one or two pieces of feedback you received on your presentation and explain how the feedback will help you strengthen your claim, evidence, and reasoning.

Instruct students to develop their written response from their synthesis of the Presentation Checklists.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using the Presentation Checklists to guide their responses.
- 💬 See the High Performance Response at the beginning of this lesson.

Activity 5: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to reread the Student Research Plan and use it as a guide to organize all sources, annotated copies, notes, tools, and assessments in preparation for the End-of-Unit Assessment in 12.3.1 Lesson 27. Additionally, instruct students to reflect on their claims from the previous lessons using the guiding questions below. Instruct students to take notes on a separate sheet of paper about each guiding question as they reflect on their claims and the research process as a whole.

Display the following guiding questions for students:

How has your understanding of the problem-based question developed or deepened as a result of the research?

Based on your claims, what ideas can you connect and how do those connections inform your understanding of the problem-based question?

Based on your claims, what are your overall views or opinions about the problem-based question? How did the research lead you to these views or opinions?

① Remind students that the Student Research Plan Handout was distributed in 12.3.1 Lesson 15.

- ▶ Students follow along.

Homework

Reread the Student Research Plan and use it as a guide to organize all sources, annotated copies, notes, tools, and assessments in preparation for the End-of-Unit Assessment in 12.3.1 Lesson 27. Additionally, reflect on your claims from the previous lessons using the guiding questions below. Take notes on a separate sheet of paper about each guiding question as you reflect on your claims and the research process as a whole.

How has your understanding of the problem-based question developed or deepened as a result of the research?

Based on your claims, what ideas can you connect and how do those connections inform your understanding of the problem-based question?

**Based on your claims, what are your overall views or opinions about the problem-based question?
How did the research lead you to these views or opinions?**

Model Presentation Checklist

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Review your presentation to ensure that it meets each criterion on this checklist. Make notes to describe how your presentation meets each criterion, or to explain how you will revise your presentation to meet the criterion.

| Component | Yes/No | Notes |
|---|--------|--|
| 1. The presentation includes information, findings, and supporting evidence to support the claim. | Yes | My peer used multiple pieces of evidence and statistics from The World Bank, the U.N. Millennium Project, and the World Development Report. |
| 2. The speaker presents a clear and distinct perspective on the issue. | Yes | I could tell that my peer had her own perspective because she differentiated the perspectives of other researchers from her own perspective by saying, "But I believe...." |
| 3. The presentation is organized in a way that is logical and clear. | Yes | The presentation contained a strong introduction, claim, evidence and reasoning, and conclusion. It was easy to follow. |
| 4. The presentation is delivered using a formal tone that is appropriate to the purpose and audience. | Yes | My peer used a formal tone throughout the presentation and sounded very professional and knowledgeable about the issue. |
| 5. The presentation considers and addresses the knowledge level of the audience. | No | My peer used too many technical terms and because of that, at times it became difficult to follow. |
| 6. The presentation considers and addresses the concerns and values of the audience. | Yes | I thought it was silly at first to invest in technology for places that do not even have access to clean water. My peer anticipated this concern by explaining how education and technology can solve many basic necessity problems in developing nations. |
| 7. The presentation considers and addresses the potential biases of the audience. | Yes | The presentation treated all subjects with objectivity and made me think differently about the potential value of education and technology in developing nations. |

12.3.1

Lesson 27

Introduction

In this final lesson of the unit, the 12.3.1 End-of-Unit Assessment, students write an evidence-based perspective that synthesizes the evidence collection and research work completed in 12.3.1. This lesson asks students to apply standards W.11-12.7 and W.11-12.9 as they craft a response that demonstrates understanding of their problem-based question as well as their ability to draw evidence from their sources to support research analysis.

Student learning in this lesson is assessed via a two-page synthesis of their perspective derived from students' research. Students draw on their research evidence to express their perspective on their problem-based question. Students submit the evidence-based perspective for assessment purposes.

For homework, students complete another multimedia journal entry, in response to the following prompts: How has your thinking changed regarding your problem-based question? How did your research process lead you to your evidence-based perspective?

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| W.11-12.9 | Draw evidence from literary or informational texts to support analysis, reflection, and research. |
| Addressed Standard(s) | |
| W.11-12.1 | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. |
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. |

Assessment

| Assessment(s) |
|--|
| <p>Student learning is assessed via a multi-paragraph response to the End-of-Unit Assessment. Students respond to the following prompt, citing textual evidence to support analysis and inferences drawn from their sources.</p> <ul style="list-style-type: none"> Write a two-page synthesis of your conclusions and perspective derived from your research. Draw on your research evidence to express your perspective on your problem-based question. <p>① Student responses are assessed using the 12.3.1 Research Rubric.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Meet the requirements of Level 4 on the 12.3.1 Research Rubric. <p>① See the Model Evidence-Based Perspective at the end of this lesson.</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*In their research and reading, students encounter domain-specific vocabulary related to their individual areas of investigation/problem-based questions. Consider instructing students to use a vocabulary journal to track this vocabulary when conducting independent searches during class and for homework.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.7, W.11-12.9, W.11-12.1, SL.11-12.1 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. 12.3.1 End-of-Unit Assessment: Evidence-Based Perspective 4. Closing | <ol style="list-style-type: none"> 1. 5% 2. 20% 3. 70% 4. 5% |

Materials

- Copies of the 12.3.1 End-of-Unit Assessment for each student
- Student copies of the 12.3.1 Research Rubric and Checklist (refer to 12.3.1 Lesson 9)
- Student copies of the Organizing Evidence-Based Claims Tools (refer to 12.3.1 Lesson 23)
- Student copies of the Student Research Plan Handout (refer to 12.3.1 Lesson 15)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| 📘 | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standards for this lesson: W.11-12.7 and W.11-12.9. In this lesson, students discuss their developing perspectives on their problem-based questions, using their tools from the previous lessons. Students write an evidence-based perspective (a two-page synthesis), supporting the perspective with relevant evidence from the research.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

20%

Instruct students to take out their responses to the previous lesson's homework assignment. (Reread the Student Research Plan and use it as a guide to organize all sources, annotated copies, notes, tools, and assessments in preparation for the End-of-Unit Assessment in 12.3.1 Lesson 27. Additionally, reflect on your claims from the previous lessons using the guiding questions below. Take notes on a separate sheet of paper about each guiding question, as you reflect on your claims and the research process as a whole.)

Instruct students to form small groups and discuss their reflections on the guiding questions regarding their problem-based questions. Remind students to use specific evidence to support their conclusions or reflections about the research work. Additionally, remind students to take notes during the discussion for later use when writing their evidence-based perspectives.

- ☞ Student responses vary according to the research conducted. Student responses may include:
 - At first, I thought that people who lived in geographically isolated regions would want to have the same opportunities as those who live in more connected regions. Instead, my sources have introduced a range of perspectives on the issue, which makes me question the value of so much constant connectivity. For example, although there are economic benefits to connectivity, many rituals, languages, and values of a given culture are lost or diluted once the area is connected to others technologically.
 - Based on my claims, my overall opinion of intellectual property laws is that, although they are the only protection and potential source of revenue for an inventor, they are not effective stimulators of innovation. The application process for a copyright, trademark, or patent is costly and lengthy, and once granted, does not provide enough protection for the inventor. Many innovators opt to open-source their initial ideas, leveraging their losses by consulting, training, and researching with for-profit corporations. The current American model of intellectual property is unsustainable for prolonged innovation and prolonged financial reward for innovators.

Explain to students that their discussions should continue the work of the collaborative discussion outlined in SL.11-12.1, to which students were previously introduced. Remind students these discussion strategies have been taught in previous modules.

① Consider posting or projecting the homework questions to guide the discussion:

How has your understanding of the problem-based question developed or deepened as a result of the research?

Based on your claims, what ideas can you connect and what do those connections tell you about the problem-based question?

Based on your claims, what are your overall views or opinions about the problem-based question? How did the research lead you to these views or opinions?

Activity 3: 12.3.1 End-of-Unit Assessment: Evidence-Based Perspective 70%

Explain to students that throughout 12.3.1 they have used the research process to explore a research issue; this lesson's assessment asks them to reflect on their current understanding of their problem-based question now that they have created claims about it. Explain to students that an evidence-based perspective is a synthesis of their research findings, based on their analysis of the research outcomes, and supported with evidence. The evidence-based perspective students develop in this lesson helps them to develop a central claim in 12.3.2.

► Students listen.

① **Differentiation Consideration:** Consider reminding students of the following definition from 12.3.1 Lesson 9: *perspective* means “how one understands an issue, including his/her relationship to and analysis of the issue.”

Instruct students to complete the 12.3.1 End-of-Unit Assessment by writing about their evidence-based perspective in a two-page synthesis, using their research evidence and details for support.

Instruct students to use their Organizing Evidence-Based Claims Tools from the previous lessons and their discussion notes from the previous activity to write about their developing perspectives regarding their problem-based questions. Remind students to use specific evidence from their sources to support their perspectives. Remind students that the focus for this writing is to develop a perspective on their research, not to summarize all of their research outcomes. Remind students to paraphrase and quote the evidence correctly when crafting the perspective. (W.11.12.1)

Transition students to writing the End-of-Unit Assessment.

Consider reminding students that developing an evidence-based perspective addresses W.11-12.1, which asks students to explore and inquire into areas of interest as they begin to formulate an argument.

- ▶ Students independently write an evidence-based perspective for the End-of-Unit Assessment.
- 🗨 See the Model Evidence-Based Perspective at the end of this lesson.

Activity 4: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to complete another multimedia journal entry, in response to the following prompts:

How has your thinking changed regarding your problem-based question?

How did your research process lead you to your evidence-based perspective?

- ▶ Students follow along.

① **Differentiation Consideration:** Consider instructing students to use the Student Research Plan Handout from 12.3.1 Lesson 15 to guide their multimedia journal entries.

Homework

Complete another multimedia journal entry, in response to the following prompts:

How has your thinking changed regarding your problem-based question?

How did your research process lead you to your evidence-based perspective?

12.3.1 End-of-Unit Assessment

Evidence-Based Perspective

Your task: Write a two-page synthesis of your conclusions and perspective derived from your research. Draw on your research evidence to express your perspective on your problem-based question.

Your response will be assessed using the 12.3.1 Research Rubric.

Guidelines

Be sure to:

- Develop a perspective on the research, and not a summary of all the research outcomes.
- Support your perspective with relevant evidence from your research.
- Organize your perspective using the claims you developed on your Organizing Evidence-Based Claims Tools (based on your inquiry paths).
- Use specific research to support your claim(s).
- Organize your ideas in a cohesive and coherent manner.
- Use precise language appropriate for your task.
- Follow the conventions of standard written English.

CCSS: W.11-12.7, W.11-12.9

Commentary on the task:

This task measures W.11-12.7 because it demands that students:

- Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem.
- Narrow or broaden the inquiry when appropriate.
- Synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

This task measures W.11-12.9 because it demands that students:

- Draw evidence from literary or informational texts to support analysis, reflection, and research.

Model Evidence-Based Perspective

What first interested me about the issue of global wealth and power distribution was the same issue as presented in *Guns, Germs, and Steel* by Jared Diamond. Throughout the excerpts, Diamond searches for the ultimate causes of inequality between rich and poor nations, and his exploration intrigued me; I wanted to know how *developing* nations could become *developed* nations. What I learned from my sources is that development is not as simple as just sending money from point A to point B. Investments must target the internal infrastructure most likely to create positive outcomes for a developing nation's economy.

Although the sources present a variety of perspectives on the many ways for a developing nation to increase its economic prosperity, my personal conclusion is that the most effective way for developing nations to become more prosperous is by providing quality education and technology to all citizens.

Through my research, I discovered that education comes in various forms and that the idea of “quality education” is difficult to define. According to UNESCO's EFA Global Monitoring Report 2005, high-quality education focuses on both cognitive skills (learning, thinking, analyzing, synthesizing, etc.) as well as “the creative and emotional growth of learners and in helping them to acquire values and attitudes for responsible citizenship.”

Quality education only works to improve economic growth when there is equality for all students in a classroom, regardless of whether the students are male or female. On page viii of “Evidence for Action: Gender Equality and Economic Growth,” Ward et al. explain that this kind of equity is important for the prosperity of a country: “With the exceptions of resource-rich Oman, Bahrain and Saudi Arabia, no country has achieved both GDP per capita of over \$10,000 and a ratio of girls to boys in primary education of less than 90 per cent.” Additionally, equity is important in terms of economic competition and overall economic productivity. If women cannot compete or produce alongside men in the workforce, only half of the potential workforce is contributing to a country's economic potential. For example, Ward et al. explain that, “markets are more competitive if all would-be entrepreneurs can use their talents.”

At first, I considered that investments in health care in developing countries would be pivotal in changing their economic fates. However, with further research, I realized that education also serves as a foundation for better health care and the physical wellbeing of a population. In fact, education gives people the knowledge to protect themselves from disease. In “The Case for Universal Basic Education for the World's Poorest Boys and Girls,” Sperling claims that, “an extra year of female education can reduce infant mortality by 5% to 10%. In Africa, children of mothers who receive five years of primary education are 40% less likely to [die] before age 5 than are children of uneducated mothers.” While investment in health care is important, it is an immediate, short-term solution to the problem of

poverty, while investing in education is a long-term strategy that will have greater impact on the economy and on health care overall.

Finally, I discovered through research that technology is an important investment because it plays a vital role in increasing wealth in developing nations. In order to contribute to economic growth, all citizens must have access to technology. Access to broadband Internet, for example, can spur economic growth. According to Qiang, Rossotto, and Kimura at the World Bank, broadband Internet helps people “acquire skills ... and develop social networks through broadband-enabled Web applications, facilitating peer-to-peer communities and their integration with the economy.” One example of the benefits broadband Internet can bring is found in India, where farming villages are “using a common portal that links multimedia personal computers by satellite ... these improvements have resulted in productivity gains for the farmers.” If access to the Internet can increase productivity and stimulate more investment in technology and education, it is a critical part of driving innovation in developing nations.

Thus, technology and education work together to improve the health and prosperity of a nation’s citizens, thereby increasing the rate of reinvestment in human capital by the citizens themselves, and providing the best chance for developing nations to gain economic prosperity.

① The evidence in this High-Performance Response comes from:

- “Empowering Women Is Smart Economics” by Ana Revenga and Sudhir Shetty (Source #1)
- “Poverty Facts and Stats” by Anup Shah (Source #2)
- “Evidence for Action: Gender Equality and Economic Growth” by John Ward, Bernice Lee, Simon Baptist, and Helen Jackson (Source #3)
- “Human Capital Investment in the Developing World: An Analysis of Praxis” by Adeyemi O. Ogunade (Source #5)
- “The Case for Universal Basic Education for the World’s Poorest Boys and Girls” by Gene B. Sperling (Source #6)
- “2005 EFA Global Monitoring Report. Education for All: The Quality Imperative” by UNESCO (Source #7)
- “Economic Impacts of Broadband” by Christine Zhen-Wei Qiang and Carlo M. Rossotto with Kaoru Kimura, in *2009 Information and Communications for Development: Extending Reach and Increasing Impact* by World Bank Publications. (Source #10)

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GUNS, GERMS, AND STEEL

BY JARED DIAMOND

PROLOGUE

YALI'S QUESTION

WE ALL KNOW THAT HISTORY HAS PROCEEDED VERY differently for peoples from different parts of the globe. In the 13,000 years since the end of the last Ice Age, some parts of the world developed literate industrial societies with metal tools, other parts developed only nonliterate farming societies, and still others retained societies of hunter-gatherers with stone tools. Those historical inequalities have cast long shadows on the modern world, because the literate societies with metal tools have conquered or exterminated the other societies. While those differences constitute the most basic fact of world history, the reasons for them remain uncertain and controversial. This puzzling question of their origins was posed to me 25 years ago in a simple, personal form.

In July 1972 I was walking along a beach on the tropical island of New Guinea, where as a biologist I study bird evolution. I had already heard about a remarkable local politician named Yali, who was touring the district then. By chance, Yali and I were walking in the same direction on that day, and he overtook me. We walked together for an hour, talking during the whole time.

Yali radiated charisma and energy. His eyes flashed in a mesmerizing way. He talked confidently about himself, but he also asked lots of probing questions and listened intently. Our conversation began with a subject then on every New Guinean's mind—the rapid pace of political developments. Papua

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New Guinea, as Yali's nation is now called, was at that time still administered by Australia as a mandate of the United Nations, but independence was in the air. Yali explained to me his role in getting local people to prepare for self-government.

After a while, Yali turned the conversation and began to quiz me. He had never been outside New Guinea and had not been educated beyond high school, but his curiosity was insatiable. First, he wanted to know about my work on New Guinea birds (including how much I got paid for it). I explained to him how different groups of birds had colonized New Guinea over the course of millions of years. He then asked how the ancestors of his own people had reached New Guinea over the last tens of thousands of years, and how white Europeans had colonized New Guinea within the last 200 years.

The conversation remained friendly, even though the tension between the two societies that Yali and I represented was familiar to both of us. Two centuries ago, all New Guineans were still “living in the Stone Age.” That is, they still used stone tools similar to those superseded in Europe by metal tools thousands of years ago, and they dwelt in villages not organized under any centralized political authority. Whites had arrived, imposed centralized government, and brought material goods whose value New Guineans instantly recognized, ranging from steel axes, matches, and medicines to clothing, soft drinks, and umbrellas. In New Guinea all these goods were referred to collectively as “cargo.”

Many of the white colonialists openly despised New Guineans as “primitive.” Even the least able of New Guinea's white “masters,” as they were still called in 1972, enjoyed a far higher standard of living than New Guineans, higher even than charismatic politicians like Yali. Yet Yali had quizzed lots of whites as he was then quizzing me, and I had quizzed lots of New Guineans. He and I both knew perfectly well that New Guineans are on the average at least as smart as Europeans. All those things must have been on Yali's mind when, with yet another penetrating glance of his flashing eyes, he asked me, “Why is it that you white people developed so much cargo and brought it to New Guinea, but we black people had little cargo of our own?”

It was a simple question that went to the heart of life as Yali experienced it. Yes, there still is a huge difference between the lifestyle of the average New Guinean and that of the average European or American. Comparable differences separate the lifestyles of other peoples of the world as well. Those huge disparities must have potent causes that one might think would be obvious.

Yet Yali's apparently simple question is a difficult one to answer. I didn't

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have an answer then. Professional historians still disagree about the solution; most are no longer even asking the question. In the years since Yali and I had that conversation, I have studied and written about other aspects of human evolution, history, and language. This book, written twenty-five years later, attempts to answer Yali.

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ALTHOUGH YALI' S QUESTION concerned only the contrasting lifestyles of New Guineans and of European whites, it can be extended to a larger set of contrasts within the modern world. Peoples of Eurasian origin, especially those still living in Europe and eastern Asia, plus those transplanted to North America, dominate the modern world in wealth and power. Other peoples, including most Africans, have thrown off European colonial domination but remain far behind in wealth and power. Still other peoples, such as the aboriginal inhabitants of Australia, the Americas, and southernmost Africa, are no longer even masters of their own lands but have been decimated, subjugated, and in some cases even exterminated by European colonialists.

Thus, questions about inequality in the modern world can be reformulated as follows. Why did wealth and power become distributed as they now are, rather than in some other way? For instance, why weren't Native Americans, Africans, and Aboriginal Australians the ones who decimated, subjugated, or exterminated Europeans and Asians?

We can easily push this question back one step. As of the year A.D. 1500, when Europe's worldwide colonial expansion was just beginning, peoples on different continents already differed greatly in technology and political organization. Much of Europe, Asia, and North Africa was the site of metal-equipped states or empires, some of them on the threshold of industrialization. Two Native American peoples, the Aztecs and the Incas, ruled over empires with stone tools. Parts of sub-Saharan Africa were divided among small states or chiefdoms with iron tools. Most other peoples—including all those of Australia and New Guinea, many Pacific islands, much of the Americas, and small parts of sub-Saharan Africa—lived as farming tribes or even still as hunter-gatherer bands using stone tools.

Of course, those technological and political differences as of A.D. 1500 were the immediate cause of the modern world's inequalities. Empires with steel weapons were able to conquer or exterminate tribes with weapons of

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stone and wood. How, though, did the world get to be the way it was in A.D. 1500?

Once again, we can easily push this question back one step further, by drawing on written histories and archaeological discoveries. Until the end of the last Ice Age, around 11,000 B.C., all peoples on all continents were still hunter-gatherers. Different rates of development on different continents, from 11,000 B.C. to A.D. 1500, were what led to the technological and political inequalities of A.D. 1500. While Aboriginal Australians and many Native Americans remained hunter-gatherers, most of Eurasia and much of the Americas and sub-Saharan Africa gradually developed agriculture, herding, metallurgy, and complex political organization. Parts of Eurasia, and one area of the Americas, independently developed writing as well. However, each of these new developments appeared earlier in Eurasia than elsewhere. For instance, the mass production of bronze tools, which was just beginning in the South American Andes in the centuries before A.D. 1500, was already established in parts of Eurasia over 4,000 years earlier. The stone technology

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of the Tasmanians, when first encountered by European explorers in A.D. 1642, was simpler than that prevalent in parts of Upper Paleolithic Europe tens of thousands of years earlier.

Thus, we can finally rephrase the question about the modern world's inequalities as follows: why did human development proceed at such different rates on different continents? Those disparate rates constitute history's broadest pattern and my book's subject.

While this book is thus ultimately about history and prehistory, its subject is not of just academic interest but also of overwhelming practical and political importance. The history of interactions among disparate peoples is what shaped the modern world through conquest, epidemics, and genocide. Those collisions created reverberations that have still not died down after many centuries, and that are actively continuing in some of the world's most troubled areas today.

For example, much of Africa is still struggling with its legacies from recent colonialism. In other regions—including much of Central America, Mexico, Peru, New Caledonia, the former Soviet Union, and parts of Indonesia—civil unrest or guerrilla warfare pits still-numerous indigenous populations against governments dominated by descendants of invading conquerors. Many other indigenous populations—such as native Hawaiians, Aboriginal Australians, native Siberians, and Indians in the United States, Canada, Brazil, Argentina, and Chile—became so reduced in numbers by genocide and disease that they are now greatly outnumbered by the descendants of invad-

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ers. Although thus incapable of mounting a civil war, they are nevertheless increasingly asserting their rights.

In addition to these current political and economic reverberations of past collisions among peoples, there are current linguistic reverberations—especially the impending disappearance of most of the modern world's 6,000 surviving languages, becoming replaced by English, Chinese, Russian, and a few other languages whose numbers of speakers have increased enormously in recent centuries. All these problems of the modern world result from the different historical trajectories implicit in Yali's question.

BEFORE SEEKING ANSWERS to Yali's question, we should pause to consider some objections to discussing it at all. Some people take offense at the mere posing of the question, for several reasons.

One objection goes as follows. If we succeed in explaining how some people came to dominate other people, may this not seem to justify the domination? Doesn't it seem to say that the outcome was inevitable, and that it would therefore be futile to try to change the outcome today? This objection rests on a common tendency to confuse an explanation of causes with a justification or acceptance of results. What use one makes of a historical explanation is a question separate from the explanation itself. Understanding is more often used to try to alter an outcome than to repeat or perpetuate it. That's why psychologists try to understand the minds of murderers and rapists, why social historians try to understand genocide, and why physicians try to understand the causes of human disease. Those investigators do not seek to justify murder,

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rape, genocide, and illness. Instead, they seek to use their understanding of a chain of causes to interrupt the chain.

Second, doesn't addressing Yali's question automatically involve a Eurocentric approach to history, a glorification of western Europeans, and an obsession with the prominence of western Europe and Europeanized America in the modern world? Isn't that prominence just an ephemeral phenomenon of the last few centuries, now fading behind the prominence of Japan and Southeast Asia? In fact, most of this book will deal with peoples other than Europeans. Rather than focus solely on interactions between Europeans and non-Europeans, we shall also examine interactions between different non-European peoples—especially those that took place within sub-Saharan Africa, Southeast Asia, Indonesia, and New Guinea, among peoples native to those areas. Far from glorifying peoples of western European origin, we

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shall see that most basic elements of their civilization were developed by other peoples living elsewhere and were then imported to western Europe.

Third, don't words such as "civilization," and phrases such as "rise of civilization," convey the false impression that civilization is good, tribal hunter-gatherers are miserable, and history for the past 13,000 years has involved progress toward greater human happiness? In fact, I do not assume that industrialized states are "better" than hunter-gatherer tribes, or that the abandonment of the hunter-gatherer lifestyle for iron-based statehood represents "progress," or that it has led to an increase in human happiness. My own impression, from having divided my life between United States cities and New Guinea villages, is that the so-called blessings of civilization are mixed. For example, compared with hunter-gatherers, citizens of modern industrialized states enjoy better medical care, lower risk of death by homicide, and a longer life span, but receive much less social support from friendships and extended families. My motive for investigating these geographic differences in human societies is not to celebrate one type of society over another but simply to understand what happened in history.

DOES YALI'S QUESTION really need another book to answer it? Don't we already know the answer? If so, what is it?

Probably the commonest explanation involves implicitly or explicitly assuming biological differences among peoples. In the centuries after A.D. 1500, as European explorers became aware of the wide differences among the world's peoples in technology and political organization, they assumed that those differences arose from differences in innate ability. With the rise of Darwinian theory, explanations were recast in terms of natural selection and of evolutionary descent. Technologically primitive peoples were considered evolutionary vestiges of human descent from apelike ancestors. The displacement of such peoples by colonists from industrialized societies exemplified the survival of the fittest. With the later rise of genetics, the explanations were recast once again, in genetic terms. Europeans became considered genetically more intelligent than Africans, and especially more so than Aboriginal Australians.

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Today, segments of Western society publicly repudiate racism. Yet many (perhaps most!) Westerners continue to accept racist explanations privately or subconsciously. In Japan and many other countries, such explanations are still advanced publicly and without apology. Even educated white Americans,

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Europeans, and Australians, when the subject of Australian Aborigines comes up, assume that there is something primitive about the Aborigines themselves. They certainly look different from whites. Many of the living descendants of those Aborigines who survived the era of European colonization are now finding it difficult to succeed economically in white Australian society.

A seemingly compelling argument goes as follows. White immigrants to Australia built a literate, industrialized, politically centralized, democratic state based on metal tools and on food production, all within a century of colonizing a continent where the Aborigines had been living as tribal hunter-gatherers without metal for at least 40,000 years. Here were two successive experiments in human development, in which the environment was identical and the sole variable was the people occupying that environment. What further proof could be wanted to establish that the differences between Aboriginal Australian and European societies arose from differences between the peoples themselves?

The objection to such racist explanations is not just that they are loathsome, but also that they are wrong. Sound evidence for the existence of human differences in intelligence that parallel human differences in technology is lacking. In fact, as I shall explain in a moment, modern “Stone Age” peoples are on the average probably more intelligent, not less intelligent, than industrialized peoples. Paradoxical as it may sound, we shall see in Chapter 15 that white immigrants to Australia do not deserve the credit usually accorded to them for building a literate industrialized society with the other virtues mentioned above. In addition, peoples who until recently were technologically primitive—such as Aboriginal Australians and New Guineans—routinely master industrial technologies when given opportunities to do so.

An enormous effort by cognitive psychologists has gone into the search for differences in IQ between peoples of different geographic origins now living in the same country. In particular, numerous white American psychologists have been trying for decades to demonstrate that black Americans of African origins are innately less intelligent than white Americans of European origins. However, as is well known, the peoples compared differ greatly in their social environment and educational opportunities. This fact creates double difficulties for efforts to test the hypothesis that intellectual differences underlie technological differences. First, even our cognitive abilities as adults are heavily influenced by the social environment that we experienced during childhood, making it hard to discern any influence of preexisting

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genetic differences. Second, tests of cognitive ability (like IQ tests) tend to measure cultural learning and not pure innate intelligence, whatever that is. Because of those undoubted effects of childhood environment

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and learned knowledge on IQ test results, the psychologists' efforts to date have not succeeded in convincingly establishing the postulated genetic deficiency in IQs of nonwhite peoples.

My perspective on this controversy comes from 33 years of working with New Guineans in their own intact societies. From the very beginning of my work with New Guineans, they impressed me as being on the average more intelligent, more alert, more expressive, and more interested in things and people around them than the average European or American is. At some tasks that one might reasonably suppose to reflect aspects of brain function, such as the ability to form a mental map of unfamiliar surroundings, they appear considerably more adept than Westerners. Of course, New Guineans tend to perform poorly at tasks that Westerners have been trained to perform since childhood and that New Guineans have not. Hence when unschooled New Guineans from remote villages visit towns, they look stupid to Westerners. Conversely, I am constantly aware of how stupid I look to New Guineans when I'm with them in the jungle, displaying my incompetence at simple tasks (such as following a jungle trail or erecting a shelter) at which New Guineans have been trained since childhood and I have not.

It's easy to recognize two reasons why my impression that New Guineans are smarter than Westerners may be correct. First, Europeans have for thousands of years been living in densely populated societies with central governments, police, and judiciaries. In those societies, infectious epidemic diseases of dense populations (such as smallpox) were historically the major cause of death, while murders were relatively uncommon and a state of war was the exception rather than the rule. Most Europeans who escaped fatal infections also escaped other potential causes of death and proceeded to pass on their genes. Today, most live-born Western infants survive fatal infections as well and reproduce themselves, regardless of their intelligence and the genes they bear. In contrast, New Guineans have been living in societies where human numbers were too low for epidemic diseases of dense populations to evolve. Instead, traditional New Guineans suffered high mortality from murder, chronic tribal warfare, accidents, and problems in procuring food.

Intelligent people are likelier than less intelligent ones to escape those causes of high mortality in traditional New Guinea societies. However, the differential mortality from epidemic diseases in traditional European socie-

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ties had little to do with intelligence, and instead involved genetic resistance dependent on details of body chemistry. For example, people with blood group B or O have a greater resistance to smallpox than do people with blood group A. That is, natural selection promoting genes for intelligence has probably been far more ruthless in New Guinea than in more densely populated, politically complex societies, where natural selection for body chemistry was instead more potent.

Besides this genetic reason, there is also a second reason why New Guineans may have come to be smarter than Westerners. Modern European and American children spend much of their time being passively entertained by television, radio, and movies. In the average American household, the TV set is

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on for seven hours per day. In contrast, traditional New Guinea children have virtually no such opportunities for passive entertainment and instead spend almost all of their waking hours actively doing something, such as talking or playing with other children or adults. Almost all studies of child development emphasize the role of childhood stimulation and activity in promoting mental development, and stress the irreversible mental stunting associated with reduced childhood stimulation. This effect surely contributes a non-genetic component to the superior average mental function displayed by New Guineans.

That is, in mental ability New Guineans are probably genetically superior to Westerners, and they surely are superior in escaping the devastating developmental *disadvantages* under which most children in industrialized societies now grow up. Certainly, there is no hint at all of any intellectual *disadvantage* of New Guineans that could serve to answer Yali's question. The same two genetic and childhood developmental factors are likely to distinguish not only New Guineans from Westerners, but also hunter-gatherers and other members of technologically primitive societies from members of technologically advanced societies in general. Thus, the usual racist assumption has to be turned on its head. Why is it that Europeans, despite their likely genetic disadvantage and (in modern times) their undoubted developmental disadvantage, ended up with much more of the cargo? Why did New Guineans wind up technologically primitive, despite what I believe to be their superior intelligence?

A GENETIC EXPLANATION isn't the only possible answer to Yali's question. Another one, popular with inhabitants of northern Europe, invokes

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the supposed stimulatory effects of their homeland's cold climate and the inhibitory effects of hot, humid, tropical climates on human creativity and energy. Perhaps the seasonally variable climate at high latitudes poses more diverse challenges than does a seasonally constant tropical climate. Perhaps cold climates require one to be more technologically inventive to survive, because one must build a warm home and make warm clothing, whereas one can survive in the tropics with simpler housing and no clothing. Or the argument can be reversed to reach the same conclusion: the long winters at high latitudes leave people with much time in which to sit indoors and invent.

Although formerly popular, this type of explanation, too, fails to survive scrutiny. As we shall see, the peoples of northern Europe contributed nothing of fundamental importance to Eurasian civilization until the last thousand years; they simply had the good luck to live at a geographic location where they were likely to receive advances (such as agriculture, wheels, writing, and metallurgy) developed in warmer parts of Eurasia. In the New World the cold regions at high latitude were even more of a human backwater. The sole Native American societies to develop writing arose in Mexico south of the Tropic of Cancer; the oldest New World pottery comes from near the equator in tropical South America; and the New World society generally considered the most advanced in art, astronomy, and other respects was the Classic Maya society of the tropical Yucatàn and Guatemala in the first millennium A.D.

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Still a third type of answer to Yali invokes the supposed importance of lowland river valleys in dry climates, where highly productive agriculture depended on large-scale irrigation systems that in turn required centralized bureaucracies. This explanation was suggested by the undoubted fact that the earliest known empires and writing systems arose in the Tigris and Euphrates Valleys of the Fertile Crescent and in the Nile Valley of Egypt. Water control systems also appear to have been associated with centralized political organization in some other areas of the world, including the Indus Valley of the Indian subcontinent, the Yellow and Yangtze Valleys of China, the Maya lowlands of Mesoamerica, and the coastal desert of Peru.

However, detailed archaeological studies have shown that complex irrigation systems did not *accompany* the rise of centralized bureaucracies but *followed* after a considerable lag. That is, political centralization arose for some other reason and then permitted construction of complex irrigation systems. None of the crucial developments preceding political centralization in those same parts of the world were associated with river valleys or with

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complex irrigation systems. For example, in the Fertile Crescent food production and village life originated in hills and mountains, not in lowland river valleys. The Nile Valley remained a cultural backwater for about 3,000 years after village food production began to flourish in the hills of the Fertile Crescent. River valleys of the southwestern United States eventually came to support irrigation agriculture and complex societies, but only after many of the developments on which those societies rested had been imported from Mexico. The river valleys of southeastern Australia remained occupied by tribal societies without agriculture.

Yet another type of explanation lists the immediate factors that enabled Europeans to kill or conquer other peoples—especially European guns, infectious diseases, steel tools, and manufactured products. Such an explanation is on the right track, as those factors demonstrably were directly responsible for European conquests. However, this hypothesis is incomplete, because it still offers only a proximate (first-stage) explanation identifying immediate causes. It invites a search for ultimate causes: why were Europeans, rather than Africans or Native Americans, the ones to end up with guns, the nastiest germs, and steel?

While some progress has been made in identifying those ultimate causes in the case of Europe's conquest of the New World, Africa remains a big puzzle. Africa is the continent where protohumans evolved for the longest time, where anatomically modern humans may also have arisen, and where native diseases like malaria and yellow fever killed European explorers. If a long head start counts for anything, why didn't guns and steel arise first in Africa, permitting Africans and their germs to conquer Europe? And what accounts for the failure of Aboriginal Australians to pass beyond the stage of hunter-gatherers with stone tools?

Questions that emerge from worldwide comparisons of human societies formerly attracted much attention from historians and geographers. The best-known modern example of such an effort was Arnold

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Toynbee's 12-volume *Study of History*. Toynbee was especially interested in the internal dynamics of 23 advanced civilizations, of which 22 were literate and 19 were Eurasian. He was less interested in prehistory and in simpler, nonliterate societies. Yet the roots of inequality in the modern world lie far back in prehistory. Hence Toynbee did not pose Yali's question, nor did he come to grips with what I see as history's broadest pattern. Other available books on world history similarly tend to focus on advanced literate Eurasian civilizations of the last 5,000 years; they have a very brief treatment of pre-Columbian

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Native American civilizations, and an even briefer discussion of the rest of the world except for its recent interactions with Eurasian civilizations. Since Toynbee's attempt, worldwide syntheses of historical causation have fallen into disfavor among most historians, as posing an apparently intractable problem.

Specialists from several disciplines have provided global syntheses of their subjects. Especially useful contributions have been made by ecological geographers, cultural anthropologists, biologists studying plant and animal domestication, and scholars concerned with the impact of infectious diseases on history. These studies have called attention to parts of the puzzle, but they provide only pieces of the needed broad synthesis that has been missing.

Thus, there is no generally accepted answer to Yali's question. On the one hand, the proximate explanations are clear: some peoples developed guns, germs, steel, and other factors conferring political and economic power before others did; and some peoples never developed these power factors at all. On the other hand, the ultimate explanations—for example, why bronze tools appeared early in parts of Eurasia, late and only locally in the New World, and never in Aboriginal Australia—remain unclear.

Our present lack of such ultimate explanations leaves a big intellectual gap, since the broadest pattern of history thus remains unexplained. Much more serious, though, is the moral gap left unfilled. It is perfectly obvious to everyone, whether an overt racist or not, that different peoples have fared differently in history. The modern United States is a European-molded society, occupying lands conquered from Native Americans and incorporating the descendants of millions of sub-Saharan black Africans brought to America as slaves. Modern Europe is not a society molded by sub-Saharan black Africans who brought millions of Native Americans as slaves.

These results are completely lopsided: it was not the case that 51 percent of the Americas, Australia, and Africa was conquered by Europeans, while 49 percent of Europe was conquered by Native Americans, Aboriginal Australians, or Africans. The whole modern world has been shaped by lopsided outcomes. Hence they must have inexorable explanations, ones more basic than mere details concerning who happened to win some battle or develop some invention on one occasion a few thousand years ago.

It *seems* logical to suppose that history's pattern reflects innate differences among people themselves. Of course, we're taught that it's not polite to say so in public. We read of technical studies claiming to demonstrate inborn differences, and we also read rebuttals claiming that those studies suffer from

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YALI'S QUESTION ■ 25

technical flaws. We see in our daily lives that some of the conquered peoples continue to form an underclass, centuries after the conquests or slave imports took place. We're told that this too is to be attributed not to any biological shortcomings but to social disadvantages and limited opportunities.

Nevertheless, we have to wonder. We keep seeing all those glaring, persistent differences in peoples' status. We're assured that the seemingly transparent biological explanation for the world's inequalities as of A.D. 1500 is wrong, but we're not told what the correct explanation is. Until we have some convincing, detailed, agreed-upon explanation for the broad pattern of history, most people will continue to suspect that the racist biological explanation is correct after all. That seems to me the strongest argument for writing this book.

AUTHORS ARE REGULARLY asked by journalists to summarize a long book in one sentence. For this book, here is such a sentence: "History followed different courses for different peoples because of differences among peoples' environments, not because of biological differences among peoples themselves."

Naturally, the notion that environmental geography and biogeography influenced societal development is an old idea. Nowadays, though, the view is not held in esteem by historians; it is considered wrong or simplistic, or it is caricatured as environmental determinism and dismissed, or else the whole subject of trying to understand worldwide differences is shelved as too difficult. Yet geography obviously has *some* effect on history; the open question concerns how much effect, and whether geography can account for history's broad pattern.

The time is now ripe for a fresh look at these questions, because of new information from scientific disciplines seemingly remote from human history. Those disciplines include, above all, genetics, molecular biology, and biogeography as applied to crops and their wild ancestors; the same disciplines plus behavioral ecology, as applied to domestic animals and their wild ancestors; molecular biology of human germs and related germs of animals; epidemiology of human diseases; human genetics; linguistics; archaeological studies on all continents and major islands; and studies of the histories of technology, writing, and political organization.

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CHAPTER 3

COLLISION AT CAJAMARCA

THE BIGGEST POPULATION SHIFT OF MODERN TIMES HAS been the colonization of the New World by Europeans, and the resulting conquest, numerical reduction, or complete disappearance of most groups of Native Americans (American Indians). As I explained in Chapter 1, the New World was initially colonized around or before 11,000 B.C. by way of Alaska, the Bering Strait, and Siberia. Complex agricultural societies gradually arose in the Americas far to the south of that entry route, developing in complete isolation from the emerging complex societies of the Old World. After that initial colonization from Asia, the sole well-attested further contacts between the New World and Asia involved only hunter-gatherers living on opposite sides of the Bering Strait, plus an inferred transpacific voyage that introduced the sweet potato from South America to Polynesia.

As for contacts of New World peoples with Europe, the sole early ones involved the Norse who occupied Greenland in very small numbers between A.D. 986 and about 1500. But those Norse visits had no discernible impact on Native American societies. Instead, for practical purposes the collision of advanced Old World and New World societies began abruptly in A.D. 1492, with Christopher Columbus's "discovery" of Caribbean islands densely populated by Native Americans.

The most dramatic moment in subsequent European-Native American

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relations was the first encounter between the Inca emperor Atahualpa and the Spanish conquistador Francisco Pizarro at the Peruvian highland town of Cajamarca on November 16, 1532. Atahualpa was absolute monarch of the largest and most advanced state in the New World, while Pizarro represented the

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Holy Roman Emperor Charles V (also known as King Charles I of Spain), monarch of the most powerful state in Europe. Pizarro, leading a ragtag group of 168 Spanish soldiers, was in unfamiliar terrain, ignorant of the local inhabitants, completely out of touch with the nearest Spaniards (1,000 miles to the north in Panama) and far beyond the reach of timely reinforcements. Atahualpa was in the middle of his own empire of millions of subjects and immediately surrounded by his army of 80,000 soldiers, recently victorious in a war with other Indians. Nevertheless, Pizarro captured Atahualpa within a few minutes after the two leaders first set eyes on each other. Pizarro proceeded to hold his prisoner for eight months, while extracting history's largest ransom in return for a promise to free him. After the ransom—enough gold to fill a room 22 feet long by 17 feet wide to a height of over 8 feet—was delivered, Pizarro reneged on his promise and executed Atahualpa.

Atahualpa's capture was decisive for the European conquest of the Inca Empire. Although the Spaniards' superior weapons would have assured an ultimate Spanish victory in any case, the capture made the conquest quicker and infinitely easier. Atahualpa was revered by the Incas as a sun-god and exercised absolute authority over his subjects, who obeyed even the orders he issued from captivity. The months until his death gave Pizarro time to dispatch exploring parties unmolested to other parts of the Inca Empire, and to send for reinforcements from Panama. When fighting between Spaniards and Incas finally did commence after Atahualpa's execution, the Spanish forces were more formidable.

Thus, Atahualpa's capture interests us specifically as marking the decisive moment in the greatest collision of modern history. But it is also of more general interest, because the factors that resulted in Pizarro's seizing Atahualpa were essentially the same ones that determined the outcome of many similar collisions between colonizers and native peoples elsewhere in the modern world. Hence Atahualpa's capture offers us a broad window onto world history.

WHAT UNFOLDED THAT day at Cajamarca is well known, because it was recorded in writing by many of the Spanish participants. To get a flavor of those events, let us relive them by weaving together excerpts from

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eyewitness accounts by six of Pizarro's companions, including his brothers Hernando and Pedro:

"The prudence, fortitude, military discipline, labors, perilous navigations, and battles of the Spaniards—vassals of the most invincible Emperor of the Roman Catholic Empire, our natural King and Lord—will cause joy to the faithful and terror to the infidels. For this reason, and for the glory of God our Lord and for the service of the Catholic Imperial Majesty, it has seemed good to me to write this narrative, and to send it to Your Majesty, that all may have a knowledge of what is here related. It will be to the glory of God, because they have conquered and brought to our holy Catholic Faith so vast a number of heathens, aided by His holy guidance. It will be to the honor of our Emperor because, by reason of his great power and good fortune, such events happened in his time. It will give joy to the faithful that such battles have

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been won, such provinces discovered and conquered, such riches brought home for the King and for themselves; and that such terror has been spread among the infidels, such admiration excited in all mankind.

“For when, either in ancient or modern times, have such great exploits been achieved by so few against so many, over so many climes, across so many seas, over such distances by land, to subdue the unseen and unknown? Whose deeds can be compared with those of Spain? Our Spaniards, being few in number, never having more than 200 or 300 men together, and sometimes only 100 and even fewer, have, in our times, conquered more territory than has ever been known before, or than all the faithful and infidel princes possess. I will only write, at present, of what befell in the conquest, and I will not write much, in order to avoid prolixity.

“Governor Pizarro wished to obtain intelligence from some Indians who had come from Cajamarca, so he had them tortured. They confessed that they had heard that Atahualpa was waiting for the Governor at Cajamarca. The Governor then ordered us to advance. On reaching the entrance to Cajamarca, we saw the camp of Atahualpa at a distance of a league, in the skirts of the mountains. The Indians’ camp looked like a very beautiful city. They had so many tents that we were all filled with great apprehension. Until then, we had never seen anything like this in the Indies. It filled all our Spaniards with fear and confusion. But we could not show any fear or turn back, for if the Indians had sensed any weakness in us, even the Indians that we were bringing with us as guides would have killed us. So we made a show of good spirits, and after carefully observing the town and the tents, we descended into the valley and entered Cajamarca.

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“We talked a lot among ourselves about what to do. All of us were full of fear, because we were so few in number and we had penetrated so far into a land where we could not hope to receive reinforcements. We all met with the Governor to debate what we should undertake the next day. Few of us slept that night, and we kept watch in the square of Cajamarca, looking at the campfires of the Indian army. It was a frightening sight. Most of the campfires were on a hillside and so close to each other that it looked like the sky brightly studded with stars. There was no distinction that night between the mighty and the lowly, or between foot soldiers and horsemen. Everyone carried out sentry duty fully armed. So too did the good old Governor, who went about encouraging his men. The Governor’s brother Hernando Pizarro estimated the number of Indian soldiers there at 40,000, but he was telling a lie just to encourage us, for there were actually more than 80,000 Indians.

“On the next morning a messenger from Atahualpa arrived, and the Governor said to him, ‘Tell your lord to come when and how he pleases, and that, in what way soever he may come I will receive him as a friend and brother. I pray that he may come quickly, for I desire to see him. No harm or insult will befall him.’

“The Governor concealed his troops around the square at Cajamarca, dividing the cavalry into two portions of which he gave the command of one to his brother Hernando Pizarro and the command of the other to Hernando de Soto. In like manner he divided the infantry, he himself taking one part and giving

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the other to his brother Juan Pizarro. At the same time, he ordered Pedro de Candia with two or three infantrymen to go with trumpets to a small fort in the plaza and to station themselves there with a small piece of artillery. When all the Indians, and Atahualpa with them, had entered the Plaza, the Governor would give a signal to Candia and his men, after which they should start firing the gun, and the trumpets should sound, and at the sound of the trumpets the cavalry should dash out of the large court where they were waiting hidden in readiness.

“At noon Atahualpa began to draw up his men and to approach. Soon we saw the entire plain full of Indians, halting periodically to wait for more Indians who kept filing out of the camp behind them. They kept filling out in separate detachments into the afternoon. The front detachments were now close to our camp, and still more troops kept issuing from the camp of the Indians. In front of Atahualpa went 2,000 Indians who swept the road ahead of him, and these were followed by the warriors, half of whom were marching in the fields on one side of him and half on the other side.

“First came a squadron of Indians dressed in clothes of different colors, like a

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chessboard. They advanced, removing the straws from the ground and sweeping the road. Next came three squadrons in different dresses, dancing and singing. Then came a number of men with armor, large metal plates, and crowns of gold and silver. So great was the amount of furniture of gold and silver which they bore, that it was a marvel to observe how the sun glinted upon it. Among them came the figure of Atahualpa in a very fine litter with the ends of its timbers covered in silver. Eighty lords carried him on their shoulders, all wearing a very rich blue livery. Atahualpa himself was very richly dressed, with his crown on his head and a collar of large emeralds around his neck. He sat on a small stool with a rich saddle cushion resting on his litter. The litter was lined with parrot feathers of many colors and decorated with plates of gold and silver.

“Behind Atahualpa came two other litters and two hammocks, in which were some high chiefs, then several squadrons of Indians with crowns of gold and silver. These Indian squadrons began to enter the plaza to the accompaniment of great songs, and thus entering they occupied every part of the plaza. In the meantime all of us Spaniards were waiting ready, hidden in a courtyard, full of fear. Many of us urinated without noticing it, out of sheer terror. On reaching the center of the plaza, Atahualpa remained in his litter on high, while his troops continued to file in behind him.

“Governor Pizarro now sent Friar Vicente de Valverde to go speak to Atahualpa, and to require Atahualpa in the name of God and of the King of Spain that Atahualpa subject himself to the law of our Lord Jesus Christ and to the service of His Majesty the King of Spain. Advancing with a cross in one hand and the Bible in the other hand, and going among the Indian troops up to the place where Atahualpa was, the Friar thus addressed him: ‘I am a Priest of God, and I teach Christians the things of God, and in like manner I come to teach you. What I teach is that which God says to us in this Book. Therefore, on the part

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of God and of the Christians, I beseech you to be their friend, for such is God's will, and it will be for your good.'

"Atahualpa asked for the Book, that he might look at it, and the Friar gave it to him closed. Atahualpa did not know how to open the Book, and the Friar was extending his arm to do so, when Atahualpa, in great anger, gave him a blow on the arm, not wishing that it should be opened. Then he opened it himself, and, without any astonishment at the letters and paper he threw it away from him five or six paces, his face a deep crimson.

"The Friar returned to Pizarro, shouting, 'Come out! Come out, Christians! Come at these enemy dogs who reject the things of God. That tyrant has thrown my book of holy law to the ground! Did you not see what hap-

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pened? Why remain polite and servile toward this over-proud dog when the plains are full of Indians? March out against him, for I absolve you!'

"The governor then gave the signal to Candia, who began to fire off the guns. At the same time the trumpets were sounded, and the armored Spanish troops, both cavalry and infantry, sallied forth out of their hiding places straight into the mass of unarmed Indians crowding the square, giving the Spanish battle cry, 'Santiago!' We had placed rattles on the horses to terrify the Indians. The booming of the guns, the blowing of the trumpets, and the rattles on the horses threw the Indians into panicked confusion. The Spaniards fell upon them and began to cut them to pieces. The Indians were so filled with fear that they climbed on top of one another, formed mounds, and suffocated each other. Since they were unarmed, they were attacked without danger to any Christian. The cavalry rode them down, killing and wounding, and following in pursuit. The infantry made so good an assault on those that remained that in a short time most of them were put to the sword.

"The Governor himself took his sword and dagger, entered the thick of the Indians with the Spaniards who were with him, and with great bravery reached Atahualpa's litter. He fearlessly grabbed Atahualpa's left arm and shouted 'Santiago!' but he could not pull Atahualpa out of his litter because it was held up high. Although we killed the Indians who held the litter, others at once took their places and held it aloft, and in this manner we spent a long time in overcoming and killing Indians. Finally seven or eight Spaniards on horseback spurred on their horses, rushed upon the litter from one side, and with great effort they heaved it over on its side. In that way Atahualpa was captured, and the Governor took Atahualpa to his lodging. The Indians carrying the litter, and those escorting Atahualpa, never abandoned him: all died around him.

"The panic-stricken Indians remaining in the square, terrified at the firing of the guns and at the horses—something they had never seen—tried to flee from the square by knocking down a stretch of wall and running out onto the plain outside. Our cavalry jumped the broken wall and charged into the plain, shouting, 'Chase those with the fancy clothes! Don't let any escape! Spear them!' All of the other Indian soldiers whom Atahualpa had brought were a mile from Cajamarca ready for battle, but not one made a

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move, and during all this not one Indian raised a weapon against a Spaniard. When the squadrons of Indians who had remained in the plain outside the town saw the other Indians fleeing and shouting, most of them too panicked and fled. It was an astonishing sight, for the whole valley for 15 or 20 miles was completely filled with Indians. Night had already fallen, and our cavalry were

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continuing to spear Indians in the fields, when we heard a trumpet calling for us to reassemble at camp.

“If night had not come on, few out of the more than 40,000 Indian troops would have been left alive. Six or seven thousand Indians lay dead, and many more had their arms cut off and other wounds. Atahualpa himself admitted that we had killed 7,000 of his men in that battle. The man killed in one of the litters was his minister, the lord of Chinchá, of whom he was very fond. All those Indians who bore Atahualpa’s litter appeared to be high chiefs and councillors. They were all killed, as well as those Indians who were carried in the other litters and hammocks. The lord of Cajamarca was also killed, and others, but their numbers were so great that they could not be counted, for all who came in attendance on Atahualpa were great lords. It was extraordinary to see so powerful a ruler captured in so short a time, when he had come with such a mighty army. Truly, it was not accomplished by our own forces, for there were so few of us. It was by the grace of God, which is great.

“Atahualpa’s robes had been torn off when the Spaniards pulled him out of his litter. The Governor ordered clothes to be brought to him, and when Atahualpa was dressed, the Governor ordered Atahualpa to sit near him and soothed his rage and agitation at finding himself so quickly fallen from his high estate. The Governor said to Atahualpa, ‘Do not take it as an insult that you have been defeated and taken prisoner, for with the Christians who come with me, though so few in number, I have conquered greater kingdoms than yours, and have defeated other more powerful lords than you, imposing upon them the dominion of the Emperor, whose vassal I am, and who is King of Spain and of the universal world. We come to conquer this land by his command, that all may come to a knowledge of God and of His Holy Catholic Faith; and by reason of our good mission, God, the Creator of heaven and earth and of all things in them, permits this, in order that you may know Him and come out from the bestial and diabolical life that you lead. It is for this reason that we, being so few in number, subjugate that vast host. When you have seen the errors in which you live, you will understand the good that we have done you by coming to your land by order of his Majesty the King of Spain. Our Lord permitted that your pride should be brought low and that no Indian should be able to offend a Christian.’ “

LET US NOW trace the chain of causation in this extraordinary confrontation, beginning with the immediate events. When Pizarro and Atahualpa

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met at Cajamarca, why did Pizarro capture Atahualpa and kill so many of his followers, instead of Atahualpa's vastly more numerous forces capturing and killing Pizarro? After all, Pizarro had only 62 soldiers mounted on horses, along with 106 foot soldiers, while Atahualpa commanded an army of about 80,000. As for the antecedents of those events, how did Atahualpa come to be at Cajamarca at all? How did Pizarro come to be there to capture him, instead of Atahualpa's coming to Spain to capture King Charles I? Why did Atahualpa walk into what seems to us, with the gift of hindsight, to have been such a transparent trap? Did the factors acting in the encounter of Atahualpa and Pizarro also play a broader role in encounters between Old World and New World peoples and between other peoples?

Why did Pizarro capture Atahualpa? Pizarro's military advantages lay in the Spaniards' steel swords and other weapons, steel armor, guns, and horses. To those weapons, Atahualpa's troops, without animals on which to ride into battle, could oppose only stone, bronze, or wooden clubs, maces, and hand axes, plus slingshots and quilted armor. Such imbalances of equipment were decisive in innumerable other confrontations of Europeans with Native Americans and other peoples.

The sole Native Americans able to resist European conquest for many centuries were those tribes that reduced the military disparity by acquiring and mastering both horses and guns. To the average white American, the word "Indian" conjures up an image of a mounted Plains Indian brandishing a rifle, like the Sioux warriors who annihilated General George Custer's U.S. Army battalion at the famous battle of the Little Big Horn in 1876. We easily forget that horses and rifles were originally unknown to Native Americans. They were brought by Europeans and proceeded to transform the societies of Indian tribes that acquired them. Thanks to their mastery of horses and rifles, the Plains Indians of North America, the Araucanian Indians of southern Chile, and the Pampas Indians of Argentina fought off invading whites longer than did any other Native Americans, succumbing only to massive army operations by white governments in the 1870s and 1880s.

Today, it is hard for us to grasp the enormous numerical odds against which the Spaniards' military equipment prevailed. At the battle of Cajamarca recounted above, 168 Spaniards crushed a Native American army 500 times more numerous, killing thousands of natives while not losing a single Spaniard. Time and again, accounts of Pizarro's subsequent battles with the Incas, Cortés's conquest of the Aztecs, and other early European campaigns against Native Americans describe encounters in which a few dozen Euro-

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European horsemen routed thousands of Indians with great slaughter. During Pizarro's march from Cajamarca to the Inca capital of Cuzco after Atahualpa's death, there were four such battles: at Jauja, Vilcashuaman, Vilcaonga, and Cuzco. Those four battles involved a mere 80, 30, 110, and 40 Spanish horsemen, respectively, in each case ranged against thousands or tens of thousands of Indians.

These Spanish victories cannot be written off as due merely to the help of Native American allies, to the psychological novelty of Spanish weapons and horses, or (as is often claimed) to the Incas' mistaking

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Spaniards for their returning god Viracocha. The initial successes of both Pizarro and Cortés did attract native allies. However, many of them would not have become allies if they had not already been persuaded, by earlier devastating successes of unassisted Spaniards, that resistance was futile and that they should side with the likely winners. The novelty of horses, steel weapons, and guns undoubtedly paralyzed the Incas at Cajamarca, but the battles after Cajamarca were fought against determined resistance by Inca armies that had already seen Spanish weapons and horses. Within half a dozen years of the initial conquest, Incas mounted two desperate, large-scale, well-prepared rebellions against the Spaniards. All those efforts failed because of the Spaniards' far superior armament.

By the 1700s, guns had replaced swords as the main weapon favoring European invaders over Native Americans and other native peoples. For example, in 1808 a British sailor named Charlie Savage equipped with muskets and excellent aim arrived in the Fiji Islands. The aptly named Savage proceeded single-handedly to upset Fiji's balance of power. Among his many exploits, he paddled his canoe up a river to the Fijian village of Kasavu, halted less than a pistol shot's length from the village fence, and fired away at the undefended inhabitants. His victims were so numerous that surviving villagers piled up the bodies to take shelter behind them, and the stream beside the village was red with blood. Such examples of the power of guns against native peoples lacking guns could be multiplied indefinitely.

In the Spanish conquest of the Incas, guns played only a minor role. The guns of those times (so-called harquebuses) were difficult to load and fire, and Pizarro had only a dozen of them. They did produce a big psychological effect on those occasions when they managed to fire. Far more important were the Spaniards' steel swords, lances, and daggers, strong sharp weapons that slaughtered thinly armored Indians. In contrast, Indian blunt clubs, while capable of battering and wounding Spaniards and their horses, rarely

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succeeded in killing them. The Spaniards' steel or chain mail armor and, above all, their steel helmets usually provided an effective defense against club blows, while the Indians' quilted armor offered no protection against steel weapons.

The tremendous advantage that the Spaniards gained from their horses leaps out of the eyewitness accounts. Horsemen could easily outride Indian sentries before the sentries had time to warn Indian troops behind them, and could ride down and kill Indians on foot. The shock of a horse's charge, its maneuverability, the speed of attack that it permitted, and the raised and protected fighting platform that it provided left foot soldiers nearly helpless in the open. Nor was the effect of horses due only to the terror that they inspired in soldiers fighting against them for the first time. By the time of the great Inca rebellion of 1536, the Incas had learned how best to defend themselves against cavalry, by ambushing and annihilating Spanish horsemen in narrow passes. But the Incas, like all other foot soldiers, were never able to defeat cavalry in the open. When Quizo Yupan-qui, the best general of the Inca emperor Manco, who succeeded Atahualpa, besieged the Spaniards in Lima in 1536 and tried to storm the city, two squadrons of Spanish cavalry charged a much larger Indian force on flat ground, killed Quizo and all of his

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commanders in the first charge, and routed his army. A similar cavalry charge of 26 horsemen routed the best troops of Emperor Manco himself, as he was besieging the Spaniards in Cuzco.

The transformation of warfare by horses began with their domestication around 4000 B.C., in the steppes north of the Black Sea. Horses permitted people possessing them to cover far greater distances than was possible on foot, to attack by surprise, and to flee before a superior defending force could be gathered. Their role at Cajamarca thus exemplifies a military weapon that remained potent for 6,000 years, until the early 20th century, and that was eventually applied on all the continents. Not until the First World War did the military dominance of cavalry finally end. When we consider the advantages that Spaniards derived from horses, steel weapons, and armor against foot soldiers without metal, it should no longer surprise us that Spaniards consistently won battles against enormous odds.

How did Atahualpa come to be at Cajamarca? Atahualpa and his army came to be at Cajamarca because they had just won decisive battles in a civil war that left the Incas divided and vulnerable. Pizarro quickly appreciated those divisions and exploited them. The reason for the civil war was that an epidemic of smallpox, spreading overland among South American Indians

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after its arrival with Spanish settlers in Panama and Colombia, had killed the Inca emperor Huayna Capac and most of his court around 1526, and then immediately killed his designated heir, Ninan Cuyuchi. Those deaths precipitated a contest for the throne between Atahualpa and his half brother Huascar. If it had not been for the epidemic, the Spaniards would have faced a united empire.

Atahualpa's presence at Cajamarca thus highlights one of the key factors in world history: diseases transmitted to peoples lacking immunity by invading peoples with considerable immunity. Smallpox, measles, influenza, typhus, bubonic plague, and other infectious diseases endemic in Europe played a decisive role in European conquests, by decimating many peoples on other continents. For example, a smallpox epidemic devastated the Aztecs after the failure of the first Spanish attack in 1520 and killed Cuitlahuac, the Aztec emperor who briefly succeeded Montezuma. Throughout the Americas, diseases introduced with Europeans spread from tribe to tribe far in advance of the Europeans themselves, killing an estimated 95 percent of the pre-Columbian Native American population. The most populous and highly organized native societies of North America, the Mississippian chiefdoms, disappeared in that way between 1492 and the late 1600s, even before Europeans themselves made their first settlement on the Mississippi River. A smallpox epidemic in 1713 was the biggest single step in the destruction of South Africa's native San people by European settlers. Soon after the British settlement of Sydney in 1788, the first of the epidemics that decimated Aboriginal Australians began. A well-documented example from Pacific islands is the epidemic that swept over Fiji in 1806, brought by a few European sailors who struggled ashore from the wreck of the ship *Argo*. Similar epidemics marked the histories of Tonga, Hawaii, and other Pacific islands.

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I do not mean to imply, however, that the role of disease in history was confined to paving the way for European expansion. Malaria, yellow fever, and other diseases of tropical Africa, India, Southeast Asia, and New Guinea furnished the most important obstacle to European colonization of those tropical areas.

How did Pizarro come to be at Cajamarca? Why didn't Atahualpa instead try to conquer Spain? Pizarro came to Cajamarca by means of European maritime technology, which built the ships that took him across the Atlantic from Spain to Panama, and then in the Pacific from Panama to Peru. Lacking such technology, Atahualpa did not expand overseas out of South America.

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In addition to the ships themselves, Pizarro's presence depended on the centralized political organization that enabled Spain to finance, build, staff, and equip the ships. The Inca Empire also had a centralized political organization, but that actually worked to its disadvantage, because Pizarro seized the Inca chain of command intact by capturing Atahualpa. Since the Inca bureaucracy was so strongly identified with its godlike absolute monarch, it disintegrated after Atahualpa's death. Maritime technology coupled with political organization was similarly essential for European expansions to other continents, as well as for expansions of many other peoples.

A related factor bringing Spaniards to Peru was the existence of writing. Spain possessed it, while the Inca Empire did not. Information could be spread far more widely, more accurately, and in more detail by writing than it could be transmitted by mouth. That information, coming back to Spain from Columbus's voyages and from Cortés's conquest of Mexico, sent Spaniards pouring into the New World. Letters and pamphlets supplied both the motivation and the necessary detailed sailing directions. The first published report of Pizarro's exploits, by his companion Captain Cristobal de Mena, was printed in Seville in April 1534, a mere nine months after Atahualpa's execution. It became a best-seller, was rapidly translated into other European languages, and sent a further stream of Spanish colonists to tighten Pizarro's grip on Peru.

Why did Atahualpa walk into the trap? In hindsight, we find it astonishing that Atahualpa marched into Pizarro's obvious trap at Cajamarca. The Spaniards who captured him were equally surprised at their success. The consequences of literacy are prominent in the ultimate explanation.

The immediate explanation is that Atahualpa had very little information about the Spaniards, their military power, and their intent. He derived that scant information by word of mouth, mainly from an envoy who had visited Pizarro's force for two days while it was en route inland from the coast. That envoy saw the Spaniards at their most disorganized, told Atahualpa that they were not fighting men, and that he could tie them all up if given 200 Indians. Understandably, it never occurred to Atahualpa that the Spaniards were formidable and would attack him without provocation.

In the New World the ability to write was confined to small elites among some peoples of modern Mexico and neighboring areas far to the north of the Inca Empire. Although the Spanish conquest of Panama, a mere 600 miles from the Incas' northern boundary, began already in 1510, no knowledge even of the Spaniards' existence appears to have reached the Incas until

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Pizarro's first landing on the Peruvian coast in 1527. Atahualpa remained entirely ignorant about Spain's conquests of Central America's most powerful and populous Indian societies.

As surprising to us today as Atahualpa's behavior leading to his capture is his behavior thereafter. He offered his famous ransom in the naive belief that, once paid off, the Spaniards would release him and depart. He had no way of understanding that Pizarro's men formed the spearhead of a force bent on permanent conquest, rather than an isolated raid.

Atahualpa was not alone in these fatal miscalculations. Even after Atahualpa had been captured, Francisco Pizarro's brother Hernando Pizarro deceived Atahualpa's leading general, Chalcuchima, commanding a large army, into delivering himself to the Spaniards. Chalcuchima's miscalculation marked a turning point in the collapse of Inca resistance, a moment almost as significant as the capture of Atahualpa himself. The Aztec emperor Montezuma miscalculated even more grossly when he took Cortés for a returning god and admitted him and his tiny army into the Aztec capital of Tenochtitlán. The result was that Cortés captured Montezuma, then went on to conquer Tenochtitlán and the Aztec Empire.

On a mundane level, the miscalculations by Atahualpa, Chalcuchima, Montezuma, and countless other Native American leaders deceived by Europeans were due to the fact that no living inhabitants of the New World had been to the Old World, so of course they could have had no specific information about the Spaniards. Even so, we find it hard to avoid the conclusion that Atahualpa "should" have been more suspicious, if only his society had experienced a broader range of human behavior. Pizarro too arrived at Cajamarca with no information about the Incas other than what he had learned by interrogating the Inca subjects he encountered in 1527 and 1531. However, while Pizarro himself happened to be illiterate, he belonged to a literate tradition. From books, the Spaniards knew of many contemporary civilizations remote from Europe, and about several thousand years of European history. Pizarro explicitly modeled his ambush of Atahualpa on the successful strategy of Cortés.

In short, literacy made the Spaniards heirs to a huge body of knowledge about human behavior and history. By contrast, not only did Atahualpa have no conception of the Spaniards themselves, and no personal experience of any other invaders from overseas, but he also had not even heard (or read) of similar threats to anyone else, anywhere else, anytime previously in history. That gulf of experience encouraged Pizarro to set his trap and Atahualpa to walk into it.

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THUS PIZARRO'S CAPTURE of Atahualpa illustrates the set of proximate factors that resulted in Europeans' colonizing the New World instead of Native Americans' colonizing Europe. Immediate reasons for Pizarro's success included military technology based on guns, steel weapons, and horses; infectious diseases endemic in Eurasia; European maritime technology; the centralized political organization of

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European states; and writing. The title of this book will serve as shorthand for those proximate factors, which also enabled modern Europeans to conquer peoples of other continents. Long before anyone began manufacturing guns and steel, others of those same factors had led to the expansions of some non-European peoples, as we shall see in later chapters.

But we are still left with the fundamental question why all those immediate advantages came to lie more with Europe than with the New World. Why weren't the Incas the ones to invent guns and steel swords, to be mounted on animals as fearsome as horses, to bear diseases to which European lacked resistance, to develop oceangoing ships and advanced political organization, and to be able to draw on the experience of thousands of years of written history? Those are no longer the questions of proximate causation that this chapter has been discussing, but questions of ultimate causation that will take up the next two parts of this book.

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CHAPTER 13

NECESSITY'S MOTHER

ON JULY 3, 1908, ARCHAEOLOGISTS EXCAVATING THE ancient Minoan palace at Phaistos, on the island of Crete, chanced upon one of the most remarkable objects in the history of technology. At first glance it seemed unprepossessing: just a small, flat, unpainted, circular disk of hard-baked clay, 6½ inches in diameter. Closer examination showed each side to be covered with writing, resting on a curved line that spiraled clockwise in five coils from the disk's rim to its center. A total of 241 signs or letters was neatly divided by etched vertical lines into groups of several signs, possibly constituting words. The writer must have planned and executed the disk with care, so as to start writing at the rim and fill up all the available space along the spiraling line, yet not run out of space on reaching the center (page 230).

Ever since it was unearthed, the disk has posed a mystery for historians of writing. The number of distinct signs (45) suggests a syllabary rather than an alphabet, but it is still undeciphered, and the forms of the signs are unlike those of any other known writing system. Not another scrap of the strange script has turned up in the 89 years since its discovery. Thus, it remains unknown whether it represents an indigenous Cretan script or a foreign import to Crete.

For historians of technology, the Phaistos disk is even more baffling; its estimated date of 1700 B.C. makes it by far the earliest printed document in the

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One side of the two-sided Phaistos Disk.

Credit: Heracleion Museum, Hellenic Republic Ministry of Culture.

world. Instead of being etched by hand, as were all texts of Crete's later Linear A and Linear B scripts, the disk's signs were punched into soft clay (subsequently baked hard) by stamps that bore a sign as raised type. The printer evidently had a set of at least 45 stamps, one for each sign appearing on the disk. Making these stamps must have entailed a great deal of work, and they surely weren't manufactured just to print this single document. Whoever used them was presumably doing a lot of writing. With those stamps, their owner could make copies much more quickly and neatly than if he or she had written out each of the script's complicated signs at each appearance.

The Phaistos disk anticipates humanity's next efforts at printing, which similarly used cut type or blocks but applied them to paper with ink, not to clay without ink. However, those next efforts did not appear until 2,500 years later in China and 3,100 years later in medieval Europe. Why was the

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disk's precocious technology not widely adopted in Crete or elsewhere in the ancient Mediterranean? Why was its printing method invented around 1700 B.C. in Crete and not at some other time in Mesopotamia, Mexico, or any other ancient center of writing? Why did it then take thousands of years to add the ideas of ink and a press and arrive at a printing press? The disk thus constitutes a threatening challenge to historians. If inventions are as idiosyncratic and unpredictable as the disk seems to suggest, then efforts to generalize about the history of technology may be doomed from the outset.

Technology, in the form of weapons and transport, provides the direct means by which certain peoples have expanded their realms and conquered other peoples. That makes it the leading cause of history's broadest pattern. But why were Eurasians, rather than Native Americans or sub-Saharan Africans, the ones to invent firearms, oceangoing ships, and steel equipment? The differences extend to most other significant technological advances, from printing presses to glass and steam engines. Why were all those inventions Eurasian? Why were all New Guineans and Native Australians in A.D. 1800 still using stone tools like ones discarded thousands of years ago in Eurasia and most of Africa, even though some of the world's richest copper and iron deposits are in New Guinea and Australia, respectively? All those facts explain why so many laypeople assume that Eurasians are superior to other peoples in inventiveness and intelligence.

If, on the other hand, no such difference in human neurobiology exists to account for continental differences in technological development, what does account for them? An alternative view rests on the heroic theory of invention. Technological advances seem to come disproportionately from a few very rare geniuses, such as Johannes Gutenberg, James Watt, Thomas Edison, and the Wright brothers. They were Europeans, or descendants of European emigrants to America. So were Archimedes and other rare geniuses of ancient times. Could such geniuses have equally well been born in Tasmania or Namibia? Does the history of technology depend on nothing more than accidents of the birthplaces of a few inventors?

Still another alternative view holds that it is a matter not of individual inventiveness but of the receptivity of whole societies to innovation. Some societies seem hopelessly conservative, inward looking, and hostile to change. That's the impression of many Westerners who have attempted to help Third World peoples and ended up discouraged. The people seem perfectly intelligent as individuals; the problem seems instead to lie with their societies. How else can one explain why the Aborigines of northeastern Aus-

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tralia failed to adopt bows and arrows, which they saw being used by Torres Straits islanders with whom they traded? Might all the societies of an entire continent be unreceptive, thereby explaining technology's slow pace of development there? In this chapter we shall finally come to grips with a central problem of this book: the question of why technology did evolve at such different rates on different continents.

THE STARTING POINT for our discussion is the common view expressed in the saying "Necessity is

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the mother of invention.” That is, inventions supposedly arise when a society has an unfulfilled need: some technology is widely recognized to be unsatisfactory or limiting. Would-be inventors, motivated by the prospect of money or fame, perceive the need and try to meet it. Some inventor finally comes up with a solution superior to the existing, unsatisfactory technology. Society adopts the solution if it is compatible with the society’s values and other technologies.

Quite a few inventions do conform to this commonsense view of necessity as invention’s mother. In 1942, in the middle of World War II, the U.S. government set up the Manhattan Project with the explicit goal of inventing the technology required to build an atomic bomb before Nazi Germany could do so. That project succeeded in three years, at a cost of \$2 billion (equivalent to over \$20 billion today). Other instances are Eli Whitney’s 1794 invention of his cotton gin to replace laborious hand cleaning of cotton grown in the U.S. South, and James Watt’s 1769 invention of his steam engine to solve the problem of pumping water out of British coal mines.

These familiar examples deceive us into assuming that other major inventions were also responses to perceived needs. In fact, many or most inventions were developed by people driven by curiosity or by a love of tinkering, in the absence of any initial demand for the product they had in mind. Once a device had been invented, the inventor then had to find an application for it. Only after it had been in use for a considerable time did consumers come to feel that they “needed” it. Still other devices, invented to serve one purpose, eventually found most of their use for other, unanticipated purposes. It may come as a surprise to learn that these inventions in search of a use include most of the major technological breakthroughs of modern times, ranging from the airplane and automobile, through the internal combustion engine and electric light bulb, to the phonograph and transistor. Thus, invention is often the mother of necessity, rather than vice versa.

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A good example is the history of Thomas Edison’s phonograph, the most original invention of the greatest inventor of modern times. When Edison built his first phonograph in 1877, he published an article proposing ten uses to which his invention might be put. They included preserving the last words of dying people, recording books for blind people to hear, announcing clock time, and teaching spelling. Reproduction of music was not high on Edison’s list of priorities. A few years later Edison told his assistant that his invention had no commercial value. Within another few years he changed his mind and did enter business to sell phonographs—but for use as office dictating machines. When other entrepreneurs created jukeboxes by arranging for a phonograph to play popular music at the drop of a coin, Edison objected to this debasement, which apparently detracted from serious office use of his invention. Only after about 20 years did Edison reluctantly concede that the main use of his phonograph was to record and play music.

The motor vehicle is another invention whose uses seem obvious today. However, it was not invented in response to any demand. When Nikolaus Otto built his first gas engine, in 1866, horses had been supplying people’s land transportation needs for nearly 6,000 years, supplemented increasingly by steam-

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powered railroads for several decades. There was no crisis in the availability of horses, no dissatisfaction with railroads.

Because Otto's engine was weak, heavy, and seven feet tall, it did not recommend itself over horses. Not until 1885 did engines improve to the point that Gottfried Daimler got around to installing one on a bicycle to create the first motorcycle; he waited until 1896 to build the first truck.

In 1905, motor vehicles were still expensive, unreliable toys for the rich. Public contentment with horses and railroads remained high until World War I, when the military concluded that it really did need trucks. Intensive postwar lobbying by truck manufacturers and armies finally convinced the public of its own needs and enabled trucks to begin to supplant horse-drawn wagons in industrialized countries. Even in the largest American cities, the changeover took 50 years.

Inventors often have to persist at their tinkering for a long time in the absence of public demand, because early models perform too poorly to be useful. The first cameras, typewriters, and television sets were as awful as Otto's seven-foot-tall gas engine. That makes it difficult for an inventor to foresee whether his or her awful prototype might eventually find a use and thus warrant more time and expense to develop it. Each year, the United States issues about 70,000 patents, only a few of which ultimately reach the

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stage of commercial production. For each great invention that ultimately found a use, there are countless others that did not. Even inventions that meet the need for which they were initially designed may later prove more valuable at meeting unforeseen needs. While James Watt designed his steam engine to pump water from mines, it soon was supplying power to cotton mills, then (with much greater profit) propelling locomotives and boats.

THUS, THE COMMONSENSE view of invention that served as our starting point reverses the usual roles of invention and need. It also overstates the importance of rare geniuses, such as Watt and Edison. That “heroic theory of invention,” as it is termed, is encouraged by patent law, because an applicant for a patent must prove the novelty of the invention submitted. Inventors thereby have a financial incentive to denigrate or ignore previous work. From a patent lawyer's perspective, the ideal invention is one that arises without any precursors, like Athene springing fully formed from the forehead of Zeus.

In reality, even for the most famous and apparently decisive modern inventions, neglected precursors lurked behind the bald claim “X invented Y.” For instance, we are regularly told, “James Watt invented the steam engine in 1769,” supposedly inspired by watching steam rise from a teakettle's spout. Unfortunately for this splendid fiction, Watt actually got the idea for his particular steam engine while repairing a model of Thomas Newcomen's steam engine, which Newcomen had invented 57 years earlier and of which over a hundred had been manufactured in England by the time of Watt's repair work. Newcomen's engine, in turn, followed the steam engine that the Englishman Thomas Savery patented in 1698, which followed the steam engine that the Frenchman Denis Papin designed (but did not build) around 1680, which in turn had

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precursors in the ideas of the Dutch scientist Christiaan Huygens and others. All this is not to deny that Watt greatly improved Newcomen's engine (by incorporating a separate steam condenser and a double-acting cylinder), just as Newcomen had greatly improved Savery's.

Similar histories can be related for all modern inventions that are adequately documented. The hero customarily credited with the invention followed previous inventors who had had similar aims and had already produced designs, working models, or (as in the case of the Newcomen steam engine) commercially successful models. Edison's famous "invention" of the incandescent light bulb on the night of October 21, 1879, improved on many other incandescent light bulbs patented by other inventors between 1841 and

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1878. Similarly, the Wright brothers' manned powered airplane was preceded by the manned unpowered gliders of Otto Lilienthal and the unmanned powered airplane of Samuel Langley; Samuel Morse's telegraph was preceded by those of Joseph Henry, William Cooke, and Charles Wheatstone; and Eli Whitney's gin for cleaning short-staple (inland) cotton extended gins that had been cleaning long-staple (Sea Island) cotton for thousands of years.

All this is not to deny that Watt, Edison, the Wright brothers, Morse, and Whitney made big improvements and thereby increased or inaugurated commercial success. The form of the invention eventually adopted might have been somewhat different without the recognized inventor's contribution. But the question for our purposes is whether the broad pattern of world history would have been altered significantly if some genius inventor had not been born at a particular place and time. The answer is clear: there has never been any such person. All recognized famous inventors had capable predecessors and successors and made their improvements at a time when society was capable of using their product. As we shall see, the tragedy of the hero who perfected the stamps used for the Phaistos disk was that he or she devised something that the society of the time could not exploit on a large scale.

MY EXAMPLES SO far have been drawn from modern technologies, because their histories are well known. My two main conclusions are that technology develops cumulatively, rather than in isolated heroic acts, and that it finds most of its uses after it has been invented, rather than being invented to meet a foreseen need. These conclusions surely apply with much greater force to the undocumented history of ancient technology. When Ice Age hunter-gatherers noticed burned sand and limestone residues in their hearths, it was impossible for them to foresee the long, serendipitous accumulation of discoveries that would lead to the first Roman glass windows (around A.D. 1), by way of the first objects with surface glazes (around 4000 B.C.), the first free-standing glass objects of Egypt and Mesopotamia (around 2500 B.C.), and the first glass vessels (around 1500 B.C.).

We know nothing about how those earliest known surface glazes themselves were developed. Nevertheless, we can infer the methods of prehistoric invention by watching technologically "primitive" people today, such as the New Guineans with whom I work. I already mentioned their knowledge of

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hundreds of local plant and animal species and each species' edibility, medical value, and other uses. New Guineans told me similarly about dozens

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of rock types in their environment and each type's hardness, color, behavior when struck or flaked, and uses. All of that knowledge is acquired by observation and by trial and error. I see that process of "invention" going on whenever I take New Guineans to work with me in an area away from their homes. They constantly pick up unfamiliar things in the forest, tinker with them, and occasionally find them useful enough to bring home. I see the same process when I am abandoning a campsite, and local people come to scavenge what is left. They play with my discarded objects and try to figure out whether they might be useful in New Guinea society. Discarded tin cans are easy: they end up reused as containers. Other objects are tested for purposes very different from the one for which they were manufactured. How would that yellow number 2 pencil look as an ornament, inserted through a pierced ear-lobe or nasal septum? Is that piece of broken glass sufficiently sharp and strong to be useful as a knife? Eureka!

The raw substances available to ancient peoples were natural materials such as stone, wood, bone, skins, fiber, clay, sand, limestone, and minerals, all existing in great variety. From those materials, people gradually learned to work particular types of stone, wood, and bone into tools; to convert particular clays into pottery and bricks; to convert certain mixtures of sand, limestone, and other "dirt" into glass; and to work available pure soft metals such as copper and gold, then to extract metals from ores, and finally to work hard metals such as bronze and iron.

A good illustration of the histories of trial and error involved is furnished by the development of gunpowder and gasoline from raw materials. Combustible natural products inevitably make themselves noticed, as when a resinous log explodes in a campfire. By 2000 B.C., Mesopotamians were extracting tons of petroleum by heating rock asphalt. Ancient Greeks discovered the uses of various mixtures of petroleum, pitch, resins, sulfur, and quicklime as incendiary weapons, delivered by catapults, arrows, firebombs, and ships. The expertise at distillation that medieval Islamic alchemists developed to produce alcohols and perfumes also let them distill petroleum into fractions, some of which proved to be even more powerful incendiaries. Delivered in grenades, rockets, and torpedoes, those incendiaries played a key role in Islam's eventual defeat of the Crusaders. By then, the Chinese had observed that a particular mixture of sulfur, charcoal, and saltpeter, which became known as gunpowder, was especially explosive. An Islamic chemical treatise of about A.D. 1100 describes seven gunpowder recipes, while a treatise from A.D. 1280 gives more than 70 recipes that had proved suitable for diverse purposes (one for rockets, another for cannons).

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As for postmedieval petroleum distillation, 19th-century chemists found the middle distillate fraction useful as fuel for oil lamps. The chemists discarded the most volatile fraction (gasoline) as an unfortunate waste product—until it was found to be an ideal fuel for internal-combustion engines. Who today

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remembers that gasoline, the fuel of modern civilization, originated as yet another invention in search of a use?

ONCE AN INVENTOR has discovered a use for a new technology, the next step is to persuade society to adopt it. Merely having a bigger, faster, more powerful device for doing something is no guarantee of ready acceptance. Innumerable such technologies were either not adopted at all or adopted only after prolonged resistance. Notorious examples include the U.S. Congress's rejection of funds to develop a supersonic transport in 1971, the world's continued rejection of an efficiently designed typewriter keyboard, and Britain's long reluctance to adopt electric lighting. What is it that promotes an invention's acceptance by a society?

Let's begin by comparing the acceptability of different inventions within the same society. It turns out that at least four factors influence acceptance. The first and most obvious factor is relative economic advantage compared with existing technology. While wheels are very useful in modern industrial societies, that has not been so in some other societies. Ancient Native Mexicans invented wheeled vehicles with axles for use as toys, but not for transport. That seems incredible to us, until we reflect that ancient Mexicans lacked domestic animals to hitch to their wheeled vehicles, which therefore offered no advantage over human porters.

A second consideration is social value and prestige, which can override economic benefit (or lack thereof). Millions of people today buy designer jeans for double the price of equally durable generic jeans—because the social cachet of the designer label counts for more than the extra cost. Similarly, Japan continues to use its horrendously cumbersome kanji writing system in preference to efficient alphabets or Japan's own efficient kana syllabary—because the prestige attached to kanji is so great.

Still another factor is compatibility with vested interests. This book, like probably every other typed document you have ever read, was typed with a QWERTY keyboard, named for the left-most six letters in its upper row. Unbelievable as it may now sound, that keyboard layout was designed in 1873 as a feat of anti-engineering. It employs a whole series of perverse tricks designed to force typists to type as slowly as possible, such as scattering the

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commonest letters over all keyboard rows and concentrating them on the left side (where right-handed people have to use their weaker hand). The reason behind all of those seemingly counterproductive features is that the typewriters of 1873 jammed if adjacent keys were struck in quick succession, so that manufacturers had to slow down typists. When improvements in typewriters eliminated the problem of jamming, trials in 1932 with an efficiently laid-out keyboard showed that it would let us double our typing speed and reduce our typing effort by 95 percent. But QWERTY keyboards were solidly entrenched by then. The vested interests of hundreds of millions of QWERTY typists, typing teachers, typewriter and

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computer salespeople, and manufacturers have crushed all moves toward keyboard efficiency for over 60-years.

While the story of the QWERTY keyboard may sound funny, many similar cases have involved much heavier economic consequences. Why does Japan now dominate the world market for transistorized electronic consumer products, to a degree that damages the United States's balance of payments with Japan, even though transistors were invented and patented in the United States? Because Sony bought transistor licensing rights from Western Electric at a time when the American electronics consumer industry was churning out vacuum tube models and reluctant to compete with its own products. Why were British cities still using gas street lighting into the 1920s, long after U.S. and German cities had converted to electric street lighting? Because British municipal governments had invested heavily in gas lighting and placed regulatory obstacles in the way of the competing electric light companies.

The remaining consideration affecting acceptance of new technologies is the ease with which their advantages can be observed. In A.D. 1340, when firearms had not yet reached most of Europe, England's earl of Derby and earl of Salisbury happened to be present in Spain at the battle of Tarifa, where Arabs used cannons against the Spaniards. Impressed by what they saw, the earls introduced cannons to the English army, which adopted them enthusiastically and already used them against French soldiers at the battle of Crécy six years later.

THUS, WHEELS, DESIGNER jeans, and QWERTY keyboards illustrate the varied reasons why the same society is not equally receptive to all inventions. Conversely, the same invention's reception also varies greatly among contemporary societies. We are all familiar with the supposed generalization that rural Third World societies are less receptive to innovation than are

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Westernized industrial societies. Even within the industrialized world, some areas are much more receptive than others. Such differences, if they existed on a continental scale, might explain why technology developed faster on some continents than on others. For instance, if all Aboriginal Australian societies were for some reason uniformly resistant to change, that might account for their continued use of stone tools after metal tools had appeared on every other continent. How do differences in receptivity among societies arise?

A laundry list of at least 14 explanatory factors has been proposed by historians of technology. One is long life expectancy, which in principle should give prospective inventors the years necessary to accumulate technical knowledge, as well as the patience and security to embark on long development programs yielding delayed rewards. Hence the greatly increased life expectancy brought by modern medicine may have contributed to the recently accelerating pace of invention.

The next five factors involve economics or the organization of society: (1) The availability of cheap slave labor in classical times supposedly discouraged innovation then, whereas high wages or labor scarcity now stimulate the search for technological solutions. For example, the prospect of changed immigration

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policies that would cut off the supply of cheap Mexican seasonal labor to Californian farms was the immediate incentive for the development of a machine-harvestable variety of tomatoes in California. (2) Patents and other property laws, protecting ownership rights of inventors, reward innovation in the modern West, while the lack of such protection discourages it in modern China. (3) Modern industrial societies provide extensive opportunities for technical training, as medieval Islam did and modern Zaire does not. (4) Modern capitalism is, and the ancient Roman economy was not, organized in a way that made it potentially rewarding to invest capital in technological development. (5) The strong individualism of U.S. society allows successful inventors to keep earnings for themselves, whereas strong family ties in New Guinea ensure that someone who begins to earn money will be joined by a dozen relatives expecting to move in and be fed and supported.

Another four suggested explanations are ideological, rather than economic or organizational: (1) Risk-taking behavior, essential for efforts at innovation, is more widespread in some societies than in others. (2) The scientific outlook is a unique feature of post-Renaissance European society that has contributed heavily to its modern technological preeminence. (3) Toler-

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ance of diverse views and of heretics fosters innovation, whereas a strongly traditional outlook (as in China's emphasis on ancient Chinese classics) stifles it. (4) Religions vary greatly in their relation to technological innovation: some branches of Judaism and Christianity are claimed to be especially compatible with it, while some branches of Islam, Hinduism, and Brahmanism may be especially incompatible with it.

All ten of these hypotheses are plausible. But none of them has any necessary association with geography. If patent rights, capitalism, and certain religions do promote technology, what selected for those factors in postmedieval Europe but not in contemporary China or India?

At least the direction in which those ten factors influence technology seems clear. The remaining four proposed factors—war, centralized government, climate, and resource abundance—appear to act inconsistently: sometimes they stimulate technology, sometimes they inhibit it. (1) Throughout history, war has often been a leading stimulant of technological innovation. For instance, the enormous investments made in nuclear weapons during World War II and in airplanes and trucks during World War I launched whole new fields of technology. But wars can also deal devastating setbacks to technological development. (2) Strong centralized government boosted technology in late-19th-century Germany and Japan, and crushed it in China after A.D. 1500. (3) Many northern Europeans assume that technology thrives in a rigorous climate where survival is impossible without technology, and withers in a benign climate where clothing is unnecessary and bananas supposedly fall off the trees. An opposite view is that benign environments leave people free from the constant struggle for existence, free to devote themselves to innovation. (4) There has also been debate over whether technology is stimulated by abundance or by scarcity of environmental resources. Abundant resources might stimulate the development of inventions utilizing those resources, such as water mill technology in rainy northern Europe, with its many rivers—

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but why didn't water mill technology progress more rapidly in even rainier New Guinea? The destruction of Britain's forests has been suggested as the reason behind its early lead in developing coal technology, but why didn't deforestation have the same effect in China?

This discussion does not exhaust the list of reasons proposed to explain why societies differ in their receptivity to new technology. Worse yet, all of these proximate explanations bypass the question of the ultimate factors behind them. This may seem like a discouraging setback in our attempt to understand the course of history, since technology has undoubtedly been one

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of history's strongest forces. However, I shall now argue that the diversity of independent factors behind technological innovation actually makes it easier, not harder, to understand history's broad pattern.

FOR THE PURPOSES of this book, the key question about the laundry list is whether such factors differed systematically from continent to continent and thereby led to continental differences in technological development. Most laypeople and many historians assume, expressly or tacitly, that the answer is yes. For example, it is widely believed that Australian Aborigines as a group shared ideological characteristics contributing to their technological backwardness: they were (or are) supposedly conservative, living in an imagined past Dreamtime of the world's creation, and not focused on practical ways to improve the present. A leading historian of Africa characterized Africans as inward looking and lacking Europeans' drive for expansion.

But all such claims are based on pure speculation. There has never been a study of many societies under similar socioeconomic conditions on each of two continents, demonstrating systematic ideological differences between the two continents' peoples. The usual reasoning is instead circular: because technological differences exist, the existence of corresponding ideological differences is inferred.

In reality, I regularly observe in New Guinea that native societies there differ greatly from each other in their prevalent outlooks. Just like industrialized Europe and America, traditional New Guinea has conservative societies that resist new ways, living side by side with innovative societies that selectively adopt new ways. The result, with the arrival of Western technology, is that the more entrepreneurial societies are now exploiting Western technology to overwhelm their conservative neighbors.

For example, when Europeans first reached the highlands of eastern New Guinea, in the 1930s, they "discovered" dozens of previously uncontacted Stone Age tribes, of which the Chimbu tribe proved especially aggressive in adopting Western technology. When Chimbus saw white settlers planting coffee, they began growing coffee themselves as a cash crop. In 1964 I met a 50-year-old Chimbu man, unable to read, wearing a traditional grass skirt, and born into a society still using stone tools, who had become rich by growing coffee, used his profits to buy a sawmill for \$100,000 cash, and bought a fleet of trucks to transport his coffee and timber to market. In contrast, a neighboring highland people with whom I worked for eight years, the Daribi, are especially conser-

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vative and uninterested in new technology. When the first helicopter landed in the Daribi area, they briefly looked at it and just went back to what they had been doing; the Chimbus would have been bargaining to charter it. As a result, Chimbus are now moving into the Daribi area, taking it over for plantations, and reducing the Daribi to working for them.

On every other continent as well, certain native societies have proved very receptive, adopted foreign ways and technology selectively, and integrated them successfully into their own society. In Nigeria the Ibo people became the local entrepreneurial equivalent of New Guinea's Chimbus. Today the most numerous Native American tribe in the United States is the Navajo, who on European arrival were just one of several hundred tribes. But the Navajo proved especially resilient and able to deal selectively with innovation. They incorporated Western dyes into their weaving, became silversmiths and ranchers, and now drive trucks while continuing to live in traditional dwellings.

Among the supposedly conservative Aboriginal Australians as well, there are receptive societies along with conservative ones. At the one extreme, the Tasmanians continued to use stone tools superseded tens of thousands of years earlier in Europe and replaced in most of mainland Australia too. At the opposite extreme, some aboriginal fishing groups of southeastern Australia devised elaborate technologies for managing fish populations, including the construction of canals, weirs, and standing traps.

Thus, the development and reception of inventions vary enormously from society to society on the same continent. They also vary over time within the same society. Nowadays, Islamic societies in the Middle East are relatively conservative and not at the forefront of technology. But medieval Islam in the same region was technologically advanced and open to innovation. It achieved far higher literacy rates than contemporary Europe; it assimilated the legacy of classical Greek civilization to such a degree that many classical Greek books are now known to us only through Arabic copies; it invented or elaborated windmills, tidal mills, trigonometry, and lateen sails; it made major advances in metallurgy, mechanical and chemical engineering, and irrigation methods; and it adopted paper and gunpowder from China and transmitted them to Europe. In the Middle Ages the flow of technology was overwhelmingly from Islam to Europe, rather than from Europe to Islam as it is today. Only after around A.D. 1500 did the net direction of flow begin to reverse.

Innovation in China too fluctuated markedly with time. Until around A.D. 1450, China was technologically much more innovative and advanced

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than Europe, even more so than medieval Islam. The long list of Chinese inventions includes canal lock gates, cast iron, deep drilling, efficient animal harnesses, gunpowder, kites, magnetic compasses, movable type, paper, porcelain, printing (except for the Phaistos disk), sternpost rudders, and wheelbarrows. China

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then ceased to be innovative for reasons about which we shall speculate in the Epilogue. Conversely, we think of western Europe and its derived North American societies as leading the modern world in technological innovation, but technology was less advanced in western Europe than in any other “civilized” area of the Old World until the late Middle Ages.

Thus, it is untrue that there are continents whose societies have tended to be innovative and continents whose societies have tended to be conservative. On any continent, at any given time, there are innovative societies and also conservative ones. In addition, receptivity to innovation fluctuates in time within the same region.

On reflection, these conclusions are precisely what one would expect if a society’s innovativeness is determined by many independent factors. Without a detailed knowledge of all of those factors, innovativeness becomes unpredictable. Hence social scientists continue to debate the specific reasons why receptivity changed in Islam, China, and Europe, and why the Chimbos, Ibos, and Navajo were more receptive to new technology than were their neighbors. To the student of broad historical patterns, though, it makes no difference what the specific reasons were in each of those cases. The myriad factors affecting innovativeness make the historian’s task paradoxically easier, by converting societal variation in innovativeness into essentially a random variable. That means that, over a large enough area (such as a whole continent) at any particular time, some proportion of societies is likely to be innovative.

WHERE DO INNOVATIONS actually come from? For all societies except the few past ones that were completely isolated, much or most new technology is not invented locally but is instead borrowed from other societies. The relative importance of local invention and of borrowing depends mainly on two factors: the ease of invention of the particular technology, and the proximity of the particular society to other societies.

Some inventions arose straightforwardly from a handling of natural raw materials. Such inventions developed on many independent occasions in world history, at different places and times. One example, which we have

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already considered at length, is plant domestication, with at least nine independent origins. Another is pottery, which may have arisen from observations of the behavior of clay, a very widespread natural material, when dried or heated. Pottery appeared in Japan around 14,000 years ago, in the Fertile Crescent and China by around 10,000 years ago, and in Amazonia, Africa’s Sahel zone, the U.S. Southeast, and Mexico thereafter.

An example of a much more difficult invention is writing, which does not suggest itself by observation of any natural material. As we saw in Chapter 12, it had only a few independent origins, and the alphabet arose apparently only once in world history. Other difficult inventions include the water wheel, rotary

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quern, tooth gearing, magnetic compass, windmill, and camera obscura, all of which were invented only once or twice in the Old World and never in the New World.

Such complex inventions were usually acquired by borrowing, because they spread more rapidly than they could be independently invented locally. A clear example is the wheel, which is first attested around 3400 B.C. near the Black Sea, and then turns up within the next few centuries over much of Europe and Asia. All those early Old World wheels are of a peculiar design: a solid wooden circle constructed of three planks fastened together, rather than a rim with spokes. In contrast, the sole wheels of Native American societies (depicted on Mexican ceramic vessels) consisted of a single piece, suggesting a second independent invention of the wheel—as one would expect from other evidence for the isolation of New World from Old World civilizations.

No one thinks that that same peculiar Old World wheel design appeared repeatedly by chance at many separate sites of the Old World within a few centuries of each other, after 7 million years of wheelless human history. Instead, the utility of the wheel surely caused it to diffuse rapidly east and west over the Old World from its sole site of invention. Other examples of complex technologies that diffused east and west in the ancient Old World, from a single West Asian source, include door locks, pulleys, rotary querns, windmills—and the alphabet. A New World example of technological diffusion is metallurgy, which spread from the Andes via Panama to Mesoamerica.

When a widely useful invention does crop up in one society, it then tends to spread in either of two ways. One way is that other societies see or learn of the invention, are receptive to it, and adopt it. The second is that societies lacking the invention find themselves at a disadvantage vis-à-vis the inventing society, and they become overwhelmed and replaced if the disadvantage is sufficiently great. A simple example is the spread of muskets among New

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Zealand's Maori tribes. One tribe, the Ngapuhi, adopted muskets from European traders around 1818. Over the course of the next 15 years, New Zealand was convulsed by the so-called Musket Wars, as musketless tribes either acquired muskets or were subjugated by tribes already armed with them. The outcome was that musket technology had spread throughout the whole of New Zealand by 1833: all surviving Maori tribes now had muskets.

When societies do adopt a new technology from the society that invented it, the diffusion may occur in many different contexts. They include peaceful trade (as in the spread of transistors from the United States to Japan in 1954), espionage (the smuggling of silkworms from Southeast Asia to the Mideast in A.D. 552), emigration (the spread of French glass and clothing manufacturing techniques over Europe by the 200,000 Huguenots expelled from France in 1685), and war. A crucial case of the last was the transfer of Chinese papermaking techniques to Islam, made possible when an Arab army defeated a Chinese army at the battle of Talas River in Central Asia in A.D. 751, found some papermakers among the prisoners of war, and brought them to Samarkand to set up paper manufacture.

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In Chapter 12 we saw that cultural diffusion can involve either detailed “blueprints” or just vague ideas stimulating a reinvention of details. While Chapter 12 illustrated those alternatives for the spread of writing, they also apply to the diffusion of technology. The preceding paragraph gave examples of blueprint copying, whereas the transfer of Chinese porcelain technology to Europe provides an instance of long-drawn-out idea diffusion. Porcelain, a fine-grained translucent pottery, was invented in China around the 7th century A.D. When it began to reach Europe by the Silk Road in the 14th century (with no information about how it was manufactured), it was much admired, and many unsuccessful attempts were made to imitate it. Not until 1707 did the German alchemist Johann Bottger, after lengthy experiments with processes and with mixing various minerals and clays together, hit upon the solution and establish the now famous Meissen porcelain works. More or less independent later experiments in France and England led to Sèvres, Wedgwood, and Spode porcelains. Thus, European potters had to reinvent Chinese manufacturing methods for themselves, but they were stimulated to do so by having models of the desired product before them.

DEPENDING ON THEIR geographic location, societies differ in how readily they can receive technology by diffusion from other societies. The

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most isolated people on Earth in recent history were the Aboriginal Tasmanians, living without oceangoing watercraft on an island 100 miles from Australia, itself the most isolated continent. The Tasmanians had no contact with other societies for 10,000 years and acquired no new technology other than what they invented themselves. Australians and New Guineans, separated from the Asian mainland by the Indonesian island chain, received only a trickle of inventions from Asia. The societies most accessible to receiving inventions by diffusion were those embedded in the major continents. In these societies technology developed most rapidly, because they accumulated not only their own inventions but also those of other societies. For example, medieval Islam, centrally located in Eurasia, acquired inventions from India and China and inherited ancient Greek learning.

The importance of diffusion, and of geographic location in making it possible, is strikingly illustrated by some otherwise incomprehensible cases of societies that abandoned powerful technologies. We tend to assume that useful technologies, once acquired, inevitably persist until superseded by better ones. In reality, technologies must be not only acquired but also maintained, and that too depends on many unpredictable factors. Any society goes through social movements or fads, in which economically useless things become valued or useful things devalued temporarily. Nowadays, when almost all societies on Earth are connected to each other, we cannot imagine a fad’s going so far that an important technology would actually be discarded. A society that temporarily turned against a powerful technology would continue to see it being used by neighboring societies and would have the opportunity to reacquire it by diffusion (or would be conquered by neighbors if it failed to do so). But such fads can persist in isolated societies.

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A famous example involves Japan's abandonment of guns. Firearms reached Japan in A.D. 1543, when two Portuguese adventurers armed with harquebuses (primitive guns) arrived on a Chinese cargo ship. The Japanese were so impressed by the new weapon that they commenced indigenous gun production, greatly improved gun technology, and by A.D. 1600 owned more and better guns than any other country in the world.

But there were also factors working against the acceptance of firearms in Japan. The country had a numerous warrior class, the samurai, for whom swords rated as class symbols and works of art (and as means for subjugating the lower classes). Japanese warfare had previously involved single combats between samurai swordsmen, who stood in the open, made ritual speeches, and then took pride in fighting gracefully. Such behavior became

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lethal in the presence of peasant soldiers ungracefully blasting away with guns. In addition, guns were a foreign invention and grew to be despised, as did other things foreign in Japan after 1600. The samurai-controlled government began by restricting gun production to a few cities, then introduced a requirement of a government license for producing a gun, then issued licenses only for guns produced for the government, and finally reduced government orders for guns, until Japan was almost without functional guns again.

Contemporary European rulers also included some who despised guns and tried to restrict their availability. But such measures never got far in Europe, where any country that temporarily swore off firearms would be promptly overrun by gun-toting neighboring countries. Only because Japan was a populous, isolated island could it get away with its rejection of the powerful new military technology. Its safety in isolation came to an end in 1853, when the visit of Commodore Perry's U.S. fleet bristling with cannons convinced Japan of its need to resume gun manufacture.

That rejection and China's abandonment of oceangoing ships (as well as of mechanical clocks and water-driven spinning machines) are well-known historical instances of technological reversals in isolated or semi-isolated societies. Other such reversals occurred in prehistoric times. The extreme case is that of Aboriginal Tasmanians, who abandoned even bone tools and fishing to become the society with the simplest technology in the modern world (Chapter 15). Aboriginal Australians may have adopted and then abandoned bows and arrows. Torres Islanders abandoned canoes, while Gaua Islanders abandoned and then readopted them. Pottery was abandoned throughout Polynesia. Most Polynesians and many Melanesians abandoned the use of bows and arrows in war. Polar Eskimos lost the bow and arrow and the kayak, while Dorset Eskimos lost the bow and arrow, bow drill, and dogs.

These examples, at first so bizarre to us, illustrate well the roles of geography and of diffusion in the history of technology. Without diffusion, fewer technologies are acquired, and more existing technologies are lost.

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BECAUSE TECHNOLOGY BEGETS more technology, the importance of an invention's diffusion potentially exceeds the importance of the original invention. Technology's history exemplifies what is termed an autocatalytic process: that is, one that speeds up at a rate that increases with time, because the process catalyzes itself. The explosion of technology since the Industrial Revolution impresses us today, but the medieval explosion was equally

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impressive compared with that of the Bronze Age, which in turn dwarfed that of the Upper Paleolithic.

One reason why technology tends to catalyze itself is that advances depend upon previous mastery of simpler problems. For example, Stone Age farmers did not proceed directly to extracting and working iron, which requires high-temperature furnaces. Instead, iron ore metallurgy grew out of thousands of years of human experience with natural outcrops of pure metals soft enough to be hammered into shape without heat (copper and gold). It also grew out of thousands of years of development of simple furnaces to make pottery, and then to extract copper ores and work copper alloys (bronzes) that do not require as high temperatures as does iron. In both the Fertile Crescent and China, iron objects became common only after about 2,000 years of experience of bronze metallurgy. New World societies had just begun making bronze artifacts and had not yet started making iron ones at the time when the arrival of Europeans truncated the New World's independent trajectory.

The other main reason for autocatalysis is that new technologies and materials make it possible to generate still other new technologies by recombination. For instance, why did printing spread explosively in medieval Europe after Gutenberg printed his Bible in A.D. 1455, but not after that unknown printer printed the Phaistos disk in 1700 B.C.? The explanation is partly that medieval European printers were able to combine six technological advances, most of which were unavailable to the maker of the Phaistos disk. Of those advances—in paper, movable type, metallurgy, presses, inks, and scripts—paper and the idea of movable type reached Europe from China. Gutenberg's development of typecasting from metal dies, to overcome the potentially fatal problem of nonuniform type size, depended on many metallurgical developments: steel for letter punches, brass or bronze alloys (later replaced by steel) for dies, lead for molds, and a tin-zinc-lead alloy for type. Gutenberg's press was derived from screw presses in use for making wine and olive oil, while his ink was an oil-based improvement on existing inks. The alphabetic scripts that medieval Europe inherited from three millennia of alphabet development lent themselves to printing with movable type, because only a few dozen letter forms had to be cast, as opposed to the thousands of signs required for Chinese writing.

In all six respects, the maker of the Phaistos disk had access to much less powerful technologies to combine into a printing system than did Gutenberg. The disk's writing medium was clay, which is much bulkier and heavier than

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paper. The metallurgical skills, inks, and presses of 1700 B.C. Crete were more primitive than those of A.D. 1455 Germany, so the disk had to be punched by hand rather than by cast movable type locked into a metal frame, inked, and pressed. The disk's script was a syllabary with more signs, of more complex form, than the Roman alphabet used by Gutenberg. As a result, the Phaistos disk's printing technology was much clumsier, and offered fewer advantages over writing by hand, than Gutenberg's printing press. In addition to all those technological drawbacks, the Phaistos disk was printed at a time when knowledge of writing was confined to a few palace or temple scribes. Hence there was little demand for the disk maker's beautiful product, and little incentive to invest in making the dozens of hand punches required. In contrast, the potential mass market for printing in medieval Europe induced numerous investors to lend money to Gutenberg.

HUMAN TECHNOLOGY DEVELOPED from the first stone tools, in use by two and a half million year ago, to the 1996 laser printer that replaced my already outdated 1992 laser printer and that was used to print this book's manuscript. The rate of development was undetectably slow at the beginning, when hundreds of thousands of years passed with no discernible change in our stone tools and with no surviving evidence for artifacts made of other materials. Today, technology advances so rapidly that it is reported in the daily newspaper.

In this long history of accelerating development, one can single out two especially significant jumps. The first, occurring between 100,000 and 50,000 years ago, probably was made possible by genetic changes in our bodies: namely, by evolution of the modern anatomy permitting modern speech or modern brain function, or both. That jump led to bone tools, single-purpose stone tools, and compound tools. The second jump resulted from our adoption of a sedentary lifestyle, which happened at different times in different parts of the world, as early as 13,000 years ago in some areas and not even today in others. For the most part, that adoption was linked to our adoption of food production, which required us to remain close to our crops, orchards, and stored food surpluses.

Sedentary living was decisive for the history of technology, because it enabled people to accumulate nonportable possessions. Nomadic hunter-gatherers are limited to technology that can be carried.

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local autonomy found in Europe. Second, the geography of China, unlike that of Europe, did not favor the prolonged survival of independent states. Instead, China's geography facilitated eventual conquest and unification over a vast area, followed by long periods of relative stability under imperial rule. The resulting state system suppressed most of the conditions required for the emergence of modern science. . . . The explanation outlined above is certainly oversimplified. However, one of the advantages of this kind of account is that it escapes the circularity which often creeps into explanations which do not go deeper than

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social or cultural differences between Europe and China. Such explanations can always be challenged with a further question: why were Europe and China different with regard to those social or cultural factors? Explanations rooted ultimately in geography and ecology, however, have reached bedrock.”

It remains a challenge for historians to reconcile these different approaches to answering the question “Why Europe, not China.” The answer may have important consequences for how best to govern China and Europe today. For example, from Lang’s and my perspective, the disaster of China’s Cultural Revolution of the 1960s and 1970s, when a few misguided leaders were able to close the school systems of the world’s largest country for five years, may not be a unique one-time-only aberration, but may presage more such disasters in the future unless China can introduce far more decentralization into its political system. Conversely, Europe, in its rush toward political and economic unity today, will have to devote much thought to how to avoid dismantling the underlying reason behind its successes of the last five centuries.

THE THIRD RECENT Extension of *GGG*’s message to the modern world was to me the most unexpected one. Soon after the book’s publication, it was reviewed favorably by Bill Gates, and then I began receiving letters from other business people and economists who pointed out possible parallels between the histories of entire human societies discussed in *GGG* and the histories of groups in the business world. This correspondence concerned the following broad question: what is the best way to organize human groups, organizations, and businesses so as to maximize productivity, creativity, innovation, and wealth? Should your group have a centralized direction (in the extreme, a dictator), or should there be diffuse leadership or even anarchy? Should your collection of people be organized into a single group, or broken down into a small or large number of groups? Should you maintain open communication between your groups, or erect walls of secrecy between them? Should you

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erect protectionist tariff walls against the outside, or should you expose your business to free competition?

These questions arise at many different levels and for many types of groups. They apply to the organization of entire countries: remember the perennial arguments about whether the best form of government is a benign dictatorship, a federal system, or an anarchical free-for-all. The same questions arise about the organization of different companies within the same industry. How can we account for the fact that Microsoft has been so successful recently, while IBM, which was formerly successful, fell behind but then drastically changed its organization and improved its success? How can we explain the different successes of different industrial belts? When I was a boy growing up in Boston, Route 128, the industrial belt around Boston, led the world in scientific creativity and imagination. But Route 128 has fallen behind, and now Silicon Valley is the center of innovation. The relations of businesses to one another in Silicon Valley and on Route 128 are very different, possibly resulting in those different outcomes.

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Of course, there are also the famous differences between the productivities of the economies of whole countries, such as Japan, the United States, France, and Germany. Actually, though, there are big differences between the productivity and wealth of different business sectors even within the same country. For example, the Korean steel industry is equal in efficiency to ours, but all other Korean industries lag behind their American counterparts. What is it about the different organization of these various Korean industries that accounts for their differences in productivity within the same country?

Obviously, answers to these questions about differences in organizational success depend partly on the idiosyncrasies of individuals. For example, the success of Microsoft has surely had something to do with the personal talents of Bill Gates. Even with a superior corporate organization, Microsoft would not be successful with an ineffectual leader. Nevertheless, one can still ask: all other things being equal, or else in the long run, or else on the average, what form of organization of human groups is best?

My comparison of the histories of China, the Indian subcontinent, and Europe in the epilogue of *GGG* suggested an answer to this question as applied to technological innovation in whole countries. As explained in the preceding section, I inferred that competition between different political entities spurred innovation in geographically fragmented Europe, and that the lack of such competition held innovation back in unified China. Would that mean that a higher degree of political fragmentation than Europe's would be even

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better? Probably not: India was geographically even more fragmented than Europe, but less innovative technologically. This suggested to me the Optimal Fragmentation Principle: innovation proceeds most rapidly in a society with some optimal intermediate degree of fragmentation: a too-unified society is at a disadvantage, and so is a too-fragmented society.

This inference rang a bell with Bill Lewis and other executives of McKinsey Global Institute, a leading consulting firm based in Washington, D.C., which carries out comparative studies of the economies of countries and industries all over the world. The executives were so struck by the parallels between their business experience and my historical inferences that they presented a copy of *GGG* to each of the firm's several hundred partners, and they presented me with copies of their reports on the economies of the United States, France, Germany, Korea, Japan, Brazil, and other countries. They, too, detected a key role of competition and group size in spurring innovation. Here are some of the conclusions that I gleaned from conversations with McKinsey executives and from their reports:

We Americans often fantasize that German and Japanese industries are super-efficient, exceeding American industries in productivity. In reality, that's not true: on the average across all industries, America's industrial productivity is higher than that in either Japan or Germany. But those average figures conceal big differences among the industries of each country, related to differences in organization—and those differences are very instructive. Let me give you two examples from McKinsey case studies on the German beer industry and the Japanese food-processing industry.

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Germans make wonderful beer. Every time that my wife and I fly to Germany for a visit, we carry with us an empty suitcase, so we can fill it with bottles of German beer to bring back to the United States and enjoy over the following year. Yet the productivity of the German beer industry is only 43 percent that of the U.S. beer industry. Meanwhile, the German metalworking and steel industries are equal in productivity to their American counterparts. Since the Germans are evidently perfectly capable of organizing industries well, why can't they do so when it comes to beer?

It turns out that the German beer industry suffers from small-scale production. There are a thousand tiny beer companies in Germany, shielded from competition with one another because each German brewery has virtually a local monopoly, and they are also shielded from competition with imports. The United States has 67 major beer breweries, producing 23 billion liters of beer per year. All of Germany's 1,000 breweries combined produce

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only half as much. Thus the average U.S. brewery produces 31 times more beer than the average German brewery.

This fact results from local tastes and German government policies. German beer drinkers are fiercely loyal to their local brand, so there are no national brands in Germany analogous to our Budweiser, Miller, or Coors. Instead, most German beer is consumed within 30 miles of the factory where it is brewed. Therefore, the German beer industry cannot profit from economies of scale. In the beer business, as in other businesses, production costs decrease greatly with scale. The bigger the refrigerating unit for making beer, and the longer the assembly line for filling bottles with beer, the lower the cost of manufacturing beer. Those tiny German beer companies are relatively inefficient. There's no competition; there are just a thousand local monopolies.

The local beer loyalties of individual German drinkers are reinforced by German laws that make it hard for foreign beers to compete in the German market. The German government has so-called beer purity laws that specify exactly what can go into beer. Not surprisingly, those government purity specifications are based on what German breweries put into beer, and not on what American, French, and Swedish breweries like to put into beer. Because of those laws, not much foreign beer gets exported to Germany, and because of inefficiency and high prices much less of that wonderful German beer than you would otherwise expect gets sold abroad. (Before you object that German Löwenbräu beer is widely available in the United States, please read the label on the next bottle of Löwenbräu that you drink here: it's not produced in Germany but in North America, under license, in big factories with North American productivity and efficiencies of scale.)

The German soap industry and consumer electronics industry are similarly inefficient; their companies are not exposed to competition with one another, nor are they exposed to foreign competition, and so they do not acquire the best practices of international industry. (When is the last time that you bought an imported TV set made in Germany?) But those disadvantages are not shared by the German metal and steel industries,

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in which big German companies have to compete with one another and internationally, and thus are forced to acquire the best international practices.

My other favorite example from the McKinsey reports concerns the Japanese food-processing industry. We Americans tend to be paranoid about Japanese efficiency, and it is indeed formidable in some industries—but not in food-processing. The efficiency of the Japanese food-processing industry is a miserable 32 percent that of ours. There are 67,000 food-processing com-

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panies in Japan, compared to only 21,000 in the United States, which has twice Japan's population—so the average U.S. food-processing company is six times bigger than its Japanese counterpart. Why does the Japanese food-processing industry, like the German beer industry, consist of small companies with local monopolies? Basically, the answer is the same two reasons: local taste and government policies.

The Japanese are fanatics for fresh food. A container of milk in a U.S. supermarket bears only one date: the expiration date. When my wife and I visited a Tokyo supermarket with one of my wife's Japanese cousins, we were surprised to discover that in Japan a milk container bears three dates: the date the milk was manufactured, the date it arrived at the supermarket, and the expiration date. Milk production in Japan always starts at one minute past midnight, so that the milk that goes to market in the morning can be labeled as today's milk. If the milk were produced at 11:59 P.M., the date on the container would have to indicate that the milk was made yesterday, and no Japanese consumer would buy it.

As a result, Japanese food-processing companies enjoy local monopolies. A milk producer in northern Japan cannot hope to compete in southern Japan, because transporting milk there would take an extra day or two, a fatal disadvantage in the eyes of consumers. These local monopolies are reinforced by the Japanese government, which obstructs the import of foreign processed food by imposing a 10-day quarantine, among other restrictions. (Imagine how Japanese consumers who shun food labeled as only one day old feel about food 10 days old.) Hence Japanese food-producing companies are not exposed to either domestic or foreign competition, and they don't learn the best international methods for producing food. Partly as a result, food prices in Japan are very high: the best beef costs \$200 a pound, while chicken costs \$25 a pound.

Some other Japanese industries are organized very differently from the food processors. For instance, Japanese steel, metal, car, car parts, camera, and consumer electronic companies compete fiercely and have higher productivities than their U.S. counterparts. But the Japanese soap, beer, and computer industries, like the Japanese food-processing industry, are not exposed to competition, do not apply the best practices, and thus have lower productivities than the corresponding industries in the United States. (If you look around your house, you are likely to find that your TV set and camera, and possibly also your car, are Japanese, but that your computer and soap are not.)

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Finally, let's apply these lessons to comparing different industrial belts or businesses within the United States. Since the publication of *GGS*, I've spent much time talking with people from Silicon Valley and from Route 128, and they tell me that these two industrial belts are quite different in terms of corporate ethos. Silicon Valley consists of lots of companies that are fiercely competitive with one another. Nevertheless, there is much collaboration—a free flow of ideas, people, and information among companies. In contrast, I'm told, the businesses of Route 128 are much more secretive and insulated from one another, like Japanese milk-producing companies.

What about the contrast between Microsoft and IBM? Since *GGS* was published, I've acquired friends at Microsoft and have learned about that corporation's distinctive organization. Microsoft has lots of units, each comprised of 5 to 10 people, with free communication among units, and the units are not micromanaged; they are allowed a great deal of freedom in pursuing their own ideas. That unusual organization at Microsoft—which in essence is broken into many competing semi-independent units—contrasts with the organization at IBM, which until some years ago consisted of much more insulated groups and resulted in IBM's loss of competitive ability. Then IBM acquired a new chief executive officer who changed things drastically: IBM now has a more Microsoft-like organization, and I'm told that IBM's innovativeness has improved as a result.

All of this suggests that we may be able to extract a general principle about group organization. If your goal is innovation and competitive ability, you don't want either excessive unity or excessive fragmentation. Instead, you want your country, industry, industrial belt, or company to be broken up into groups that compete with one another while maintaining relatively free communication—like the U.S. federal government system, with its built-in competition between our 50 states.

THE REMAINING EXTENSION of *GGS* has been into one of the central questions of world economics: why are some countries (like the United States and Switzerland) rich, while other countries (like Paraguay and Mali) are poor? Per-capita gross national products (GNP) of the world's richest countries are more than 100 times those of the poorest countries. This is not just a challenging theoretical question giving employment to economics professors, but also one with important policy implications. If we could identify the answers, then poor countries could concentrate on changing the things

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that keep them poor and on adopting the things that make other countries rich.

Obviously, part of the answer depends on differences in human institutions. The clearest evidence for this view comes from pairs of countries that divide essentially the same environment but have very different institutions and, associated with those institutions, different per-capita GNPs. Four flagrant examples are the comparison of South Korea with North Korea, the former West Germany with the former East Germany, the Dominican Republic with Haiti, and Israel with its Arab neighbors. Among the many “good institutions” often invoked to explain the greater wealth of the first-named country of each of these pairs are effective

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rule of law, enforcement of contracts, protection of private property rights, lack of corruption, low frequency of assassinations, openness to trade and to flow of capital, incentives for investment, and so on.

Undoubtedly, good institutions are indeed part of the answer to the different wealths of nations. Many, perhaps most, economists go further and believe that good institutions are overwhelmingly the most important explanation. Many governments, agencies, and foundations base their policies, foreign aid, and loans on this explanation, by making the development of good institutions in poor countries their top priority.

But there is increasing recognition that this good-institutions view is incomplete—not wrong, just incomplete—and that other important factors need addressing if poor countries are to become rich. This recognition has its own policy implications. One cannot just introduce good institutions to poor countries like Paraguay and Mali and expect those countries to adopt the institutions and achieve the per-capita GNPs of the United States and Switzerland. The criticisms of the good-institutions view are of two main types. One type recognizes the importance of other proximate variables besides good institutions, such as public health, soil- and climate-imposed limits on agricultural productivity, and environmental fragility. The other type concerns the origin of good institutions.

According to the latter criticism, it is not enough to consider good institutions as a proximate influence whose origins are of no further practical interest. Good institutions are not a random variable that could have popped up anywhere around the globe, in Denmark or in Somalia, with equal probability. Instead, it seems to me that, in the past, good institutions always arose because of a long chain of historical connections from ultimate causes rooted in geography to the proximate dependent variables of the institutions.

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We must understand that chain if we hope, now, to produce good institutions quickly in countries lacking them.

At the time that I wrote *GGG*, I commented, “The nations rising to new power [today] are still ones that were incorporated thousands of years ago into the old centers of dominance based on food production, or that have been repopulated by peoples from those centers. . . . The hand of history’s course at 8,000 B.C. lies heavily on us.” Two new papers by economists (Olsson and Hibbs, and Bockstette, Chanda, and Putterman) have subjected this postulated heavy hand of history to detailed tests. It turns out that countries in regions with long histories of state societies or agriculture have higher per-capita GNP than countries with short histories, even after other variables have been controlled. The effect explains a large fraction of the variance in GNP. Even just among countries with still-low or recently low GNPs, countries in regions with long histories of state societies or agriculture, like South Korea, Japan, and China, have higher growth rates than countries with short histories, such as New Guinea and the Philippines, even though some of the countries with short histories are much richer in natural resources.

There are many obvious reasons for these effects of history, such as that long experience of state societies and agriculture implies experienced administrators, experience with market economies, and so on.

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Statistically, part of that ultimate effect of history proves to be mediated by the familiar proximate causes of good institutions. But there is still a large effect of history remaining after one controls for the usual measures of good institutions. Hence there must be other mediating proximate mechanisms as well. Thus a key problem will be to understand the detailed chain of causation from a long history of state societies and agriculture to modern economic growth, in order to help developing countries advance up that chain more quickly. In short, the themes of *GGS* seem to me to be not only a driving force in the ancient world but also a ripe area for study in the modern world.

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12.3.2**Unit Overview**

Synthesizing Research and Argument Through the Writing Process

| | |
|----------------------------------|--|
| Text | Student texts (research sources) vary. By 12.3.2, students have chosen texts for research based on their individual problem-based questions. |
| Number of Lessons in Unit | 11 |

Introduction

In this unit, students synthesize their research and articulate their conclusions in a written argument. As part of the writing process, students engage in a writing cycle in which they continually revise and edit their own work and provide peer review. Students explore practices related to the writing process, including:

- Creating outlines
- Organizing claims, counterclaims, and evidence in a logical manner
- Drafting effective introductions, body paragraphs, and conclusions
- Creating cohesion within and between paragraphs
- Observing English grammar and usage conventions
- Observing correct English capitalization, punctuation, and spelling
- Adhering to Modern Language Association (MLA) citation conventions
- Writing in a formal, objective tone
- Adhering to conventions of argument writing

No new texts are introduced in 12.3.2. Instead, students focus on analyzing the sources they collected for their research in 12.3.1, delving more deeply into these sources throughout the writing process.

The formal assessment for 12.3.2 is the final draft of the research-based argument paper. Throughout the lessons in 12.3.2, students have the opportunity to outline, draft, revise, and edit their papers. In the

final lesson of 12.3.2, students submit their final papers for assessment using the 12.3.2 Rubric and Checklist, which students use throughout 12.3.2 to guide the writing process.

Literacy Skills and Habits

- Create an outline to organize collected evidence.
- Analyze, synthesize, and organize evidence-based claims.
- Write effective introduction, body, and conclusion paragraphs for a research-based argument paper.
- Use proper MLA citation methods in writing.
- Edit for a variety of language conventions, including using hyphens and correct capitalization, punctuation, and spelling.
- Use formal style and objective tone in writing.
- Adhere to the conventions of argument writing (e.g., addressing all sides of an issue, avoiding emotional appeals, etc.).
- Demonstrate clarity and cohesion in writing.
- Vary syntax for effect.

Standards for This Unit

| College and Career Readiness Anchor Standards for Reading | |
|---|--|
| None. | |
| CCS Standards: Reading — Literature | |
| None. | |
| CCS Standards: Writing | |
| W.11-12.1.a-e | <p>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <p>a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.</p> <p>b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of</p> |

| | |
|--|---|
| | <p>both in a manner that anticipates the audience’s knowledge level, concerns, values, and possible biases.</p> <p>c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.</p> <p>d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.</p> <p>e. Provide a concluding statement or section that follows from and supports the argument presented.</p> |
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| W.11-12.5 | Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
| W.11-12.9 | Draw evidence from literary or informational texts to support analysis, reflection, and research. |
| CCS Standards: Speaking & Listening | |
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners <i>on grades 11–12 topics, texts, and issues</i> , building on others’ ideas and expressing their own clearly and persuasively. |
| SL.11-12.4 | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. |

| | |
|--------------------------------|--|
| SL.11-12.5 | Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. |
| SL.11-12.6 | Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. |
| CCS Standards: Language | |
| L.11-12.1.b | Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. b. Resolve issues of complex or contested usage, consulting references (e.g., <i>Merriam-Webster's Dictionary of English Usage</i> , <i>Garner's Modern American Usage</i>) as needed. |
| L.11-12.2.a, b | Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Observe hyphenation conventions. b. Spell correctly. |
| L.11-12.3.a | Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. a. Vary syntax for effect, consulting references (e.g., Tufte's <i>Artful Sentences</i>) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading. |
| L.11-12.6 | Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. |

Note: Bold text indicates targeted standards that will be assessed in the unit.

Unit Assessments

| Ongoing Assessment | |
|---------------------------|---|
| Standards Assessed | W.11-12.4, W.11-12.5, W.11-12.9 |
| Description of Assessment | Varies by lesson; lessons focus on developing and strengthening writing by editing, rewriting, and incorporating peer and teacher feedback. |

| End-of-Unit Assessment | |
|---------------------------|--|
| Standards Assessed | W.11-12.1.a-e, L.11-12.1, L.11-12.2, L.11-12.3 |
| Description of Assessment | Students are assessed on their final drafts of their research-based argument papers. The final draft should present a precise claim supported by relevant and sufficient evidence and valid reasoning. The draft should be well organized, distinguish claims from alternate and opposing claims, and use transitional language that clearly links the major sections of the text and clarifies relationships among the claims, counterclaims, evidence, and reasoning. Finally, the draft should demonstrate control of the conventions of written language and maintain a formal style and objective tone. |

Unit-at-a-Glance Calendar

| Lesson | Text | Learning Outcomes/Goals |
|--------|---------------------------|---|
| 1 | Individual research texts | In this first lesson of the unit, students are introduced to the process of drafting a research-based argument paper. Students draft, revise, peer review, and edit this paper over the course of 12.3.2. Students learn how to develop their research-based argument paper from the evidence-based perspective they completed in the previous lesson, 12.3.1 Lesson 27. Students determine a central claim from their research frame and evidence-based perspective and begin to construct an outline for the research-based argument paper. To complete the outline, students develop an individualized process for organizing their supporting claims and evidence for each claim while providing reasoning to support each claim. |
| 2 | Individual research texts | In this lesson, students continue to plan for their research-based argument papers by completing the outline they began in 12.3.2 Lesson 1. Using their outlines, students develop a counterclaim in opposition to the central claim developed in 12.3.2 Lesson 1. Students then address the strengths and limitations of the counterclaim. |
| 3 | Individual research texts | In this lesson, students learn how to integrate citation information into their research-based argument papers effectively to maintain the flow of ideas, avoid plagiarism, and follow a standard format for citation. Students learn Modern Language Association (MLA) conventions for in-text citation as well as for a works cited page. |
| 4 | Individual research texts | In this lesson, students begin writing their research-based argument papers. The lesson begins with a peer review of the in-text citations students inserted in their outlines. Students then learn about the purpose and components of an effective introduction. Through discussion and examination of an exemplar and non-exemplar introduction, students further develop their understanding of how to write an effective introduction. |

| Lesson | Text | Learning Outcomes/Goals |
|--------|---------------------------|--|
| 5 | Individual research texts | In this lesson, students focus on making sure their writing is cohesive and clear as they continue to draft their research-based argument papers. Students improve the effectiveness of their writing by focusing on the use of transitional words and phrases and establishing strong relationships among evidence, claims, and counterclaims. In addition, students focus on using varied syntax to enhance the rhythm and flow of their sentences and paragraphs. |
| 6 | Individual research texts | In this lesson, students learn to craft a concluding statement that follows from and further supports the argument and appropriately connects sections of the text. |
| 7 | Individual research texts | In this lesson, students learn how to identify and use formal style and objective tone when writing the research-based argument paper. Students then use the first drafts of their papers to participate in peer review and teacher conferences. |
| 8 | Individual research texts | In this lesson, students continue to refine and revise their research papers. The instruction in this lesson focuses on editing for clarity and cohesion of the entire research paper. Students continue to provide peer feedback as well as conference individually with the teacher. Students use the 12.3.2 Rubric and Checklist to guide their peer review and make revisions to their research papers. |
| 9 | Individual research texts | In this lesson, students continue to edit and revise their papers. Students are introduced to language standards L.11-12.2.a,b, as well as to common hyphenation conventions through the Hyphenation Conventions Handout. Students continue the peer review process by editing for capitalization, punctuation, and spelling. |

| Lesson | Text | Learning Outcomes/Goals |
|--------|---------------------------|---|
| 10 | Individual research texts | In this lesson, students participate in a peer review activity during which they offer constructive feedback to their classmates about the entire research-based argument paper. Students review their peers' papers for elements of the W.11-12.1 standard and substandards (W.11-12.1.a-e) that have been introduced in 12.3.2. Additionally, students peer review for English grammar, usage, and writing conventions. |
| 11 | Individual research texts | In the final lesson of the unit, the End-of-Unit Assessment, students finalize their research-based argument papers by editing, polishing, and rewriting as necessary. Students are assessed on how their final drafts align to the 12.3.2 Rubric and Checklist. |

Preparation, Materials, and Resources

Preparation

- Review the 12.3.2 Rubric and Checklist.
- Review all unit standards and post in classroom.

Materials/Resources

- Individual research texts and materials
- Sticky notes
- Writing utensils including colored pencils, pens, markers, and highlighters
- Methods for collecting student work: student notebooks, folders, etc.
- Access to technology (if possible): interactive whiteboard, document camera, LCD projector, computers for individual students (for word processing)
- Copies of the 12.3.2 Rubric and Checklist
- Copies of the 12.3 Speaking and Listening Rubric and Checklist
- Copies of handouts and tools for each student: see Materials list in individual lesson plans

12.3.2**Lesson 1****Introduction**

In this first lesson of the unit, students are introduced to the process of drafting a research-based argument paper. Students draft, revise, peer review, and edit this paper over the course of 12.3.2. Students learn how to develop their research-based argument paper from the evidence-based perspective they completed in the previous lesson, 12.3.1 Lesson 27. Students determine a central claim from their research frame and evidence-based perspective and begin to construct an outline for the research-based argument paper. To complete the outline, students develop an individualized process for organizing their supporting claims and evidence for each claim while providing reasoning to support each claim. Student learning is assessed via a Quick Write at the end of the lesson: Explain your outlining process and how it informs the organization of your claim(s), reasons, and evidence.

For homework, students search for another source to gather stronger or more relevant evidence for a supporting claim on their outline, and provide reasoning that explains how this evidence supports the claim. Instruct students to record their evidence and reasoning on the Additional Evidence Tool.

Standards

| Assessed Standard(s)- | |
|-----------------------|--|
| W.11-12.5 | Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. |
| W.11-12.9 | Draw evidence from literary or informational texts to support analysis, reflection, and research. |
| Addressed Standard(s) | |
| W.11-12.1.a | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry |

| | |
|--|---|
| | when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
|--|---|

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt:</p> <ul style="list-style-type: none"> Explain your outlining process and how it informs the organization of your claim(s), reasons, and evidence. <p>① This Quick Write will be assessed using the W.11-12.1.a and W.11-12.5 portions of the 12.3.2 Rubric.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Explain the selected outlining process (e.g., I have chosen to construct a web as an outline for my research paper with the central claim in the middle of the page, the supporting claims on the sides, and the reasoning connecting the supporting claims to the central claims. Also, the evidence is connected to the supporting claims on the outer sides of each supporting claim.). Explain how this process informs the organization of claim(s), reasons, and evidence (e.g., I am a visual thinker and this process helps me to organize my thinking visually. I place the central claim in the middle of the page, the supporting claims on the sides, and the reasoning connecting the two so that I can remember the function of reasoning is to explain how supporting claims reinforce the central claim. I add the evidence to the sides of each supporting claim. I also draw connecting lines from the evidence to the supporting claims with the reasoning noted, since reasoning also explains how evidence supports a claim.). |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |

Additional vocabulary to support English Language Learners (to provide directly)

- None.*

*Students should incorporate relevant academic and/or domain-specific vocabulary from 12.3.1 into their research-based argument papers.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|---|---|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.5, W.11-12.9, W.11-12.1.a, W.11-12.7 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Introduction to the Writing Process Reasoning, Planning, and Organization Outline Quick Write Closing | <ol style="list-style-type: none"> 5% 10% 15% 35% 20% 10% 5% |

Materials

- Student copies of Evidence-Based Perspectives (refer to 12.3.1 Lesson 27)
- Student copies of the research frame (refer to 12.3.1 Lesson 19)
- Student copies of the Organizing Evidence-Based Claims Tools (refer to 12.3.1 Lesson 23)
- Copies of the Outline Tool for each student (optional)
- Copies of the 12.3.2 Rubric and Checklist for each student
- Copies of the Additional Evidence Tool for each student

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no | Plain text indicates teacher action. |

| | |
|--------|---|
| symbol | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ▶ | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standards for this lesson: W.11-12.5 and W.11-12.9. In this lesson, students are introduced to the writing process, the research-based argument paper, and the outline. Students determine a central claim from their research frame and evidence-based perspective and begin constructing an outline for the research paper. Students organize their supporting claims and evidence for each claim based on their synthesis work completed in 12.3.1. Students also analyze the evidence that supports each claim and provide reasoning to complete their outlines.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Complete a multimedia journal entry in response to the following prompts: How has your thinking changed regarding your problem-based question? How did your research process lead you to your evidence-based perspective?) Instruct students to talk in pairs about their response to the homework assignment.

- 💬 Student responses vary according to the research conducted.

Activity 3: Introduction to the Writing Process

15%

Explain to students that the writing process is iterative, much like the research process in 12.3.1, which means that students frequently reassess their work or their thinking in order to improve and/or refine it. In 12.3.2, students compose a formal, research-based argument paper. Explain that writing is a process that takes many forms and students can accomplish it through a variety of methods. Though there are many different ways to approach the writing process, they all involve creating multiple drafts and revisions. Inform students that they will draft, revise, peer review, and edit throughout 12.3.2 to create a well-crafted research-based argument paper.

- ❗ **Differentiation Consideration:** Consider reviewing the meaning of *iterative*, which means “repeating” and was introduced in 12.3.1 Lesson 14.

Explain that the research paper students complete in 12.3.2 is a formal argument (a composition of precise claims about an issue) including relevant and sufficient evidence and valid reasoning. Advise students to keep in mind that the purpose of writing a research-based argument paper is to support

their claims in an analysis of their chosen issue to convince readers to understand and accept their perspectives. Explain that students must also develop a central claim and support that claim using supporting claims and evidence.

- ▶ Students listen.

① Consider reviewing the skills inherent in W.11-12.7 and how they apply to writing a research-based argument paper.

Explain that the evidence-based perspective students developed at the end of 12.3.1 is the foundation for their research-based argument paper. Return to students their evidence-based perspectives. Explain that students should use their evidence-based perspectives to identify the claims and evidence they express in their papers. The research-based argument paper is a logical, well-reasoned, and coherent synthesis of students' research and the arguments they drew from their research.

Explain that a research-based argument paper has a formal structure composed of an introduction, body paragraphs, conclusion, and works cited page. Inform students that they will focus on each of these parts in lessons throughout 12.3.2 to produce a final research-based argument paper for the End-of-Unit Assessment.

- ▶ Students listen.

Activity 4: Reasoning, Planning, and Organization

35%

Explain to students that this part of the lesson focuses on organizing evidence and claims into an outline. Proper organization gives students a clear structure to follow when they begin writing.

① Remind students that the act of outlining or planning their papers addresses standard W.11-12.5, which focuses on the writing process. Inform students that they continue to work with this standard throughout 12.3.2 as they revise, edit, and rewrite their papers.

Inform students that they are going to construct an outline to guide their work on the argument-based research paper. Explain to students that, because writing is an individual process, everyone has a slightly different method for outlining their thoughts. Inform students that although methods of outlining will be individualized, all outlines will share some common elements. Explain to students that in this lesson, they first learn the elements of an effective outline before beginning to write their own outlines.

Instruct students to consider what method of outlining works best for them. Some students may prefer creating a visual web of information to organize their thoughts. Other students might prefer to organize their thoughts in a bulleted list. Still others might prefer a combination of the two, or a different format entirely. Explain to students that organization at the beginning of the drafting process can help them to identify areas where the paper might be weak or need more work.

Instruct students to take out a sheet of paper to use to construct an outline. Inform students that in their outlines they should plan for an introduction, several body paragraphs, and a conclusion. The introductory paragraph should state the central claim of the paper; the body paragraphs should provide supporting claims and counterclaims with supporting evidence and reasoning; and the conclusion should summarize the argument and restate the central claim in a new way.

- ① **Differentiation Consideration:** If students require additional support with the outlining process, consider distributing the Outline Tool.
 - ① Students work in greater detail with introductions, body paragraphs, and conclusions throughout 12.3.2.
-

Explain to students that to begin their outlines, they first determine the central claim. Explain to students that the answer to the problem-based question forms the central claim of the research-based argument paper. Instruct students to examine their evidence-based perspectives and their research frames, and briefly discuss in pairs the strongest or most interesting possible central claims that have emerged from their research. Remind students that they recorded several answers to their problem-based questions in the evidence-based perspective. Explain to students that a central claim must be strong enough to warrant and uphold several supporting claims.

- ▶ Students form pairs to discuss possible central claims for their research-based argument papers.

- ① Consider reminding students of their work with central claims in 12.3.1 Lesson 6. A *central claim* is an author or speaker's main point about an issue in an argument.
- ① Students work on organizing counterclaims in 12.3.2 Lesson 2.

Instruct students to distill one of the possible central claims from the previous discussion on their outlines into a single sentence: a central claim. In order to distill the answer into a central claim, students should consider which perspective, surfaced through the research process, has the strongest evidence as well as an overarching claim they are interested in pursuing over the course of writing their paper. For example, if their problem-based question is "What is the most effective way for a developing nation to increase its economic prosperity?" students should write an answer to this question based on the best-supported conclusions expressed in the evidence-based perspective. In this example, this answer might be, "The most effective way for developing nations to become more prosperous is by investing in human capital, providing quality education and technology to all citizens, regardless of gender or race."

- ▶ Students write down their problem-based question and central claim on their outlines.
- 💬 Student responses vary according to the research conducted.

- ① **Differentiation Consideration:** At this point, there may be some students at different stages of the research process. Some students may need more time or practice in developing a central claim that is supported by research and is interesting to write about. Consider using the Organizing Evidence-

Based Claims Tools from 12.3.1 Lesson 23 to model how to craft a central claim that is supported by evidence and interesting to write about.

Explain to students that claims and evidence should be ordered within their paper in a logical manner that clearly supports their central claim and demonstrates valid reasoning. *Reasoning* connects evidence to claims by explaining how the evidence supports the claim.

① **Differentiation Consideration:** Consider reminding students of the definition of *reasoning*: “the logical relationships among ideas, including relationships among claims and relationships across evidence.”

Display the following example claims for students:

- **Central Claim:** The most effective way for developing nations to become more prosperous is by investing in human capital, providing quality education and technology to all citizens, regardless of gender or race.
- **Claim:** Equal access to quality education results in wealth not only for a country as a whole, but also for the individuals who live in the country.
- **Claim:** Quality education is multifaceted and not limited to the classroom.
- **Claim:** The Internet provides vast opportunities for communication, and therefore fosters larger-scale competition among all people of a nation.

Explain to students that the claims need to be ordered in a way that effectively supports the central claim. Remind students that although some claims may be related to the central claim, they may not reinforce a logical relationship to the central claim and may not work effectively to persuade the reader that the central claim being presented is correct. Ask students:

Which claim in this sequence does not support the central claim?

- While it may be true, the claim, “Quality education is multifaceted and not limited to the classroom” does not directly support the central claim because it does not provide evidence to support the idea that education and technology will support economic development.

① **Differentiation Consideration:** This is a brief exercise in ordering claims in a logical, well-reasoned manner. Consider providing further instruction of logical conclusions from the information on the Purdue University Online Writing Lab (OWL): <http://owl.english.purdue.edu/> (search term: logical conclusions).

Inform students that when adding supporting claims to the outline they should articulate how the supporting claim connects to or supports the central claim. The significance of the supporting claim helps hold the paper together for the reader and helps explain how each section builds to the central claim.

- ▶ Students listen and follow along.

① Consider discussing W.11-12.1.a for further exploration of the concept of claims.

Instruct students to retrieve all of the Organizing Evidence-Based Claims Tools from their research materials from 12.3.1 that align with their central claim. Instruct students to arrange their Organizing Evidence-Based Claims Tools physically on their workspace in an order that reflects where each claim would appear in the research paper.

Display some potential questions for students to guide their organization of the tools:

Are my evidence-based claims in a logical order (i.e., one claim flows neatly into the next and the claims build toward an overarching central claim)?

Can I explain the significance of how each supporting claim supports the central claim?

How do I link my claims from the Organizing Evidence-Based Claims Tools to best support the central claim?

How can I transition from one claim to another to effectively demonstrate the reasoning and how it best supports the central claim?

- ▶ Students follow along and read the guiding questions.

① **Differentiation Consideration:** The organizational structure in this lesson is not meant to be prescriptive, but rather to model one way to organize a research-based argument paper.

① Students completed their Organizing Evidence-Based Claims Tools in 12.3.1 Lesson 23.

- ▶ Students organize their Organizing Evidence-Based Claims Tools.

Instruct students to Turn-and-Talk briefly in pairs. Instruct students to discuss their answers to this question:

How does this order effectively support your central claim?

- ▶ Students Turn-and-Talk in pairs.

💬 Student responses vary according to the research conducted.

① Student responses should identify how the order of their claims supports the central claim and how this order demonstrates strong *reasoning*.

Lead a brief share out of pair discussions.

Instruct students to follow the order of their evidence-based claims from their Organizing Evidence-Based Claims Tools in the outline. Remind students that the purpose of this outline is to have a clear plan for their research-based argument paper and to consolidate all of their information into one place.

- ▶ Students work independently on adding supporting claims to their outlines.

① Students may decide to reorder their evidence-based claims from their Organizing Evidence-Based Claims Tools in the outline.

- 🗨 See the Model Outline Tool at the end of this lesson (optional).

Display one model supporting claim for students. Explain that students need to use the evidence from their research to support each claim in the body of their papers, much like each claim in the paper supports the central claim. Explain that in order to provide reasoning, students should write a brief explanation of how this evidence supports each claim. Model the following evidence and analysis for students:

- **Supporting claim:** Equal access to quality education results in wealth not only for the country as a whole, but also for the individuals who live in the country.
 - **Evidence:** “A more productive workforce, through greater equality in employment and education, increases expected rates of return, which in turn generates a modest increase investment and promotes growth.” (Ward et al. ix)
 - **Reasoning (connecting the evidence to the claim):** When people have access to quality education, they become potential investors in the market and can develop capital of their own. This potential leads to more competition within and between industries. Competition is a motivator, so the more people use their talents within a specific industry, the harder people will work in the industry to be able to compete. Competition and hard work will also result in more reliable monetary return, which in turn incentivizes individual and shared investment.
- ▶ Students follow along with the modeling.

Inform students that this type of analysis is the starting point for each body paragraph in the research-based argument paper.

① Remind students that they have recorded evidence on their Organizing Evidence-Based Claims Tools. On their outline, they should focus on expressing how that evidence best supports each supporting claim.

Instruct students to form pairs to discuss their ideas about which evidence on their Organizing Evidence-Based Claims Tools best supports the first claim on their outlines. Instruct students to write this evidence and reasoning on their outlines. Remind students that the reasoning is an explanation of how the evidence supports the claim.

- ▶ Students discuss their ideas in pairs and add evidence and reasoning to their outlines.

Activity 5: Outline

20%

Instruct students to work individually to organize the claims and evidence in their outlines, using a method that makes sense to them. Remind students that everyone has a slightly different method for outlining their paper and organizing their thoughts, but everyone should apply all the elements discussed in today's lesson: a central claim, logically organized supporting claims, evidence, and reasoning to support each claim. Explain to students that they will add counterclaims to their outlines in the following lesson (12.3.2 Lesson 2). Finally, instruct students to identify one claim on their outline that requires additional or stronger evidence, as students search for additional and stronger evidence for homework.

- ▶ Students independently work on their outlines.

① **Differentiation Consideration:** Consider providing the Outline Tool to students who require additional support.

Activity 6: Quick Write

10%

Display and distribute the 12.3.2 Rubric and Checklist. Inform students that several lesson assessments and the research papers will be assessed using the 12.3.2 Rubric. Explain to students that each part of this rubric is aligned to specific Common Core Standards that are targeted to assess components of argument writing as well as relevant language standards.

Inform students that the 12.3.2 Rubric and Checklist is a resource to which they refer as they engage in the writing process throughout 12.3.2. The rubric also guides teacher feedback and assessment. The 12.3.2 Rubric details 4 categories of assessed standards, a brief synthesis of what those categories entail, and a list of the standards contained in that category. Corresponding to each standard category are 4 levels of potential student responses. The final page of the handout is a student checklist that corresponds with the rubric. Instruct students to review the 12.3.2 Rubric and Checklist briefly.

- ▶ Students follow along and review the 12.3.2 Rubric and Checklist.

Instruct students to respond briefly in writing to the following prompt:

Explain your outlining process and how it informs the organization of your claim(s), reasons, and evidence.

Instruct students to follow their outlines to develop their written responses. Remind students to use the W.11-12.1.a portion of the 12.3.2 Rubric and Checklist to guide their written responses. Remind students to practice the skills outlined in W.11-12.4, which include producing clear, coherent writing that employs organization and style appropriate to the task, purpose, and audience, to which they were introduced in Module 12.1.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using their outlines and the W.11-12.1.a and W.11-12.5 portions of the 12.3.2 Rubric and Checklist to guide their responses.
- 🗨 See the High Performance Response at the beginning of this lesson.

Activity 7: Closing

5%

Display and distribute the homework assignment and distribute the Additional Evidence Tool. For homework, instruct students to search for another source to gather stronger or more relevant evidence for a supporting claim on their outline, and provide reasoning that explains how this evidence supports the claim. Instruct students to record their evidence and reasoning on the Additional Evidence Tool.

① Consider posting the Model Additional Evidence Tool as an exemplar along with the prompt.

- ▶ Students follow along.

Homework

Search for another source to gather stronger or more relevant evidence for a supporting claim on your outline, and provide reasoning that explains how this evidence supports the claim. Record your evidence and reasoning on the Additional Evidence Tool.

Outline Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Organize your claims below. State the connection of each supporting claim to the central claim, and then provide sufficient and relevant evidence and reasoning to support each claim. Finally, provide a strong counterclaim that challenges your central claim. Include supporting claims, evidence, and limitations of the counterclaim.

| | |
|---|--|
| [Introduction] Problem-based question: Central claim: | |
| [Body] Supporting claim: | |
| Connection of supporting claim to the central claim: | |
| Evidence: | Reasoning: <i>How does the evidence support your claim?</i> |
| Supporting claim: | |
| Connection of supporting claim to the central claim: | |
| Evidence: | Reasoning: <i>How does the evidence support your claim?</i> |

| | |
|---|--|
| Supporting claim: | |
| Connection of supporting claim to the central claim: | |
| Evidence: | Reasoning: <i>How does the evidence support your claim?</i> |
| Supporting claim: | |
| Connection of supporting claim to the central claim: | |
| Evidence: | Reasoning: <i>How does the evidence support your claim?</i> |
| Counterclaim (to the central claim): | |
| Supporting claim (for the counterclaim): | |

| | |
|--|---|
| Evidence: | Reasoning: <i>How does this evidence support the counterclaim?</i> |
| Supporting claim (for the counterclaim): | |
| Evidence: | Reasoning: <i>How does this evidence support the counterclaim?</i> |
| Limitations of the counterclaim: | |
| [Conclusion] Restate central claim: | |

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Model Outline Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Organize your claims below. State the connection of each supporting claim to the central claim, and then provide sufficient and relevant evidence and reasoning to support each claim. Finally, provide a strong counterclaim that challenges your central claim. Include supporting claims, evidence, and limitations of the counterclaim.

[Introduction]

Problem-based question: What is the most effective way for a developing nation to increase its economic prosperity?

Central claim: The most effective way for developing nations to become more prosperous is by investing in human capital, providing quality education and technology to all citizens, regardless of gender or race.

[Body] **Supporting claim:** For developing nations to prosper, men and women of all races must have equal access to quality education.

Connection of supporting claim to the central claim: This supporting claim highlights the value of equal access to education for all members of a developing nation.

| | |
|--|---|
| <p>Evidence: “[B]etter-educated women can undertake higher-value economic activity.” (Ward et al. viii)</p> <p>“With the exceptions of resource-rich Oman, Bahrain and Saudi Arabia, no country has achieved both GDP per capita of over \$10,000 and a ratio of girls to boys in primary education of less than 90 per cent.” (Ward et al. viii)</p> | <p>Reasoning: <i>How does the evidence support your claim?</i></p> <p>This evidence supports the claim by providing a logical reason why education would support economic prosperity (higher-value activity), and providing a statistic linking education and economic prosperity in the vast majority of countries.</p> |
|--|---|

Supporting claim: Equal access to quality education results in wealth not only for countries as a whole but also for the individuals who live in these countries.

Connection of supporting claim to the central claim: This supporting claim highlights the connection between education and individual economic growth, which, in turn, supports national economic growth.

| | |
|--|--|
| <p>Evidence:</p> <p>“Product markets are more competitive if all would-be entrepreneurs can use their talents.” (Ward et al. ix)</p> <p>“A more productive workforce, through greater equality in employment and education, increases expected rates of return, which in turn generates a modest increase in investment and promotes growth.” (Ward et al. ix)</p> | <p>Reasoning: <i>How does the evidence support your claim?</i></p> <p>Education creates a positive feedback loop; people become educated, refine their talents, compete with one another, attract investors, increase domestic prosperity, create more wealth at the individual level, become educated potential investors themselves, and in turn incentivize education and the development of talent to perpetuate the cycle.</p> |
| <p>Supporting claim:</p> <p>A developing nation must also seek out communication to foster productive competition within the nation, and technology plays a vital role; in order for communication to take place on a larger scale and contribute to economic growth, all citizens must have access to technology.</p> | |
| <p>Connection of supporting claim to the central claim:</p> <p>This supporting claim highlights the importance of technology for all citizens in order for national economic growth to occur.</p> | |
| <p>Evidence:</p> <p>“[D]eploying broadband networks at the community and municipal levels has become an important factor in allowing local businesses to grow and remain competitive.” (Qiang et al. 38)</p> <p>Broadband Internet access has also helped individual workers in developing nations “acquire skills (increasing their marketability as workers) and develop social networks through broadband-enabled Web applications, facilitating peer-to-peer communities and their integration with the economy” (Qiang et al. 36).</p> | <p>Reasoning: <i>How does the evidence support your claim?</i></p> <p>This evidence supports the claim by pointing to the direct benefits of broadband Internet access deployed throughout developing nations and the positive economic implications.</p> |
| <p>Counterclaim (to the central claim):</p> | |
| <p>Supporting claim (for the counterclaim):</p> | |

| | |
|---|---|
| Evidence: | Reasoning: <i>How does this evidence support the counterclaim?</i> |
| Supporting claim (for the counterclaim): | |
| Evidence: | Reasoning: <i>How does this evidence support the counterclaim?</i> |
| Limitation of the counterclaim: | |
| <p>[Conclusion]</p> <p>Restate central claim:</p> <p>The future wellbeing of developing nations depends on investment in human capital. When everyone has equal access to quality education and technology, skilled workers will thrive at their fullest, and economies will grow.</p> | |

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12.3.2 Rubric

____ / ____ (Total points)

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|--|--|---|---|--|
| Command of Evidence and Reasoning The extent to which the response develops claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. CCSS.ELA-Literacy.W.11-12.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. CCSS.ELA-Literacy.W.11-12.1.b Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. | Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that precisely anticipates the audience's knowledge level, concerns, values, and possible biases. (W.11-12.1.b) | Develop claim(s) and counterclaims fairly, supplying relevant evidence for each while pointing out the strengths and limitations of both in a manner that accurately anticipates the audience's knowledge level, concerns, values, and possible biases. (W.11-12.1.b) | Partially develop claim(s) and counterclaims, supplying weak evidence for each while pointing out the strengths and limitations of both in a manner that anticipates with partial accuracy the audience's knowledge level, concerns, values, and possible biases. (W.11-12.1.b) | Minimally develop claim(s) and counterclaims, supplying little evidence for each while pointing out the strengths and limitations of either in a manner that inaccurately anticipates the audience's knowledge level, concerns, values, and possible biases. (W.11-12.1.b) |
| Command of Evidence and Reasoning The extent to which the response demonstrates the use of relevant | Skillfully demonstrates the use of relevant information from multiple authoritative print and digital sources, using advanced searches effectively; thorough assessment of the strengths | Demonstrates the use of relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assessment of the strengths and | Somewhat effectively demonstrates the use of relevant information from multiple authoritative print and digital sources, using advanced searches; partial assessment of the strengths | Ineffectively demonstrates the use of relevant information from multiple authoritative print and digital sources, using advanced searches effectively; insufficient assessment of the |

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|--|---|--|--|--|
| <p>information from multiple authoritative print and digital sources, using advanced searches effectively; assessment of the strengths and limitations of each source in terms of the task, purpose, and audience; selective integration of information into the text to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p>CCSS.ELA-Literacy.W.11-12.8</p> <p>Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> | <p>and limitations of each source in terms of the task, purpose, and audience; skillful and selective integration of information into the text to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and consistently following a standard format for citation.</p> | <p>limitations of each source in terms of the task, purpose, and audience; skillful and selective integration of information into the text to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> | <p>and limitations of each source in terms of the task, purpose, and audience; somewhat effective integration of information into the text to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and inconsistently following a standard format for citation.</p> | <p>strengths and limitations of each source in terms of the task, purpose, and audience; ineffective integration of information into the text to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and rarely following a standard format for citation.</p> |
| <p>Coherence, Organization, and Style</p> <p>The extent to which the response introduces precise, knowledgeable claim(s), establishes the significance of the claim(s), distinguishes the claim(s) from alternate or opposing claims, and organizes claim(s), counterclaims, reasons, and evidence, establishing clear</p> | <p>Skillfully introduce precise, knowledgeable claim(s), thoroughly establish the significance of the claim(s), precisely distinguish the claim(s) from alternate or opposing claims, and skillfully organize claim(s), counterclaims, reasons, and evidence, establishing clear and logical relationships among all components. (W.11-12.1.a)</p> <p>Skillfully and consistently use precise</p> | <p>Introduce knowledgeable claim(s) appropriate to the topic, establish the significance of the claim(s), clearly distinguish the claim(s) from alternate or opposing claims, and organize claim(s), counterclaims, reasons, and evidence, establishing relationships among all components. (W.11-12.1.a)</p> <p>Consistently use appropriate words, phrases, and clauses as well as varied syntax to link the major sections of</p> | <p>Introduce somewhat knowledgeable claim(s), partially establish the significance of the claim(s), imprecisely distinguish the claim(s) from alternate or opposing claims, and somewhat effectively organize claim(s), counterclaims, reasons, and evidence, establishing relationships among some components. (W.11-12.1.a)</p> <p>Inconsistently use appropriate words,</p> | <p>Lack knowledgeable claim(s) or introduce problematic claim(s), minimally establish the significance of the claim(s), insufficiently distinguish the claim(s) from alternate or opposing claims, and ineffectively organize claim(s), counterclaims, reasons, and evidence, such that relationships among components are unclear. (W.11-12.1.a)</p> <p>Use improper words, phrases, or</p> |

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|--|---|---|--|--|
| <p>relationships among all components.</p> <p>CCSS.ELA-Literacy.W.11-12.1</p> <p>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <p>CCSS.ELA-Literacy.W.11-12.1.a</p> <p>Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.</p> <p>The extent to which the response uses words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships among the components of the argument.</p> <p>CCSS.ELA-Literacy.W.11-12.1.c</p> <p>Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.</p> <p>The extent to which the response establishes and maintains a</p> | <p>words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships among the components of the argument. (W.11-12.1.c)</p> <p>Skillfully establish and maintain a formal style and objective tone that is appropriate for the norms and conventions of the discipline. (W.11-12.1.d)</p> <p>Provide a concluding statement or section that clearly follows from and skillfully supports the argument presented. (W.11-12.1.e)</p> | <p>the text, create cohesion, and clarify the relationships among the components of the argument. (W.11-12.1.c)</p> <p>Establish a formal style and objective tone that is appropriate for the norms and conventions of the discipline. (W.11-12.1.d)</p> <p>Provide a concluding statement or section that follows from and supports the argument presented. (W.11-12.1.e)</p> | <p>phrases, and clauses as well as varied syntax to link the major sections of the text, creating limited cohesion or clarity in the relationships among the components of the argument. (W.11-12.1.c)</p> <p>Establish but fail to maintain a formal style and objective tone that is appropriate for the norms and conventions of the discipline. (W.11-12.1.d)</p> <p>Provide a concluding statement or section that loosely follows from and so ineffectively supports the argument presented. (W.11-12.1.e)</p> | <p>clauses as well as unvaried syntax to link the major sections of the text, creating incoherent or unclear relationships among the components of the argument. (W.11-12.1.c)</p> <p>Lack a formal style or objective tone that adheres to the norms and conventions of the discipline. (W.11-12.1.d)</p> <p>Provide a concluding statement or section that does not follow from or support the argument presented. (W.11-12.1.e)</p> |

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|--|---|---|--|--|
| <p>formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.</p> <p>CCSS.ELA-Literacy.W.11-12.1.d</p> <p>Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.</p> <p>The extent to which the response provides a concluding statement or section that follows from and supports the argument presented.</p> <p>CCSS.ELA-Literacy.W.11-12.1.e</p> <p>Provide a concluding statement or section that follows from and supports the argument presented.</p> | | | | |
| <p>Coherence, Organization, and Style</p> <p>The extent to which the response develops and strengthens writing during the writing process, addressing what is most significant for the specific purpose and audience.</p> <p>CCSS.ELA-Literacy.W.11-12.5</p> <p>Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.</p> | Thoroughly develop and strengthen writing during the writing process, skillfully addressing what is most significant for the specific purpose and audience. | Develop and strengthen writing during the writing process, addressing what is most significant for the specific purpose and audience. | Partially develop and strengthen writing during the writing process, somewhat effectively addressing what is most significant for the specific purpose and audience. | Insufficiently develop and strengthen writing during the writing process, ineffectively addressing what is most significant for the specific purpose and audience. |

| Criteria | 4 – Responses at this Level: | 3 – Responses at this Level: | 2 – Responses at this Level: | 1 – Responses at this Level: |
|---|--|---|---|---|
| Control of Conventions The extent to which the response demonstrates command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling. CCSS.ELA-Literacy.L.11-12.1 CCSS.ELA-Literacy.L.11-12.2 Demonstrate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling when writing or speaking. | Demonstrate skillful command of conventions with no grammar, usage, capitalization, punctuation, or spelling errors. | Demonstrate command of conventions with occasional grammar, usage, capitalization, punctuation, or spelling errors that do not hinder comprehension. | Demonstrate partial command of conventions with several grammar, usage, capitalization, punctuation, or spelling errors that hinder comprehension. | Demonstrate insufficient command of conventions with frequent grammar, usage, capitalization, punctuation, or spelling errors that make comprehension difficult. |
| Control of Conventions The extent to which the response applies knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. CCSS.ELA-Literacy.L.11-12.3 Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. | Skillfully apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. | Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. | Somewhat effectively apply knowledge of language to understand how language functions in different contexts, to make somewhat effective choices for meaning or style, and to comprehend more fully when reading or listening. | Ineffectively apply knowledge of language, failing to understand how language functions in different contexts, making ineffective choices for meaning or style, and failing to comprehend more fully when reading or listening. |

- A response that is a personal response and makes little or no reference to the task or text can be scored no higher than a 1.
- A response that is totally copied from the text with no original writing must be given a 0.
- A response that is totally unrelated to the task, illegible, incoherent, blank, or unrecognizable as English must be scored as a 0.

12.3.2 Checklist

Assessed Standards: _____

| | Does my response... | ✓ |
|---|---|--------------------------|
| Command of Evidence and Reasoning | Develop claim(s) and counterclaims by supplying the most relevant evidence for each? (W.11-12.1.b) | <input type="checkbox"/> |
| | Point out the strengths and limitations of both claim(s) and counterclaims? (W.11-12.1.b) | <input type="checkbox"/> |
| | Anticipate and address the audience's knowledge level, concerns, values, and possible biases? (W.11-12.1.b) | <input type="checkbox"/> |
| | Develop the topic with the most significant and relevant textual evidence? (W.11-12.2.b) | <input type="checkbox"/> |
| | Demonstrate the use of relevant information from multiple authoritative print and digital sources, using advanced searches effectively? (W.11-12.W.8) | <input type="checkbox"/> |
| | Assess the strengths and limitations of each source in terms of the task, purpose, and audience? (W.11-12.W.8) | <input type="checkbox"/> |
| Coherence, Organization, and Style | Introduce precise, knowledgeable claim(s) and establish the significance of the claim(s)? (W.11-12.1.a) | <input type="checkbox"/> |
| | Distinguish the claim(s) from alternate or opposing claims? (W.11-12.1.a) | <input type="checkbox"/> |
| | Create an organization that logically sequences claim(s), counterclaims, reasons and evidence? (W.11-12.1.a) | <input type="checkbox"/> |
| | Use words, phrases, and clauses as well as varied syntax to link the major sections of the text and create cohesion? (W.11-12.1.c) | <input type="checkbox"/> |
| | Use words, phrases, and clauses as well as varied syntax to clarify the relationships between claims(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims? (W.11-12.1.c) | <input type="checkbox"/> |
| | Establish a formal style and objective tone that is appropriate for the norms and conventions of the discipline? (W.11-12.1.d) | <input type="checkbox"/> |
| | Provide a concluding statement or section that follows from and supports the argument presented? (W.11-12.1.e) | <input type="checkbox"/> |

| | | |
|-------------------------------|--|--------------------------|
| | Develop and strengthen writing during the writing process, addressing what is most significant for the specific purpose and audience? (W.11-12.5) | <input type="checkbox"/> |
| Control of Conventions | Demonstrate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling? (L.11-12.1, L.11-12.2) | <input type="checkbox"/> |
| | Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening? (W.11-12.L.3) | <input type="checkbox"/> |

Additional Evidence Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Choose one supporting claim from your Outline Tool that requires stronger or more relevant evidence. Record the source, the new evidence, and why the evidence provides additional support for your claim.

Claim:

Source:

Evidence:

Reasoning: *How does the evidence provide additional support for your claim?*

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Model Additional Evidence Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Choose one supporting claim from your Outline Tool that requires stronger or more relevant evidence. Record the source, the new evidence, and why the evidence provides additional support for your claim.

Claim: Increasing access to high-speed Internet is not only a supplement to quality education in the classroom; it becomes a source of education itself, offering vital social interaction between all citizens of a nation regardless of gender or race.

Source: Qiang et al.

| | |
|--|---|
| <p>Evidence:</p> <p>Broadband Internet access has also helped individual workers in developing nations “acquire skills (increasing their marketability as workers) and develop social networks through broadband-enabled Web applications, facilitating peer-to-peer communities and their integration with the economy” (Qiang et al. 36).</p> | <p>Reasoning: <i>How does the evidence provide additional support for your claim?</i></p> <p>Facilitating peer-to-peer communities and increasing access to information becomes a source of education, and the skills people gain as a result (first by learning to use the Internet and then by having access to information and dialogue) help them integrate more effectively and equally into the economy.</p> |
|--|---|

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12.3.2**Lesson 2****Introduction**

In this lesson, students continue to plan for their research-based argument papers by completing the outline they began in 12.3.2 Lesson 1. Using their outlines, students develop a counterclaim in opposition to their central claim developed in 12.3.2 Lesson 1. Students then address the strengths and limitations of the counterclaim. Student learning is assessed via a Quick Write at the end of the lesson: Explain your counterclaim and two pieces of relevant evidence for that counterclaim. Additionally, explain the strengths and limitations of your counterclaim.

For homework, students search for another source to gather stronger or more relevant evidence for a counterclaim on their outline, and provide reasoning that explains how this evidence supports their counterclaim. Students then record their evidence and reasoning on the Additional Evidence Tool.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.5 | Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. |
| W.11-12.9 | Draw evidence from literary or informational texts to support analysis, reflection, and research. |
| Addressed Standard(s) | |
| W.11-12.1.b | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. |
| W.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating |

| | |
|--|---|
| | understanding of the subject under investigation. |
|--|---|

Assessment

Assessment(s)

Student learning is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt.

- Explain your counterclaim and two pieces of relevant evidence for that counterclaim. Additionally, explain the strengths and limitations of your counterclaim.

 This Quick Write will be assessed using the W.11-12.1.b portion of the 12.3.2 Rubric.

High Performance Response(s)

A High Performance Response should:

- Identify a counterclaim (e.g., Some scholars and policymakers argue that although education and technology are important in the development of a more robust economy, they are not the most important pieces in this complicated puzzle. After all, in order for nations to make these types of investments in the first place, there must be some amount of foundational stability and reliable governance.).
- Identify two pieces of relevant evidence for the counterclaim (e.g., Some countries are stuck in “a poverty trap, with local and national economies too poor to make the needed investments” (Sachs et al. 29). This piece of evidence supports the counterclaim because if a country is too poor to build and maintain solid educational and technological infrastructure, these items cannot be made a priority in economic development. Also, in rural, impoverished areas, “[c]hildren are ‘economic assets’ on the farm, and many of them, especially girls, do not attend school because they are home performing household work” (Sachs et al. 32). This evidence also supports the counterclaim because it demonstrates that education may not be a profitable investment when children are needed to work at home, so countries are forced to prioritize work over education.).
- Explain the strengths and limitations of the counterclaim (e.g., This counterclaim does not acknowledge the importance of education in creating foundational stability and reliable governance. A nation cannot institute a reliable government if there is not an informed and educated populace to comprise and hold that government accountable.).

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*Students should incorporate relevant academic and/or domain-specific vocabulary from 12.3.1 into their research-based argument papers.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|---|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.5, W.11-12.9, W.11-12.1.b, W.11-12.7 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Developing Counterclaims Strengths and Limitations Outline Quick Write Closing | <ol style="list-style-type: none"> 5% 10% 20% 30% 20% 10% 5% |

Materials

- Student copies of the Additional Evidence Tool (refer to 12.3.2 Lesson 1)—students may need additional blank copies
- Student copies of the Outline Tool (refer to 12.3.2 Lesson 1) (optional)—students may need additional blank copies
- Student copies of the Evidence-Based Claims Criteria Checklist (refer to 12.3.1 Lesson 23) (optional)

- Student copies of the 12.3.2 Rubric and Checklist (refer to 12.3.2 Lesson 1)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standards for this lesson: W.11-12.5 and W.11-12.9. Explain that in this lesson, students develop counterclaims and integrate additional evidence and reasoning into their outlines from the previous lesson.

- Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Search for another source to gather stronger or more relevant evidence for a supporting claim on your outline, and provide reasoning that explains how this evidence supports the claim. Record the evidence and reasoning on the Additional Evidence Tool. Be sure to use your Organizing Evidence-Based Claims Tool to support the analysis.) Instruct students to talk in pairs and discuss the resource and evidence they found and recorded on the Additional Evidence Tool.

- 💬 Student responses vary according to the research conducted.

❗ Consider posting the Model Additional Evidence Tool as a reminder of an exemplary response.

Instruct students to talk in pairs and discuss how they intend to organize their essays, as well as how they organized their supporting claims, evidence, and reasoning on their outlines.

- 💬 Student responses vary according to the research conducted.

Activity 3: Developing Counterclaims

20%

Explain to students that in this lesson, they develop both a counterclaim to their central claim and supporting claims for the counterclaim.

- ▶ Students follow along.

- ① Remind students that they developed counterclaims in 12.3.1 Lesson 24. Consider reviewing standard W.11-12.1.b about the development of claims and counterclaims, and using the Forming Counterclaims Tool from 12.3.1 Lesson 24 to support student learning in this lesson.

Explain to students that in order to present a balanced perspective in the research-based argument paper, it is necessary to develop a counterclaim to an existing central claim. Incorporating a strong counterclaim in the research-based argument paper demonstrates to the audience that the writer has addressed opposing or divergent perspectives.

Display the following example of a central claim and a counterclaim.

- **Central claim:** The most effective way for developing nations to become more prosperous is by investing in human capital, providing quality education and technology to all citizens, regardless of gender or race.
- **Counterclaim:** Some scholars and policymakers argue that although education and technology are important in the development of a more robust economy, they are not the most important pieces in this complicated puzzle. After all, in order for nations to make these types of investments in the first place, there must be some amount of foundational stability and reliable governance.

Instruct students to briefly Turn-and-Talk in pairs to discuss the following question about the relationship between the claim and counterclaim.

How does the counterclaim refute the central claim?

- 💬 The counterclaim suggests that some critics believe that the most important aspect of developing a robust economy is establishing foundational infrastructure. These critics argue that before education and technology are implemented, there must be a foundational amount of wealth and reliable government.

Lead a brief whole-class discussion of student responses.

Instruct students to form pairs to review their central claims on the outline and form a counterclaim to their central claim. Remind students to refer to their research materials if necessary. Remind students that if they have several counterclaims to consider, they should think about which counterclaim would provide a more interesting or compelling exploration of the issue.

- ▶ Student pairs review their research materials and develop counterclaims on their outlines.
- 💬 Student responses vary based on their individual problem-based questions and research. See the Model Outline Tool for a potential counterclaim.

① **Differentiation Consideration:** Consider instructing students who began using the Outline Tool in 12.3.2 Lesson 1 that they may continue to use the tool in this lesson.

Explain to students that presenting a counterclaim fairly means developing supporting claims and providing evidence as they would when developing a central claim.

- ▶ Students listen.

Display the following supporting claims for students.

- **Model counterclaim:** Some scholars and policymakers argue that although education and technology are important in the development of a more robust economy, they are not the most important pieces in this complicated puzzle. After all, in order for nations to make these types of investments in the first place, there must be some amount of foundational stability and reliable governance.
- **Supporting counterclaim:** Others may argue that good health comes before education and technology. In order to invest in human capital through education and technology, humans themselves must be healthy.
- **Supporting counterclaim:** Economic development fails if a government cannot uphold its own rule of law or even begin to institute its ideal policies in the first place.
- **Supporting counterclaim:** It is impossible to educate everyone.

Ask student pairs to discuss the following question:

Which of the examples above best supports the counterclaim and why? Which example does not effectively support the counterclaim and why?

- 💬 Student responses may include:
 - The first supporting counterclaim is the strongest because it argues why education and technology cannot be a top priority; people must first be healthy before they are educated.
 - The second supporting counterclaim is strong because it relates directly to the counterclaim and supports it with logic: If there is no foundation, how can one begin to build?
 - The third supporting counterclaim does not follow the logic of the other two claims and there is no evidence to support it.

① **Differentiation Consideration:** If students require additional support with developing counterclaims, consider revisiting the focus excerpts of Jared Diamond's *Guns, Germs, and Steel* in order to examine Diamond's counterclaims. Students analyzed Diamond's counterclaims in 12.3.1 Lesson 13.

- ① Consider instructing students to review their Evidence-Based Claims Criteria Checklist in order to provide more scaffolding to determine if the claim and counterclaim are well developed.

Remind students that in addition to their claims in support of the counterclaim, they should provide evidence from their research materials and demonstrate reasoning.

- Students follow along.

Activity 4: Strengths and Limitations

30%

Explain to students that as they develop the supporting claims for the counterclaim, they are deliberately questioning their original central claim. Inform students that it is important to question the argument's central claim as rigorously as possible, pointing out the strengths of each counterclaim before highlighting the counterclaim's limitations. Remind students that in doing so, they are strengthening their own argument by assuring the reader all other arguments have been considered and dismissed on the basis of their limitations.

- ① Consider reminding students of their work with identifying Diamond's counterclaims and analyzing the counterclaims' limitations in *Guns, Germs, and Steel* in 12.3.1 Lesson 13.

Post or project a model supporting counterclaim, evidence, and reasoning for the model counterclaim above:

- **Model supporting counterclaim:** Others may argue that good health comes before education and technology. In order to invest in human capital through education and technology, the humans themselves must be healthy.
- **Model supporting evidence:** In very poor countries, “[l]ife expectancy is less than 50 years (as opposed to 80 years in high-income countries), and child mortality is 100 per 1,000 live births or higher ... Infectious diseases are rife” (Sachs et al. 33).
- **Reasoning connecting evidence to supporting counterclaim:** How can people begin to take advantage of a quality education system if they are suffering from disease? Investing in human capital through equal and affordable health care is more important or effective than education, insofar as able minds rely on able bodies.

Explain to students that an effective counterclaim requires supporting counterclaims and evidence to oppose the central claim effectively. Supporting counterclaims and relevant evidence bolsters the strength of the counterclaim, and ultimately the strength of the argument overall.

Ask students:

How does the model supporting counterclaim demonstrate the strength of the model counterclaim above?

- ☞ The supporting counterclaim strengthens the counterclaim by making a specific assertion, that health care should take priority over education and technology because it is difficult to educate an ailing and diseased population with a short lifespan.

Remind students that while a counterclaim may have strong supporting counterclaims and the evidence may be sound, there may be also be limitations, or points the author does not consider or does not develop fully or effectively. Explain to students that pointing out these flaws or weaknesses in a counterclaim creates an opportunity for the writer to reassert the strength of the argument's central and supporting claims, thereby advancing the argument.

① Remind students they were introduced to *limitations* in 12.3.1 Lesson 13.

Ask students:

What is a potential limitation of the model supporting counterclaim?

- ☞ A limitation of this perspective is that it does not take into account the interrelatedness of health care and education. Investing in education leads a greater number of professionals to develop and facilitate advanced health care to the population, which in turn yields healthier citizens who may participate in education and contribute to the economic health of the nation.

Explain to students that it is important to include their analysis of the strengths and limitations of the counterclaim in their outlines so they can easily integrate it into the paper in subsequent lessons.

- ▶ Students listen and follow along.

Activity 5: Outline

20%

Instruct students to work individually to organize the claims and evidence in their outlines, using a method that makes sense to them. Remind students that everyone has a slightly different method for outlining their paper and organizing their thoughts, but everyone should apply all the elements discussed in today's lesson: counterclaims, supporting claims, and the strengths and limitations of each. Remind students that they worked to develop central and supporting claims in the previous lesson, and they should now work on outlining their counterclaims, evidence, and reasoning.

- ① Consider reminding students of the research writing skills inherent in W.11-12.7, which include conducting short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrowing or broaden the inquiry when appropriate; synthesizing multiple sources on the subject, and demonstrating understanding of the subject under investigation.
- ▶ Students independently work to add counterclaims, supporting claims, evidence, and the strengths and limitations of the claims to their outlines.

Activity 6: Quick Write

10%

Instruct students to respond briefly in writing to the following prompt:

Explain your counterclaim and two pieces of relevant evidence for that counterclaim. Additionally, explain the strengths and limitations of your counterclaim.

Instruct students to follow their outlines to develop their written responses. Remind students to use the W.11-12.1.b portion of the 12.3.2 Rubric and Checklist to guide their written responses. Remind students to practice the skills outlined in W.11-12.4, which include producing clear, coherent writing that employs organization and style appropriate to the task, purpose, and audience, and to which they were introduced in Module 12.1.

- ▶ Students listen and read the Quick Write prompt.

① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt using their outline and the W.11.12.1.b portion of the 12.3.2 Rubric and Checklist to guide their responses.
- 💬 See the High Performance Response at the beginning of this lesson.

Activity 7: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to search for another source to gather stronger or more relevant evidence for a counterclaim on their outline, and provide reasoning that explains how this evidence supports their counterclaim. Instruct students to then record their evidence and reasoning on the Additional Evidence Tool.

- ▶ Students follow along.

Homework

Search for another source to gather stronger or more relevant evidence for a counterclaim on your outline, and provide reasoning that explains how this evidence supports your counterclaim. Record the evidence and reasoning on the Additional Evidence Tool.

Model Outline Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Organize your claims below. State the connection of each supporting claim to the central claim, and then provide sufficient and relevant evidence and reasoning to support each claim. Finally, provide a strong counterclaim that challenges your central claim. Include supporting claims, evidence, and limitations of the counterclaim.

[Introduction]

Problem-based question: What is the most effective way for a developing nation to increase its economic prosperity?

Central claim: The most effective way for developing nations to become more prosperous is by investing in human capital, providing quality education and technology to all citizens, regardless of gender or race.

[Body]

Supporting claim: For developing nations to prosper, men and women of all races must have equal access to quality education.

Connection of supporting claim to the central claim: This supporting claim highlights the value of equal access to education for all members of a developing nation.

| | |
|--|--|
| <p>Evidence: “[B]etter-educated women can undertake higher-value economic activity.” (Ward et al. viii)</p> <p>“With the exceptions of resource-rich Oman, Bahrain and Saudi Arabia, no country has achieved both GDP per capita of over \$10,000 and a ratio of girls to boys in primary education of less than 90 per cent.” (Ward et al. viii)</p> | <p>Reasoning: <i>How does the evidence support your claim?</i></p> <p>This evidence supports the claim by providing a logical reason why education would support economic prosperity (higher-value activity), and also providing a statistic linking education and economic prosperity in the vast majority of countries.</p> |
|--|--|

Supporting claim: Equal access to quality education results in wealth not only for countries as a whole, but also for the individuals who live in these countries.

Connection of supporting claim to central claim: This supporting claim highlights the connection between education and individual economic growth, which in turn supports national economic growth.

| | |
|---|--|
| <p>Evidence: “Product markets are more competitive if all would-be entrepreneurs can use their talents.” (Ward et al. ix)</p> <p>“A more productive workforce, through greater equality in employment and education, increases expected rates of return, which in turn generates a modest increase investment and promotes growth.” (Ward et al. ix)</p> | <p>Reasoning: <i>How does the evidence support your claim?</i></p> <p>Education creates a positive feedback loop; people become educated, refine their talents, compete with one another, attract investors, increase domestic prosperity, create more wealth at the individual level, become educated potential investors themselves, and in turn incentivize education and the development of talent to perpetuate the cycle.</p> |
| <p>Supporting claim:</p> <p>A developing nation must also seek out communication to foster productive competition within the nation, and technology plays a vital role; in order for communication to take place on a larger scale and contribute to economic growth, all citizens must have access to technology.</p> | |
| <p>Connection of supporting claim to central claim:</p> <p>This supporting claim highlights the importance of technology for all citizens in order for national economic growth to occur.</p> | |
| <p>Evidence: “[D]eploying broadband networks at the community and municipal levels has become an important factor in allowing local businesses to grow and remain competitive.” (Qiang et al. 38)</p> <p>Broadband Internet access has also helped individual workers in developing nations “acquire skills (increasing their marketability as workers) and develop social networks through broadband-enabled Web applications, facilitating peer-to-peer communities and their integration with the economy” (Qiang et al. 36).</p> | <p>Reasoning: <i>How does the evidence support your claim?</i></p> <p>This evidence supports the claim by pointing to the direct benefits of broadband Internet access deployed throughout developing nations and the positive economic implications.</p> |
| <p>Counterclaim (to the central claim):</p> <p>Some scholars and policymakers argue that although education and technology are important in the development of a more robust economy, they are not the most important pieces in this complicated puzzle. Economic development fails if a government cannot uphold its own rule of law or even begin to institute its ideal policies in the first place.</p> | |
| <p>Supporting claim (for the counterclaim):</p> <p>If there is no foundation for equality in the first place, such as a constitution declaring all citizens equal and a legal infrastructure to uphold that law, all the benefits of instituting education and technology will be limited to the privileged and ultimately remain ineffective on a large economic scale.</p> | |

| | |
|--|---|
| <p>Evidence: “In many places, access to public goods and services is restricted for certain groups. Minority groups, for their language, religion, or race, suffer discrimination at the hands of more powerful groups.” (Sachs et al. 31)</p> | <p>Reasoning: <i>How does this evidence support the counterclaim?</i></p> <p>If access to public goods is still restricted for certain groups, investing in education and technology will only be investing more in the rich majority.</p> |
| <p>Supporting claim (for the counterclaim):</p> <p>Without proper governance, legal infrastructure, a baseline amount of wealth, and basic health care needs met, a suffering population will not benefit from the luxuries of the classroom or technology.</p> | |
| <p>Evidence: To end this poverty trap, a country must “raise the economy’s capital stock—in infrastructure, human capital, and public administration—to the point where the downward spiral ends and self-sustaining economic growth takes over. This requires a ‘big push’ of basic investments ... in key infrastructure (roads, electricity, ports, water and sanitation, accessible land for affordable housing, environmental management), human capital (nutrition, disease control ...) and public administration” (Sachs et al. 39).</p> | <p>Reasoning: <i>How does this evidence support the counterclaim?</i></p> <p>These basic investments—that is, key infrastructure and sanitation, accessible land for affordable housing, human capital, and public administration—take precedence over education and technology.</p> |
| <p>Limitation of the counterclaim:</p> <p>Basic necessities and government infrastructure are important for economic development, but they are not the primary foundational elements of a long-term solution. Education is necessary for an educated citizenry, which gives birth to and sustains reliable governance. Reliable and strong government infrastructure cannot be supplied from outside the country. Also, a country needs technology in order to deliver basic necessities like clean water. To sustain an infrastructure that delivers basic necessities, a population must be educated.</p> | |
| <p>[Conclusion]</p> <p>Restate central claim:</p> <p>The future wellbeing of developing nations depends on investment in human capital. When everyone has equal access to quality education and technology, skilled workers will thrive at their fullest, and economies will grow.</p> | |

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Model Additional Evidence Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Choose one supporting claim from your Outline Tool that requires stronger or more relevant evidence. Record the source, the new evidence, and why the evidence provides additional support for your claim.

Claim: Health care is most important for developing nations. In order to invest in human capital through education and technology, the humans themselves must be healthy.

Source: Sachs et al.

Evidence: In very poor countries, “[I]f life expectancy is less than 50 years (as opposed to 80 years in high-income countries), and child mortality is 100 per 1,000 live births or higher... Infectious diseases are rife” (Sachs et al. 33).

Reasoning: *How does the evidence provide additional support for your claim?*

How can people begin to take advantage of a quality education system if they are suffering from disease? This line of reasoning leads one to the conclusion that investing in human capital through equal and affordable health care is more important or effective than education, insofar as able minds rely on able bodies.

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12.3.2**Lesson 3****Introduction**

In this lesson, students learn how to integrate citation information into their research-based argument paper effectively to maintain the flow of ideas, avoid plagiarism, and follow a standard format for citation. Students learn Modern Language Association (MLA) conventions for in-text citation as well as for a works cited page. Drafting the works cited page, which is integral to the creation of any research paper, helps students to avoid plagiarism. Student learning is assessed via completion of a works cited page at the end of the lesson.

For homework, students insert in-text citations for each source of evidence listed on their outline from 12.3.2 Lessons 1 and 2.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| Addressed Standard(s) | |
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |

Assessment

| Assessment(s) |
|--|
| <p>Student learning is assessed via completion of a works cited page at the end of the lesson.</p> <p>① The works cited page is assessed using the MLA Citation Handout and the W.11-12.8 portion of the 12.3.2 Rubric. Students should properly cite references using MLA guidelines.</p> |

High Performance Response(s)

A High Performance Response should:

- Demonstrate adherence to MLA formatting for a variety of source types (e.g., Smith, Joe. "Joe Smith's Theory of the Universe." *Universe Theories* 20 Apr. 1989: pp. 100–109. Print.).

① See the works cited page from the Sample Student Research-Based Argument Paper found in 12.3.2 Lesson 11.

Vocabulary

Vocabulary to provide directly (will not include extended instruction)

- None.*

Vocabulary to teach (may include direct word work and/or questions)

- None.*

Additional vocabulary to support English Language Learners (to provide directly)

- None.*

*Students should incorporate relevant academic and/or domain-specific vocabulary from 12.3.1 into their research-based argument papers.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|---|--|
| Standards: <ul style="list-style-type: none"> • Standards: W.11-12.4, W.11-12.8 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Citation Methods 4. Lesson Assessment 5. Closing | <ol style="list-style-type: none"> 1. 5% 2. 10% 3. 40% 4. 40% 5. 5% |

Materials

- Student copies of the Additional Evidence Tool (refer to 12.3.2 Lesson 1)

- Copies of the MLA Citation Handout for each student
- Student copies of the 12.3.2 Rubric and Checklist (refer to 12.3.2 Lesson 1)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: W.11-12.4. In this lesson, students focus on proper citation methods in a research paper. Explain that the MLA citation style is the format advocated by the Modern Language Association; students use MLA style to cite their references.

- Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Search for another source to gather stronger or more relevant evidence for a counterclaim on your outline, and provide reasoning that explains how this evidence supports your counterclaim. Record the evidence and reasoning on the Additional Evidence Tool.) Instruct students to talk in pairs and share one resource and one piece of evidence they found for homework.

- 💬 Student responses vary according to the research conducted.

❗ Consider posting the Model Additional Evidence Tool as a reminder of an exemplary response.

Activity 3: Citation Methods

40%

In this lesson, students learn how to cite information in MLA format within their papers. Remind students they have gathered information about their issue and have begun to organize it in a way that

supports their central claim. Explain to students that although they are the authors of their own papers, they are drawing on several other authors' ideas in order to make their arguments. Remind students that failing to give other authors credit when referencing their work is called *plagiarism*.

Explain that plagiarism is taking someone else's work or ideas and passing it off as one's own. Plagiarism is an ethical offense, and can often result in serious consequences. Explain to students that in addition to resulting in academic or legal consequences, plagiarism is counterproductive to the learning process, as stealing someone else's ideas will not build the deep understanding that results from learning on one's own.

- ▶ Students listen.

① Remind students of their work with the term *plagiarism* in 12.3.1 Lesson 16.

Explain to students that someone can plagiarize by copying and pasting the exact words from a source without citing the source. Plagiarism also occurs when a writer uses different words to express the same idea as another author (e.g., if someone takes the central claim and evidence from another paper and writes it with different words, it is still plagiarism if the original source is not cited).

Inform students they can avoid plagiarism by always citing works properly. Proper citation gives credit to the author one is quoting, paraphrasing, or referencing.

Provide students with the following definition: *citation* means "quoting or referencing a book, paper, or author."

- ▶ Students listen.

Explain to students that MLA is a specific format for providing citations and references. Distribute the MLA Citation Handout. Instruct students to look at the in-text citation portion of the handout first.

- ▶ Students examine the in-text citation portion of the MLA Citation Handout.

① Consider explaining to students that there are different kinds of citation styles, but for the purposes of the research-based argument paper in an ELA or humanities class, MLA is the preferred style.

Inform students that different disciplines have different preferred citation styles. Consider directing students to the following link for a more detailed discussion of various citation styles:

<http://www.ucla.edu/> (search terms: Getting Help with Citation Style).

Remind students that as they located sources throughout 12.3.1, they compiled the information necessary for proper citation. Inform students that according to the MLA format, following the use of a quote, paraphrase, or idea in their research-based argument papers, students should cite authors by providing the author's last name and a page number (if any) in parentheses. Explain to students that if there are three or fewer authors of one source, they should list all the authors in their parenthetical citations. However, if there are more than three authors, students should include the first author, followed by "et al." This abbreviation is Latin for "and others."

- ▶ Students listen.

Provide students with the following example:

- **More than three authors:** “[D]eploying broadband networks at the community and municipal levels has become an important factor in allowing local businesses to grow and remain competitive.” (Qiang et al. 38)

Explain to students that a reference to a source within a document is called an *in-text citation*. *In-text citations* provide readers with details about where information originated.

Display the following in-text citation formats:

- **If the quote comes from page ix of the article:** “Product markets are more competitive if all would-be entrepreneurs can use their talents.” (Ward et al. ix)
- ① **Differentiation Consideration:** If students do not recognize “ix” as a page number, remind students that some texts use roman numerals for the pages of a book or article.

If no page number is given, the author’s name should suffice.

- **If there is no page number:** “Product markets are more competitive if all would-be entrepreneurs can use their talents.” (Ward et al.)
 - ▶ Students follow along.

Explain to students that if the author’s name already appears in the sentence, the parentheses can simply include a page number.

- **If the quote comes from page ix of the article:** According to Ward et al., “Product markets are more competitive if all would-be entrepreneurs can use their talents” (ix).
- **If there is no page number:** According to Ward et al., “Product markets are more competitive if all would-be entrepreneurs can use their talents.”
- **If there is no page number, but there is more than one article by the same author:** According to Ward et al., “Product markets are more competitive if all would-be entrepreneurs can use their talents” (“Evidence for Action”).
- ① Explain to students that the exact syntax of citation will vary, as above. For example, in the three examples above, the quote could also be cited as follows: “Product markets are more competitive if all would-be entrepreneurs can use their talents” (Ward et al. ix).
- ① **Differentiation Consideration:** Explain to students that in the final example, “Evidence for Action” is the title of the article.

The citation method outlined in the third bullet is also useful for Internet articles and other sources in which the author may not be named explicitly.

- ▶ Students listen.

Explain to students that in some cases, the whole quote is too long for the section, or only a part is relevant to the argument. In this case, students should use the following marks to edit the quote, preserving the original context and meaning:

- Brackets “[]” replace or clarify pronouns, or to replace indirect references with specific references.
- Ellipses “...” replace unnecessary text, such as extraneous phrases and clauses that do not impact the meaning of the quotation.

Share the following original and revised sentences with students.

- **Original:** “A more productive workforce, through greater equality in employment and education, increases expected rates of return, which in turn generates a modest increase investment and promotes growth.” (Ward et al. ix)

Revised: “A more productive workforce ... generates a modest increase investment and promotes growth.” (Ward et al. ix)

- **Original:** “Sometimes these factors occur together, making individual problems all the more challenging to resolve.” (Sachs et al. 29)

Revised: “Sometimes [a poverty trap, uneven progress, and policy neglect] occur together, making individual problems all the more challenging to resolve.” (Sachs et al. 29)

① **Differentiation Consideration:** Students may require additional practice with the specific formatting of in-text quotes and citations. Consider extending this into a longer activity in which students practice citing quotes and paraphrasing their sources.

Finally, inform students that, although it happens rarely, sometimes even authoritative sources have typographical and spelling errors. Inform students that it is best practice not to alter a quote for grammar, spelling, or typographical errors. Instead, if it is necessary to quote a sentence with a spelling error, transcribe the error exactly as it appears in the text, and immediately follow it with the term *sic*, italicized and in brackets. *Sic* is Latin for “thus,” “so,” or “just as that,” and it informs the reader that the quote is an exact reproduction of what appeared in the quoted source.

Provide students with the following example:

- “Across both Africa and Southeast Asia, mothers who have a basic education ate [*sic*] 50% more likely than uneducated mothers to immunize their children.” (Sperling)

Ask students:

What is the mistake in this sentence?

💬 There is a typographical error: *ate* should be *are*.

Direct students' attention to the second portion of the MLA Citation Handout under the heading "Works cited page." Explain to students that a works cited page is the final page of a research paper and is a list of all the sources used to write the paper. Explain to students that the in-text citations direct students to the works cited page where the source's full bibliographic information is listed. Instruct students to look at the example on their handout and notice the formatting differences between different types of sources.

- ▶ Students review the works cited examples on the handout.

Ask students:

What is the purpose of in-text citations?

- 💬 In-text citations provide readers with the exact location of information from a given source when it is referenced in a paper.

What is the purpose of a works cited page?

- 💬 Works cited pages provide extensive details about all cited sources used in the paper.

How are in-text citations related to the works cited page?

- 💬 The in-text citations provide an abbreviated version of the source's information that can be found in the works cited page; the in-text citations lead readers to the source's full information on the works cited page.

Lead a brief whole-class discussion of student responses.

- ① Some students may think that a works cited page is the same thing as a bibliography. Inform students that the two are different: a *works cited page* lists only sources actually cited in a paper, whereas a *bibliography* lists every source used in the preparation of a paper, whether they are cited or not.

Explain to students that different source types necessitate different citation formatting. Note the format used for citing a book:

Last Name, First Name. *Title of Book*. Place of Publication: Publisher, Year of Publication. Medium.

Then, draw students' attention to the difference between this format and that of a website:

Editor, Author, or Compiler Name (if available). Name of Site. Version Number. Name of Institution/Organization Affiliated with Site (Sponsor or Publisher), Date of Resource Creation (if available). Medium. Date of Access.

- ▶ Students examine the different source formatting for a works cited page.

Direct students' attention to the MLA Citation Handout. Lead a brief whole-class discussion of the similarities and differences in the various source-dependent citation formats.

💬 Student responses may include:

- Book citations include author and book name, but periodical articles have to include author, article title, and the name of the periodical.
 - Website citations need to include the entire Web address, the date of creation, and the date the information was accessed.
 - Motion-picture citations list director information instead of author information.
- ① Given the wide variety of source types students may have compiled over the course of their research, citation instruction for each medium may require extensive work. Consider focusing primarily on books or Web publications, providing students with information from the Purdue University Online Writing Lab (OWL) for reference when citing sources: <http://owl.english.purdue.edu> (search term: MLA formatting). Alternatively, depending on the size of the class, consider providing individual instruction for students with atypical sources (e.g., radio interviews).
- ① Information in this activity adheres to MLA style.
- ① Consider reviewing the citation skills outlined in W.11-12.8: integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

Activity 4: Lesson Assessment

40%

Instruct students to gather all the sources they intend to use to write their research-based argument paper. Instruct students to work independently to create a works cited page for their papers, using the MLA Citation Handout and/or the Purdue University Online Writing Lab (OWL) <http://owl.english.purdue.edu> (search term: MLA Formatting) as a guide. Additionally, instruct students to use the 12.3.2 Rubric and Checklist as a guide for the Works Cited page.

- ▶ Students independently create their works cited pages.
- ① Collect students' works cited pages for assessment purposes.
- ① Remind students that as they draft and revise their papers, their sources used may or may not be listed in this initial draft of the works cited page. Explain to students that they will update this works cited page once they have published their final drafts to ensure that all in-text citations match the sources listed in the final version of the works cited page.

Activity 5: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to insert in-text citations for each source of evidence listed on their outline from 12.3.2 Lessons 1 and 2. Remind students these in-text citations should directly correspond with the works cited page they created for this lesson's assessment and that they should refer to the MLA Citation Handout for the correct citation format.

- ▶ Students follow along.

Homework

Insert in-text citations for each source of evidence listed on your outline from 12.3.2 Lessons 1 and 2.

MLA Citation Handout

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

In-text citations

For in-text citations for an online source, use the following as examples:

- (page numbers provided) "Product markets are more competitive if all would-be entrepreneurs can use their talents." (Ward et al. ix)
- (page numbers provided) According to Ward et al., "Product markets are more competitive if all would-be entrepreneurs can use their talents" (ix).
- (no page numbers) "Product markets are more competitive if all would-be entrepreneurs can use their talents." (Ward et al.)
- (no page numbers) According to Ward et al., "Product markets are more competitive if all would-be entrepreneurs can use their talents."
- (more than three authors) "[D]eploying broadband networks at the community and municipal levels has become an important factor in allowing local businesses to grow and remain competitive." (Qiang et al. 38)

Works cited page

Below are the different citation methods for various forms of media. If the citation extends past one line, indent the second and subsequent lines half an inch.

Book

Basic format:

Last Name, First Name. *Title of Book*. Place of Publication: Publisher, Year of Publication. Medium.

Example:

Smith, Joe. *Joe Smith's Theory of the Universe*. New York: Books Limited, 2013. Print.

Magazine

Basic format:

Last Name, First name. "Title of Article." *Title of Periodical* Day Month Year: Pages. Medium.

Example:

Smith, Joe. "Joe Smith's Theory of the Universe." *Universe Theories* 20 Apr. 1989: pp. 100–109. Print.

Website**Basic format:**

Editor, Author, or Compiler Name (if available). *Name of Site*. Version Number. Name of Institution/Organization Affiliated with Site (Sponsor or Publisher), Date of Resource Creation (if available). Medium of Publication. Date of Access.

① Remind students that names appear as last name, first name.

Example:

Smith, Joe. *Guide to My Theory of the Universe*. UniverseBlogs, 16 Apr. 2001. Web. 19 Dec. 2013.

Motion picture**Basic format:**

Title of Motion Picture. Director. If relevant, list performers using 'Perf.' to distinguish them from director. Distributor, Date of Release. Medium.

Example:

Theories of the Universe. Dir. Joe Smith. Perf. Joe Smith, Jane Smith, Robert Smith. Touchstone, 2012. DVD.

12.3.2**Lesson 4****Introduction**

In this lesson, students begin writing their research-based argument papers. The lesson begins with a peer review of the in-text citations students inserted in their outlines. Students then learn about the purpose and components of an effective introduction. Through discussion and examination of an exemplar and non-exemplar introduction, students further develop their understanding of how to write an effective introduction. Student learning is assessed via the first draft of the introduction for the research-based argument paper at the end of the lesson.

For homework, students draft the first two body paragraphs of their research-based argument papers, using their outlines to guide their writing and remembering to use complete sentences and properly formatted in-text citations.

Standards

| Assessed Standard(s) | |
|-----------------------|---|
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| Addressed Standard(s) | |
| W.11-12.1.a | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. <ul style="list-style-type: none"> a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. |
| L.11-12.6 | Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. |

Assessment

| Assessment(s) |
|--|
| <p>Student learning is assessed via the first draft of the introduction for the research-based argument paper at the end of the lesson.</p> <p>① This draft will be assessed using the W.11-12.1.a portion of the 12.3.2 Rubric.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> • Introduce readers to the issue in an engaging manner (e.g., Nearly half of the globe lives on less than \$2.50 per day and “[a]t least 80% of humanity lives on less than \$10 a day” (Shah). In the U.S. alone, nearly 50 million people live below the poverty line (Fessler).). • Effectively communicate the writer’s precise and knowledgeable central claim and establish its significance (e.g., We are thus faced with an important question: What is the best way for developing nations to increase their economic prosperity? The most effective way for developing nations to become more prosperous is to invest in human capital by providing quality education and technology to all citizens, regardless of gender or race.). • Distinguish the central claim from alternative or opposing claims (e.g., It is a complex question with no single, one-size-fits-all solution). <p>① See the model introduction from the Sample Student Research-Based Argument Paper in 12.3.2 Lesson 11.</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> • None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> • None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> • None.* |

*Students should incorporate relevant academic and/or domain-specific vocabulary from 12.3.1 into their research-based argument papers.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|---|---|
| Standards & Text: <ul style="list-style-type: none"> Standards: W.11-12.4, W.11-12.1.a, L.11-12.6 Text: “The Case for Universal Basic Education for the World’s Poorest Boys and Girls” by Gene B. Sperling, paragraph 1 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Drafting an Introduction Analyzing Effective Introductions Lesson Assessment Closing | <ol style="list-style-type: none"> 10% 10% 30% 20% 25% 5% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (refer to 12.3.1 Lesson 3) (optional)
- Student copies of the MLA Citation Handout (refer to 12.3.2 Lesson 3)
- Student copies of the 12.3.2 Rubric and Checklist (refer to 12.3.2 Lesson 1)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

10%

Begin by reviewing the lesson agenda and the assessed standard for this lesson: W.11-12.4. Inform students that in this lesson, they learn how to draft an effective introduction for the research-based argument paper.

- ▶ Students look at the agenda.

- ① **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard L.11-12.6. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

- 💬 Student responses should include:

- Use domain-specific words and phrases.
- Demonstrate vocabulary knowledge by using academic words to aid comprehension.

- ① Students have gathered domain-specific language during their research throughout Module 12.3. The introduction of this standard will synthesize this work and prepare students to demonstrate mastery by using domain-specific language in the drafting of their research-based argument papers.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Insert in-text citations for each source of evidence listed on your outline from 12.3.2 Lessons 1 and 2.) Instruct students to form pairs, exchange outlines with their peer, and examine their peer's use of in-text citations, identifying any formatting problems and inconsistencies.

- 💬 Student responses vary according to their individual sources.

- ① It may be necessary for students to refer to the MLA Citation Handout from 12.3.2 Lesson 3 for the correct citation format.
- ① **Differentiation Consideration:** As students begin drafting their research papers in this lesson, it may be necessary to review some of the building blocks for effective writing, including parts of speech, complete sentences, and sentence complexity.

Activity 3: Drafting an Introduction

30%

Explain that with the completion of the outline, students are ready to begin drafting the research-based argument paper, starting with the introduction.

Explain that an introduction begins the research-based argument paper. The introduction should be interesting enough to catch the reader's attention, provide context for the content of the paper, include the central claim, and distinguish this central claim from opposing claims. An effective introduction should be 1–2 paragraphs long and be written in a clear, organized fashion that begins to establish clear relationships among claims, counterclaims, reasons, and evidence. Inform students that they do not need to discuss all of the paper's claims, counterclaims, reasons, and evidence in the introduction. Students' introductions should include their central claim(s), which may be the last sentence of the introduction, but all of their evidence and reasoning should be included in the body paragraphs of their papers.

- ▶ Students listen.

Ask students to discuss the following question in pairs.

How is an introduction different from the body of an essay or paper?

- 💬 An introduction is the first part of an essay or paper. The introduction should clearly communicate the central claim of the paper. It should also be the “hook” that grabs readers' attention. The introduction should provide a high-level overview of the research-based argument paper without including all of the supporting claims and counterclaims found in the body of the paper.

Display W.11-12.1.a and the exemplar introduction from the article “The Case for Universal Basic Education for the World's Poorest Boys and Girls” by Gene B. Sperling. Instruct students to read the substandard and consider its components as they review the exemplar introduction. (Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.)

- ▶ Students read W.11-12.1.a and the exemplar introduction.

① Students were introduced to W.11-12.1.a in 12.3.1 Lesson 26.

Instruct students to Turn-and-Talk in pairs about how this introduction effectively exemplifies the components of W.11-12.1.a.

- 💬 Student responses may include:
 - The author introduces his precise, knowledgeable claim in this sentence: “We also know that the cost of that cure ... is minuscule compared with the enormous benefits such education would bring for health, economics, women's empowerment, and basic human dignity” (par. 1).
 - The author establishes the significance of the claim: “One of the silent killers attacking the developing world is the lack of quality basic education for large numbers of the poorest children in the world's poorest countries—particularly girls” (par. 1).

- The author anticipates an opposing claim in the opening paragraph: “We also know that the cost of that cure—perhaps \$7.5 billion to \$10 billion per year—is minuscule compared with the enormous benefits such education would bring for health, economics, women’s empowerment, and basic human dignity” (par. 1). The author is anticipating that someone will argue that education is too costly an endeavor.

Explain that there are different methods for creating an interesting introduction. Writers can frame an introduction by describing a problem, posing a question, or piquing readers’ curiosity with interesting facts associated with the research. Introductions can also begin using an interesting story found during the course of the writer’s research. Regardless of the approach, an effective introduction not only grabs a reader’s attention, but also makes clear the writer’s purpose. Remind students that Jared Diamond begins *Guns, Germs, and Steel* with a story: He begins the book with an anecdote from a visit to New Guinea in which his friend Yali asks a simple question. This simple question serves as a springboard for the entire book.

Instruct students to discuss the following question about the exemplar introduction in pairs before discussing with the entire class.

What method does the writer use to get the attention of the reader? Is this an effective method?

- The writer begins with evocative and descriptive language such as “silent killers,” “grievous ailments,” “disease,” and “known cure.” This method of capturing the reader’s attention is effective because it takes the broad and abstract problem of a lack of basic education for the world’s poorest boys and girls and makes it concrete, tangible, and personal. If the reader feels there is a “disease,” the reader also wants to know the “known cure.”
- ① **Differentiation Consideration:** Consider transitioning students into their pre-established research teams and have them brainstorm interesting ways to introduce their research paper. Allow each student to write a sample and then instruct students to engage in a round-robin style discussion wherein each student passes his or her sample to a member of the group, and the group discusses how interesting or engaging each sample is and why.

Activity 4: Analyzing Effective Introductions

20%

Explain to students that in this activity they review two additional introductions with similar content. Instruct students to compare the two introductions. Remind students to keep the components of W.11-12.1.a in mind as they compare the introductions.

- ▶ Students read and compare both introductions.

- ① **Differentiation Consideration:** If more structure is necessary to support student analysis, consider instructing students to annotate each introduction (boxing/circling unfamiliar words or ideas, starring important or repeating ideas, writing a question mark by sections that they are questioning or confused by, writing an exclamation point by sections that strike or surprise them, underlining areas that represent major points, and numbering idea sequences that trace the development of an argument).

Introduction #1:

Nearly half of the globe lives on less than \$2.50 per day, and “[a]t least 80% of humanity lives on less than \$10 a day” (Shah). In the U.S. alone, nearly 50 million people live below the poverty line (Fessler). While people all over the globe suffer as a result of poverty from income disparity, it is particularly devastating for developing nations. We are thus faced with an important question: What is the best way for developing nations to increase their economic prosperity? It is a complex question with no single, one-size-fits-all solution, but the most effective way for developing nations to become more prosperous is to invest in human capital by providing quality education and technology to all citizens, regardless of gender or race.

Introduction #2:

Listen, lots of people are poor and I know why, and also how to fix it. There is one and only one way to fix the economy of developing nations, which is to invest only in education and technology. Most people would disagree with this statement, but in the research it is shown to be true. “At least 80% of humanity lives on less than \$10 a day” (Shah). In the U.S. alone, nearly 50 million people live below the poverty line (Fessler). Even in our major cities and also in rural areas there is poverty in the U.S. What makes a nation “developing”?

Instruct students to briefly discuss the two introductions, focusing on what makes them effective or ineffective.

- ▶ Students briefly compare the introductions.

Lead a whole-class discussion of the following questions:

What makes the first introduction effective or ineffective?

💬 Student responses may include:

- The first introduction is effective because it grabs the reader’s attention by describing that a large portion of the world’s population is living in poverty. These statistics are surprising and horrible.
- The claim is strong and knowledgeable: “[T]he most effective way for developing nations to become more prosperous is to invest in human capital by providing quality education and technology to all citizens, regardless of gender or race.”

- The introduction clearly builds to the central claim: “While people all over the globe suffer as a result of poverty from income disparity, it is particularly devastating for developing nations. We are thus faced with an important question: What is the best way for developing nations to increase their economic prosperity?” The central claim succinctly responds to this question in a way that prepares readers for the rest of the paper.

What makes the second introduction effective or ineffective?

💬 Student responses may include:

- The second introduction is ineffective because it does not grab the reader’s attention with an engaging, clearly written introductory statement. Instead, the author is abrasive, writing “Listen,” to get the reader’s attention.
- It is difficult to determine the claims, counterclaims, reasoning, and evidence that will be provided in the paper.
- The ideas appear out of order and the transitions do not help the reader follow what is happening.
- The central claim is convoluted and confusing because the language is so informal, the author is not offering a clear direction for the paper, and the author does not seem confident in his or her tone.
- The evidence does not clearly support any claim in the paragraph.
- The paragraph ends with a tangential question not directly related to the central claim.

Activity 5: Lesson Assessment

25%

Instruct students to independently draft their own introductions for the lesson assessment. Remind students that this is a first draft, and while they should focus on the conventions established for an effective introduction, they will edit and refine their writing in later lessons. Inform students that this assessment will be assessed using W.11-12.1.a on the 12.3.2 Rubric and Checklist. Remind students to refer to the checklist as they are writing their introductions.

Transition students to the assessment.

- ▶ Students independently draft the introduction of their papers.

💬 See the High Performance Response at the beginning of this lesson.

- ① Remind students that they should work to incorporate into their introductions the domain-specific words and phrases they have acquired through their research.
- ① Remind students to refer to their copies of the MLA Citation Handout as they draft their introductions.

- ① The process of writing a research paper will involve drafting, peer review, editing, and revising. If access to technology is available, consider using a cloud or electronic storage system (e.g., Dropbox, Google Drive) that allows each student to write and track changes using a word processing program (e.g., Microsoft Word). If technological resources are not available, use the established classroom protocols for drafting, editing, and revising hard copies.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to draft the first two body paragraphs of their research-based argument papers, using their outlines to guide their writing. Remind students that although the first two body paragraphs are first drafts, they should be writing full paragraphs using complete sentences and properly formatted in-text citations.

- ① Inform students that they will receive instruction on crafting strong body paragraphs in subsequent lessons.
- ① **Differentiation Consideration:** Consider also having students select one of their sources and, using the Connecting Ideas Handout, circle or highlight the transitional words and phrases that link sections of the text together. Instruct students to look specifically for transitional words and phrases that link claims, evidence, and reasoning. Additionally, instruct students to prepare to explain how the highlighted transitions help to delineate the author's argument. The Connecting Ideas Handout is located in 12.3.2 Lesson 5.
- ▶ Students follow along.

Homework

Draft the first two body paragraphs of your research-based argument paper, using your outline to guide your writing. Remember to use complete sentences and properly formatted in-text citations.

12.3.2

Lesson 5

Introduction

In this lesson, students focus on making sure their writing is cohesive and clear as they continue to draft their research-based argument papers. Students improve the effectiveness of their writing by focusing on the use of transitional words and phrases and how they establish strong relationships among evidence, claims, and counterclaims. In addition, students focus on using varied syntax to enhance the rhythm and flow of their sentences and paragraphs.

Students begin by examining model paragraphs that demonstrate mastery of cohesion and transitional words and phrases. Next, students draft additional body paragraphs, paying particular attention to their use of transitional words and phrases. Student learning is assessed via students' effective use of transitional words and phrases and varied syntax to create cohesion and clarify the relationships among claims, reasoning, and evidence in two body paragraphs at the end of the lesson.

For homework, students finish drafting their remaining body paragraphs. Students use the 12.3.2 Rubric and Checklist as they are drafting, organizing, and adjusting their paragraphs for cohesion and development of central claims, supporting claims, counterclaims, reasoning, and evidence.

Standards

| Assessed Standard(s) | |
|-----------------------|---|
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| Addressed Standard(s) | |
| W.11-12.1.c | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. |
| L.11-12.1 | Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. |

Assessment

| Assessment(s) |
|--|
| <p>Student learning is assessed via students' effective use of transitional words and phrases and varied syntax to create cohesion and clarify the relationships among claims, reasoning, and evidence in two body paragraphs at the end of the lesson.</p> <p>① Student responses will be assessed using the W.11-12.1.c portion of the 12.3.2 Rubric.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Demonstrate the effective use of transitional words and phrases and varied syntax to create cohesion and clarify the relationships between claims, reasoning, and evidence in two body paragraphs (e.g., In addition to the Internet, other technology solutions can help developing countries generate wealth. Countries can “improve ... quality of life by investing in labour-saving technology” (Ward et al. 44). If technology can reduce the number of people doing manual labor, more people can engage in high-caliber, efficient economic activity, assuming there is an educational infrastructure to support them. Many developing countries have already instituted laborsaving technologies, but unfortunately, “a large literature shows that men have been the primary adopters” of these technologies (Gill et al. 2). Many women are employed in agriculture in developing countries, making this a missed opportunity as “women continue to use traditional, more labor-intensive methods, undermining their agricultural productivity” (Gill et al. 2). If women were freed from the burden of manual labor to the extent that men are, they would have a higher capacity for more high-value economic activity. As Revenga and Shetty note, “if women farmers have the same access as men to productive resources ... agricultural output in developing countries would increase by as much as 2.5 to 4 percent” (11). Thus, for technology to be harnessed most effectively, like quality education, it must be made equally available to all people.). <p>① For more examples, see the Sample Student Research-Based Argument Paper in 12.3.2 Lesson 11.</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |

Additional vocabulary to support English Language Learners (to provide directly)

- None.*

*Students should incorporate relevant academic and/or domain-specific vocabulary from 12.3.1 into their research-based argument papers.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|---|--|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.4, W.11-12.1.c, L.11-12.1 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Crafting Clear Sentences Crafting Cohesion in Argument Writing Drafting and Assessment Closing | <ol style="list-style-type: none"> 10% 10% 30% 30% 10% 10% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (refer to 12.3.1 Lesson 3) (optional)
- Students copies of the MLA Citation Handout (refer to 12.3.2 Lesson 3)
- Copies of the Connecting Ideas Handout for each student
- Student copies of the 12.3.2 Rubric and Checklist (refer to 12.3.2 Lesson 1)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |

| | |
|---|--|
| | <i>Italicized text indicates a vocabulary word.</i> |
| ▶ | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

10%

Begin by reviewing the agenda and the assessed standard for this lesson: W.11-12.4. In this lesson, students focus on improving their writing by deepening their understanding of how words and phrases can link together and reinforce the relationships among evidence, claims, and counterclaims within their papers. Students participate in a class discussion about the use of transitional words and phrases and revise their body paragraphs from the previous lesson's homework, paying attention to their use of transitional words and phrases.

- ▶ Students look at the agenda.

❗ **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard W.11-12.1.c. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

💬 Student responses should include:

- Use words and phrases to connect sections of an essay.
- Use words and phrases to make sure ideas flow together.
- Use words and phrases to show the relationships between claims and reasons, reasons and evidence, and claims and counterclaims.

Inform students that this lesson focuses on creating cohesion as students draft their research-based argument papers.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Draft the first two body paragraphs of your research-based argument paper, using your outline to guide your writing. Remember to use complete sentences and properly formatted in-text citations.) Instruct students to form pairs and briefly review one another's citations and supporting claims in the paragraphs they drafted for homework. Students should provide both positive and constructive feedback where appropriate and highlight any errors in citations. Students should reference the MLA Citation Handout they received in 12.3.2 Lesson 4, comparing their peers' citations to the examples in the handout.

- ▶ Students form pairs and review each other's paragraphs, providing feedback on the supporting claims and citation.
- Student responses vary by individual research but may include:
 - The supporting claim in this paragraph is well supported by evidence but reasoning or explanation of how the evidence supports the claim is missing.
 - There is no comma between the author's name and page number listed, according to the MLA guidelines, so the comma should be removed in all in-text citations.
 - MLA guidelines require naming the author of the article, but no author's name was included.
 - Consider improving the reasoning used to connect these two claims. The evidence presented is not strong enough to support it.

Instruct students to keep out their paragraphs to use in the following activities.

Activity 3: Crafting Clear Sentences

30%

Inform students that in this activity and the next, they revise the paragraphs they wrote in the previous lesson's homework.

Explain to students that in order for an argument paper to be effective, it must be written clearly to aid reader comprehension. One way to achieve clarity is to write sentences that provide the reader with information in a clear and understandable way.

To craft clear and understandable sentences and paragraphs, a writer must focus on writing sentences that adhere to the following requirements:

- Use appropriate transitions.
- Use variations in sentence length.
- Use appropriate punctuation.
- Use complete sentences (not fragments or run-on sentences).
- Use active voice.

Display the following two sentences for students:

- Most people think of formal classroom education as an example of a high-quality educational experience, but classroom education and student attendance do not by themselves result in quality education.

- "Education" is usually thought to be just formal Classroom Education as the first type of educational experience someone thinks of, on the other hand, Classroom Education and high student attendance, most of the time they do not by themselves happen in quality education.

Lead a class discussion on the sample sentences using the following questions:

Which of these sentences is clearer and why?

💬 Student responses may include:

- The first sentence is much clearer because it uses a comma to separate the clauses properly. The second sentence uses commas in the wrong places.
- The second sentence is a run-on sentence. There should be a period or a semi-colon before "on the other hand."
- The second sentence is less clear because it capitalizes a noun that is not proper ("classroom education"). This creates confusion for the reader, as capitalization infers that the term may be a brand name or government entity.
- The first sentence is clearer because it uses a transition, *but*, which connects the clauses better than the transition "on the other hand," used in the second sentence.
- The first sentence is clearer because it uses active voice. The second sentence is indirect and wordy and uses a passive voice; it takes time for the reader to figure out what the author means.

Explain to students that the first model sentence is an example of writing in the "active voice." In a sentence using active voice, the subject performs the action of the verb. Passive voice occurs when the noun or phrase that should be the subject in a sentence becomes the object instead. For example, "Our team won the game" is a sentence in active voice. "The game was won by our team" is passive voice, because "our team" is the object of the sentence when it should act as the subject.

Active voice is useful in argument writing because it creates stronger sentences by putting the emphasis on the subject doing the action. Passive voice creates weaker verbs and leads to wordy and awkward sentences because it can be difficult to figure out the sentence's subject and the subject's action. Therefore, the use of active voice provides greater clarity for the reader and makes sentences more powerful, thus creating a more persuasive and engaging argument overall.

▶ Students listen.

What words and phrases in the second sentence weaken its claim?

💬 Student responses should include:

- Usually
- Most of the time

- ① **Differentiation Consideration:** Consider reviewing qualifiers that can weaken a claim in writing. For example, students may weaken their claim by using the words and phrases *a lot*, *basically*, *kind of*, *pretty much*, *probably*, *somewhat*, and *very*.

Inform students that they should keep sentence structure and word choice in mind as they progress with their argument writing. As students develop the introduction, body, and conclusion paragraphs throughout 12.3.2, they should pay special attention to crafting clear sentences that support a compelling argument. Encourage students to periodically review their writing and find ways to improve its clarity and coherence.

- ▶ Students listen.
-

Instruct students to work individually to revise the paragraphs they wrote for the previous lesson's homework by incorporating clear, active sentences into their paragraphs.

- ▶ Students work individually to revise their body paragraphs for clear and active sentence structure.
-

Inform students that varied use of syntax is a powerful rhetorical device that can enhance the persuasiveness or power of their arguments. Varying the length and structure of sentences in an argument paper can strengthen the power, pacing, and flow of the argument and help readers engage with the text. Explain to students that they should consider the variety of sentences they use throughout their paper. Define *variations in syntax* as “changes in sentence length, style, or complexity for stylistic effect.”

- ① Students were introduced to *varied syntax* as a rhetorical technique in 12.1.1 Lesson 5.
- ① **Differentiation Consideration:** Consider posing the following question to the whole class to elicit deeper understanding of varied syntax.

What is *syntax*?

- 💬 *Syntax* means changes in sentence length, style, or complexity for stylistic effect.

What does the phrase *varied syntax* mean?

- 💬 Student responses should include:
 - There are different sentence lengths.
 - Not all of the sentences sound or look the same.
 - There is a variety of different patterns or formations.

How does varied syntax affect a piece of writing?

🗨 Student responses should include:

- Varied syntax makes the writing more interesting because there are different sentence formations.
- Varied syntax engages the listener or reader by making him or her pay attention to changes in sentence structure.
- Varied syntax allows the reader to read fast over certain parts and slow down for others.
- Varied syntax can provide emphasis by making important sentences stand out by being longer or shorter.

Explain to students that a writer can vary syntax by changing the length of a sentence or paragraph to alter the tone and rhythm of a piece of writing. Explain to students that sentence structure contributes to the readers' understanding and that writers should be purposeful with their use of syntax. Encourage students to look for places to use varied syntax while they are drafting and revising their papers.

▶ Students listen.

Display the following examples for students:

- The future wellbeing of developing nations depends on investment in human capital. When the barriers of all forms of inequality are abolished, and everyone has equal access to quality education and technology, skilled workers will thrive at their fullest, and economies will grow.
- The future wellbeing of developing nations depends on investment in human capital. Barriers of all forms of inequality must be abolished. In this way, everyone will have equal access to quality education and technology. Then, skilled workers will thrive at their fullest. When that happens, economies will grow and thrive.

Instruct students to form pairs and discuss the following question about the examples above.

How does the author's use of syntax affect the reader's understanding of each sentence?

🗨 Student responses may include:

- The first example flows and connects the ideas using short and long sentences. The variation in length creates rhythm and interests the reader.
- The second example contains 5 sentences of similar length, making the paragraph less interesting to read and the ideas seem somewhat disconnected.

Remind students that syntax is also a powerful tool for connecting and clarifying sentences, paragraphs, and claims within a research-based argument paper. An author can use syntax to establish cohesive relationships between words, phrases, claims, and counterclaims.

- ▶ Students listen.
 - ① To aid student understanding of *varied syntax*, consider reading a paragraph from the Sample Student Research-Based Argument Paper aloud (12.3.2 Lesson 12). This practice may support students' understanding of variations in syntax by allowing them to hear the effect of structure on the rhythm of the sentences.
 - ① **Differentiation Consideration:** Consider providing examples of varied syntax before the discussion to allow students time to assess the sentences independently.
 - ① **Differentiation Consideration:** If necessary to support student work and understanding, consider spending additional time reviewing how to establish clarity through sentence structure. As 12.3.2 Lessons 4–7 are focused on the technical crafting of the student research-based argument paper and feature extensive time for student drafting, this may be an ideal opportunity to pursue deeper instruction on crafting effective sentences.
-

Instruct students to work individually to revise the paragraphs they wrote for the previous lesson's homework by incorporating varied syntax into their writing.

- ▶ Students work individually to revise their body paragraphs for varied syntax.

Activity 4: Crafting Cohesion in Argument Writing

30%

Introduce students to the ideas of *cohesion* and *transitions*. Explain to students that *cohesion* in writing refers to how well the paragraphs and sentences link the claims and evidence of a text together into a coherent whole, which, in the case of argument writing, serves to inform and convince the reader. Explain to students that *cohesion* is achieved by carefully demonstrating links between ideas.

Provide students with the following definition: *cohesion* means “the state of uniting or sticking together.” Explain to students that achieving *cohesion* in their writing is the result of careful revision and editing.

Provide students with the following definition: *transition* means “a word, phrase, or passage in a piece of writing that clearly links two topics or sections to each other.”

- ▶ Students listen.

Provide students with the following two example paragraphs and ask them to consider which they think is more cohesive and logical.

Sample 1:

Equity in education is strongly connected to the prosperity of a country. For example, “with the exceptions of resource-rich Oman, Bahrain and Saudi Arabia, no country has achieved both GDP per capita of over \$10,000 and a ratio of girls to boys in primary education of less than 90 per cent” (Ward et al. viii). Resource-rich countries have wealth based on oil rather than human capital. Equal access to quality education for men and women of all races has economic implications for developing nations to prosper. Women do not receive equal access to education in many countries. It is a necessary investment for countries that wish to increase their high-value economic activity. “Better-educated women can undertake higher-value economic activity” (Ward et al. viii). This requires higher-caliber cognitive skills. Most countries rely on human capital to generate wealth, and the connection between education equality and economic prosperity holds.

Sample 2:

For developing nations to prosper, men and women of all races must have equal access to quality education. For example, in many countries, women do not receive equal access to education, even though “[b]etter-educated women can undertake higher-value economic activity” (Ward et al. viii). Such economic activity requires higher-caliber cognitive skills, so education is a necessary investment for countries that wish to increase their high-value economic activity. Furthermore, equity in education is strongly connected to the prosperity of a country. “With the exceptions of resource-rich Oman, Bahrain and Saudi Arabia, no country has achieved both GDP per capita of over \$10,000 and a ratio of girls to boys in primary education of less than 90 per cent” (Ward et al. viii). These resource-rich countries have wealth based on oil rather than human capital. But for most countries that rely on human capital to generate wealth, the connection between education equality and economic prosperity holds.

① This model body paragraph is located in the Sample Student Research-Based Argument Paper in 12.3.2 Lesson 12.

After students have had time to consider the two paragraphs above, lead a whole-class discussion on the differences between the two samples by using the following questions.

Which of these paragraphs is more cohesive and why?

- ☞ The second paragraph is more cohesive. The language is easier to follow and it connects the ideas of the sentences together much better than the first paragraph.

Which of these paragraphs is less cohesive and why?

- ☞ The first paragraph is less cohesive. It feels choppy and the sentences and ideas seem disconnected. It seems to jump around from point to point without explaining how ideas are related. It opens with a strong claim, but the evidence that appears to support it does not directly connect to the claim.

What specific words and phrases in the more cohesive paragraph contribute to its success?

- ☞ Student responses should include:

- “For example”
 - “Even though”
 - *Such*
 - *So*
 - *Furthermore*
 - *But*
- ① If students struggle to identify differences between the paragraphs, consider distributing a highlighted version of the paragraphs, annotating the changes and improvements and the transitional words and phrases.
- ① **Differentiation Consideration:** If necessary to support student understanding, consider spending additional time discussing these transitional words and phrases.
-

Distribute the Connecting Ideas Handout. Explain to students that cohesion should exist between paragraphs as well as between sentences. In both cases, transitional words and phrases can help link ideas and support the logic of the paper. Instruct students to look at the Connecting Ideas Handout. Explain that the Connecting Ideas Handout provides a variety of transitional words to use in specific cases. To show how ideas are similar, students might use phrases like “in the same way” or “similarly.” Instruct students that these words can be used within a paragraph but also to connect two different paragraphs. Words like *furthermore* and phrases like “in addition” can be used to continue a line of reasoning or sustain a thought between paragraphs.

- ▶ Students listen and examine the handout.

Instruct students to form pairs. Present student pairs with the following two paragraphs and instruct them to identify and annotate for words and phrases that support transition and cohesion between sentences and paragraphs.

Paragraph 1:

Before describing the practical measures developing nations must take in order to work toward economic prosperity, one must first define several terms. What do we mean when we say *prosperity*? In fact, what do we mean by *developing*? To say *developing nation* is to claim that there exists a *developed nation*. It would be easy to take a very Eurocentric position and claim that the developing world is just what is outside the developed, predominantly Western world. This stance is problematic because it assumes that all countries and cultures want to develop in the way the Western world has. Still, “developing world” or “developing nation” is the most common term in the available research. For most, the term means a nation with a lower material standard of living, lower life expectancy, and weaker industrial base when compared to more industrialized nations (e.g., the U.S., United Kingdom, Japan, Canada, Denmark). Therefore, prosperity, for the purposes of this argument, refers to a material

standard of living, poverty rate, life expectancy, and industrial base comparable to more industrialized nations.

Paragraph 2:

Next, what is “human capital”? Human capital is defined as the “accumulated stock of skills and talents ... [that] manifests itself in the educated and skilled workforce in the region” (Ogunade 2). In other words, human capital is all of the “skills and talents” that workers in a society offer. Countries rely on a “skilled workforce” to increase their economic power and improve their standard of living.

① These model body paragraphs are located in the Sample Student Research-Based Argument Paper in 12.3.2 Lesson 11.

Ask students the following question, using the Connecting Ideas Handout as a reference.

What words support transition and cohesion between and among ideas in the paragraphs?

💬 Student responses should include:

- *Before*
- “one must first”
- *Still*
- *Therefore*
- *Next*
- “In other words”

Explain to students that they should use the Connecting Ideas Handout to write their research-based argument papers. Instruct students to use the “Categories” column to guide their choice of transitional words and phrases as they write. For example, if they are looking to add more information to support a claim, they can look in the “Add Related Information” section and choose the word *furthermore* to help them connect their ideas.

- ▶ Students listen and examine the handout.

Explain to students that creating effective transitions is crucial to supporting their argument writing. Effective use of transitional words and phrases improves the logical presentation of information and is important to presenting claims, evidence, and reasoning in an understandable way. In addition to having concrete details and relevant examples to support a claim, the information has to be presented in a way that is appropriate to the audience’s knowledge of the issue. Explain that writing a research-based argument paper requires careful use of transitional words and phrases to guide the reader. Students should use these words and phrases to connect their claims and evidence with reasoning that convinces the reader of their central claim. In order to achieve this, students must present their findings and claims in an accessible, clear, and cohesive manner, with each statement flowing into the next to build a unified research-based argument. Remind students that arriving at a point of cohesion is the result of a process that involves several rounds of revision and editing.

- ① **Differentiation Consideration:** Remind students of the work they have done with the identification of solid reasoning. Remind students of the definition of *reasoning* as it pertains to Module 12.3: “the logical relationships among ideas, including relationships among claims and relationships across evidence.”
-

Instruct students to work individually to revise the paragraphs they wrote for the previous lesson’s homework by incorporating effective transitions into their writing where appropriate to achieve cohesion between sentences.

- ▶ Students work individually to revise their body paragraphs for effective transitions and cohesion.

Activity 5: Drafting and Assessment

10%

Inform students that in this assessment, they review the body paragraphs they revised during class and make any final changes before turning them in. Students should pay specific attention to the use of transitional words and phrases to build cohesion between and among the paragraphs. Inform students that they will be assessed on their effective use of transitional words and phrases and varied syntax to create cohesion and clarify the relationships among claims, reasoning, and evidence in the two body paragraphs.

Direct students to turn to the “Coherence, Organization, and Style” portion of the 12.3.2 Rubric and Checklist and look for substandard W.11-12.1.c. Inform students that this draft is assessed using substandard W.11-12.1.c on the 12.3.2 Rubric and Checklist. Remind students to refer to the checklist as they review their two body paragraphs.

- ▶ Students read substandard W.11-12.1.c on the 12.3.2 Rubric and Checklist.
- ① Remind students to refer to the MLA Citation Handout as they review their body paragraphs.
- ① **Differentiation Consideration:** Consider instructing students to mark W.11-12.1.c on the 12.3.2 Rubric and Checklist to focus their attention on this standard only.
- ① Consider drawing students’ attention to the application of standard L.11-12.1 by using correct grammar when writing as they draft their body paragraphs. L.11-12.1 was first introduced in 12.1.1 Lesson 15.

Transition students to the assessment.

- ▶ Students work independently to review their drafts to ensure cohesion and varied syntax.
-

Instruct students to submit the revised paragraphs they worked on in class.

Use the W.11-12.1.c section of the 12.3.2 Rubric and Checklist to assess the submitted paragraphs.

Activity 6: Closing

10%

Display and distribute the homework assignment. For homework, instruct students to finish drafting the body paragraphs. Instruct students to use the 12.3.2 Rubric and Checklist as they are drafting, organizing, and adjusting their paragraphs for cohesion and development of central claims, supporting claims, counterclaims, reasoning, and evidence. Inform students that they will be assessed according to this rubric when they submit the final draft of their papers.

- ▶ Students listen.

Instruct students to organize their paragraphs and make adjustments to what they have written to ensure:

- There is cohesion and logic to their paragraphs.
- The information is presented in a way that effectively reinforces a claim made by the writer.

Remind students that they may need to add concrete details, transition words, or delete sentences/passages to polish their papers.

- ▶ Students follow along.

Homework

Finish drafting your remaining body paragraphs. Use the 12.3.2 Rubric and Checklist as you are drafting, organizing, and adjusting your paragraphs for cohesion and development of central claims, supporting claims, counterclaims, reasoning, and evidence.

CONNECTING IDEAS

USING TRANSITIONAL WORDS AND PHRASES

Transitional words and phrases create links between your ideas when you are speaking and writing. They help your audience understand the logic of your thoughts. When using transitional words, make sure that it is the right match for what you want to express. And remember, transition words work best when they are connecting two or more strong ideas that are clearly stated. Here is a list of transitional words and phrases that you can use for different purposes:

| ADD RELATED INFORMATION | GIVE AN EXAMPLE OR ILLUSTRATE AN IDEA | MAKE SURE YOUR THINKING IS CLEARLY UNDERSTOOD | COMPARE IDEAS OR SHOW HOW IDEAS ARE SIMILAR | CONTRAST IDEAS OR SHOW HOW THEY ARE DIFFERENT |
|--|--|--|---|---|
| <ul style="list-style-type: none"> furthermore moreover too also again in addition next further finally and, or, nor | <ul style="list-style-type: none"> to illustrate to demonstrate specifically for instance as an illustration for example | <ul style="list-style-type: none"> that is to say in other words to explain i.e., (that is) to clarify to rephrase it to put it another way | <ul style="list-style-type: none"> in the same way by the same token similarly in like manner likewise in similar fashion | <ul style="list-style-type: none"> nevertheless but however otherwise on the contrary in contrast on the other hand |
| EXPLAIN HOW ONE THING CAUSES ANOTHER | EXPLAIN THE EFFECT OR RESULT OF SOMETHING | EXPLAIN YOUR PURPOSE | LIST RELATED INFORMATION | QUALIFY SOMETHING |
| <ul style="list-style-type: none"> because since on account of for that reason | <ul style="list-style-type: none"> therefore consequently accordingly thus hence as a result | <ul style="list-style-type: none"> in order that so that to that end, to this end for this purpose for this reason | <ul style="list-style-type: none"> First, second, third... First, then, also, finally | <ul style="list-style-type: none"> almost nearly probably never always frequently perhaps maybe although |

12.3.2**Lesson 6****Introduction**

In this lesson, students learn to craft a concluding statement that follows from and further supports the argument and appropriately connects sections of the text.

Students begin the lesson by examining a model text conclusion in a teacher-led discussion. Students then have an opportunity to draft their research-based argument paper conclusions. Student learning is assessed via the first draft of the conclusion of the research-based argument paper.

For homework, students review and revise their body paragraphs to better support their concluding statements.

Standards

| Assessed Standard(s) | |
|-----------------------|---|
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| Addressed Standard(s) | |
| W.11-12.1.c,e | <p>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <p>c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.</p> <p>e. Provide a concluding statement or section that follows from and supports the argument presented.</p> |
| L.11-12.6 | Acquire and use accurately a range of general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. |

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via the first draft of the conclusion to the research-based argument paper at the end of the lesson.</p> <p>① This draft will be assessed using the W.11-12.1.c, e portion of the 12.3.2 Rubric.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> • Provide a concluding section that follows from and supports the argument presented (e.g., The future wellbeing of developing nations depends on their investment in human capital. When the barriers of all forms of inequality are abolished, and everyone has equal access to quality education and technology, skilled workers will thrive at their fullest, and economies will grow. Of course, quality education and thriving industry will look different from one developing nation to another, and as of yet, no country in the world has formulated the perfect solution to poverty and human suffering; there is no single solution. In an ideal world, all nations would come together, acknowledge potential areas for growth, and help one another toward a common goal of global economic prosperity.). <p>① See the model conclusion from the Sample Student Research-Based Argument Paper in 12.3.2 Lesson 11.</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> • None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> • None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> • None.* |

*Students should incorporate relevant academic and/or domain-specific vocabulary from 12.3.1 into their research-based argument papers.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|---|---|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.4, W.11-12.1.c, e, L.11-12.6 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Crafting a Conclusion 4. Drafting a Conclusion and Assessment 5. Closing | <ol style="list-style-type: none"> 1. 10% 2. 10% 3. 30% 4. 45% 5. 5% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (refer to 12.3.1 Lesson 3) (optional)
- Student copies of the Connecting Ideas Handout (refer to 12.3.2 Lesson 5)
- Student copies of the 12.3.2 Rubric and Checklist (refer to 12.3.2 Lesson 1)
- Student copies of the MLA Citation Handout (refer to 12.3.2 Lesson 3)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

10%

Begin by reviewing the agenda and the assessed standard for this lesson: W.11-12.4. In this lesson, students examine the components of an effective conclusion and its place in the research-based argument paper. Students first examine a model concluding paragraph to deepen their understanding of the conclusion of a research-based argument paper. Students then have an opportunity to draft a concluding paragraph. This draft of a conclusion serves as the assessment for this lesson.

- ▶ Students look at the agenda.

① **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard W.11-12.1.e. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

💬 Student responses should include:

- The standard is about providing a conclusion or final statement.
- A conclusion should follow from the presented claims and support the presented argument.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Finish drafting the rest of your body paragraphs. Use the 12.3.2 Rubric and Checklist as you are drafting, organizing, and adjusting your paragraphs for cohesion and development of central claims, supporting claims, counterclaims, reasoning, and evidence.) Instruct students to form pairs and briefly review their body paragraphs for effective transitions, varied syntax, and cohesion.

💬 Student responses vary according to their individual drafts.

Activity 3: Crafting a Conclusion

30%

Explain to students that the focus of today's lesson is writing a conclusion for their research-based argument paper.

Display a definition of *conclusion* for students: *conclusion* means "the last main division of a formal discussion in speech or writing, usually containing a summing up of the points and a statement of opinion or decisions reached." Explain to students that the *conclusion* of a research-based argument paper is the writer's final opportunity to reinforce the argument and provide a convincing statement to the reader. A *conclusion* serves as a final statement that synthesizes the evidence provided in the paper and shows how this evidence supports the central claim.

- Students listen.

Present students with the following example of a model introduction and conclusion and instruct students to read and compare the organization, claims, and articulation of the central claim in the two paragraphs:

① Students read the model introduction in 12.3.2 Lesson 4.

Introduction:

Nearly half of the globe lives on less than \$2.50 per day, and “at least 80% of humanity lives on less than \$10 a day” (Shah). In the U.S. alone, nearly 50 million people live below the poverty line (Fessler). While people all over the globe suffer as a result of poverty from income disparity, it is particularly devastating for developing nations. We are thus faced with an important question: What is the best way for developing nations to increase their economic prosperity? It is a complex question with no single, one-size-fits-all solution, but the most effective way for developing nations to become more prosperous is by investing in human capital, providing quality education and technology to all citizens, regardless of gender or race.

Conclusion:

The future wellbeing of developing nations depends on their investment in human capital. When the barriers of all forms of inequality are abolished, and everyone has equal access to quality education and technology, skilled workers will thrive at their fullest, and economies will grow. Of course, quality education and thriving industry will look different from one developing nation to another, and as of yet, no country in the world has formulated the perfect solution to poverty and human suffering; there is no single solution. In an ideal world, all nations would come together, acknowledge potential areas for growth, and help one another toward a common goal of global economic prosperity.

① The model conclusion is located in the Sample Student Research-Based Argument Paper in 12.3.2 Lesson 11.

Instruct students to discuss the following questions as a class:

What is similar about the conclusion and the introduction? What is different?

- 💬 Student responses should include:
 - Both the introduction and conclusion stress the importance of human capital in increasing prosperity in developing nations, specifically investments in education and technology.
 - Both paragraphs state that investment in human capital is not the only way to develop a nation’s prosperity. In the introduction, the author says “there is no one-size-fits-all solution,” and in the conclusion, the author states that “there is no single solution” to solving poverty in developing nations.

- The conclusion uses stronger language and rhetoric, such as the effective metaphor of a “barrier” to inequality, which works to stress the urgency of the point.
- The conclusion urges the audience to work together towards the goal of investment in education and technology to achieve global prosperity. This call to action leaves the reader with the strong impression that the central claim is important and valuable, especially since it is well supported by the claims, evidence, and reasoning that preceded it.

What claims are presented in the conclusion?

💬 Student responses may include:

- The future wellbeing of developing nations depends on investment in human capital.
- When the barriers of all forms of inequality are abolished and everyone has equal access to quality education and technology, skilled workers will thrive at their fullest and economies will grow.

How does the conclusion enhance or alter the initial central claim?

💬 Student responses may include:

- The conclusion restates the original central claim, but does so powerfully, acknowledging the supporting claims (inequality, access [to technology], quality education) and counterarguments (“no perfect solution”) that came before.
- The central claim in the conclusion uses words like *future wellbeing*, *inequality*, *barriers*, and *abolished* to convey the urgency in the claim and call the reader to action.

① **Differentiation Consideration:** If students struggle, consider asking the following scaffolding question:

What is the central claim in the conclusion?

💬 The central claim is that when the barriers of all forms of inequality are abolished and everyone has equal access to quality education and technology, skilled workers will thrive at their fullest and economies will grow.

Inform students that they begin drafting their conclusions in the following activity. Direct students to the “Coherence, Organization, and Style” portion of the 12.3.2 Rubric and Checklist and look for substandards W.11-12.1.c and W.11-12.1.e. Remind students to reference this checklist as they are drafting their conclusions. Encourage students to reference the Connecting Ideas Handout as they are writing their conclusions.

- ▶ Students read substandards W.11-12.1.c and W.11-12.1.e on the 12.3.2 Rubric and Checklist as well as examine the Connecting Ideas Handout.

Explain to students that the work done in the previous two lessons to build understanding of cohesion and the use of varied syntax should also be employed in the crafting of a conclusion.

Explain to students that the conclusion is the writer's last opportunity to present the central claim to the reader. It serves not only to remind the reader of all of the evidence presented in the paper but also to support the reasoning and overall claims of the writer. Therefore, the concluding paragraph is a powerful synthesis of all of the evidence-based claims in the paper.

- ▶ Students follow along.

Activity 4: Drafting a Conclusion and Assessment

45%

Instruct students to independently draft their own conclusions for the lesson assessment. Inform students that their conclusions are assessed using W.11-12.1.c, e on the 12.3.2 Rubric and Checklist. Remind students to refer to the checklist as they draft, organize, and adjust their conclusions for cohesion, clarity, and development of a claim.

- ▶ Students listen.

Instruct students to organize their concluding paragraph to ensure

- There is cohesion and logic to their final statements.
- The information is presented in a way that effectively restates the central claim and summarizes supporting claims, evidence, and reasoning.

Remind students that they may need to add concrete details or transition words, or delete sentences or passages to polish their conclusions.

Also, remind students that they should pay close attention to their use of domain-specific words and phrases. The accurate use of these words and phrases serves to improve the tone and content of their conclusions and paper as a whole (L.11-12.6).

- ▶ Students independently draft their conclusions.

① Remind students to refer to the MLA Citation Handout as they draft their conclusions.

Instruct students to submit the conclusions they worked on in class.

- ▶ Students submit their concluding paragraphs.

Activity 5: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to review and revise their body paragraphs to better support their concluding statements. Remind students to refer to substandards W.11-12.1.c, e on the 12.3.2 Rubric and Checklist to guide their revisions.

- ▶ Students follow along.

Homework

Review and revise your body paragraphs to better support your concluding statements. Refer to substandards W.11-12.1.c, e on the 12.3.2 Rubric and Checklist to guide your revisions.

12.3.2

Lesson 7

Introduction

In this lesson, students learn how to identify and use formal style and objective tone when writing the research-based argument paper. Students then use the first drafts of their papers to participate in peer review and teacher conferences. Student learning is assessed via incorporation of peer and teacher feedback regarding formal style and objective tone in two body paragraphs at the end of the lesson.

For homework, students continue to review and revise their entire research-based argument paper to ensure they are using formal style and objective tone.

Standards

| Assessed Standard(s) | |
|-----------------------|--|
| W.11-12.5 | Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. |
| Addressed Standard(s) | |
| W.11-12.1.d | Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. |
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. |
| SL.11-12.4 | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. |
| L.11-12.3 | Apply knowledge of language to understand how language functions in different |

| | |
|--|---|
| | contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. |
|--|---|

Assessment

| Assessment(s) |
|--|
| <p>Student learning is assessed via incorporation of peer and teacher feedback regarding formal style and objective tone in two body paragraphs.</p> <p>① These revisions will be assessed using the W.11-12.1.d portion of the 12.3.2 Rubric.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> • Demonstrate thoughtful consideration of feedback received in class. • Incorporate formal style and objective tone into two body paragraphs (e.g., revising from “There are tons of opportunities for communication on the Internet, and it’s silly if people don’t take advantage because it can lead to growth because people all the way across the nation can compete” to “The Internet provides vast opportunities for communication, and therefore fosters larger-scale competition among all people of a nation”). <p>① See additional examples of formal style and objective from the Sample Student Research-Based Argument Paper in 12.3.2 Lesson 11.</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> • None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> • None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> • None.* |

*Students should incorporate relevant academic and/or domain-specific vocabulary from 12.3.1 into their research-based argument papers.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|---|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.5, W.11-12.1.d, SL.11-12.1, SL.11-12.4, L.11-12.3 | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Formal Style and Objective Tone 4. Independent Revision 5. Peer Review and Teacher Conference 6. Lesson Assessment 7. Closing | <ol style="list-style-type: none"> 1. 10% 2. 10% 3. 15% 4. 15% 5. 30% 6. 15% 7. 5% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (refer to 12.3.1 Lesson 3) (optional)
- Student copies of the 12.3.2 Rubric and Checklist (refer to 12.3.2 Lesson 1)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

10%

Begin by reviewing the agenda and the assessed standard for this lesson: W.11-12.5. In this lesson, students learn how to use formal style and objective tone in their research-based argument papers. Students engage in peer-review and teacher conferences for the purpose of revising their first drafts.

- ▶ Students look at the agenda.

① Students were introduced to the standard W.11-12.5 in 12.1.1 Lesson 2.

① **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard W.11-12.1.d. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

Provide students with the following definitions: *norms* mean “standards or patterns” and *discipline* means “the branch of learning.” In other words, students should use patterns of writing appropriate for the English Language Arts *discipline* in which they are writing.

💬 Student responses should include:

- The standard is about using a formal style and objective tone in writing, meaning that the paper should use professional and unbiased language.
- The standard explains that the paper should include all of the components of argument.

Explain to students that norms and conventions of academic writing also apply to argument writing. In addition to formal style and objective tone, these norms and conventions include command of standard English grammar and usage (L.11-12.1), as well as proper capitalization, punctuation, and spelling (L.11-12.2).

Ask students:

What are norms or conventions unique to argument writing?

💬 Student responses may include:

- A convention unique to argument writing is the use of a counterclaim.
- A convention unique to argument writing is the analysis of the strengths and limitations of claims and counterclaims.
- A convention unique to argument writing is the use of reasoning to explain how evidence supports claims.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Review and revise your body paragraphs to better support your concluding statements. Refer to sub-standards W.11-12.1.c, e on the 12.3.2 Rubric and Checklist to guide your revisions.) Instruct students to form pairs to share briefly their revisions to their body paragraphs, focusing on how they support their concluding statements. Remind students to refer to W.11-12.1.c, e on the 12.3.2 Rubric and Checklist to guide their discussions.

- ▶ Student pairs share the revisions to their body paragraphs.
- 🗣 Student responses vary according to their individual research-based argument papers.

Activity 3: Formal Style and Objective Tone

15%

Explain to students the importance of maintaining a formal style in academic writing. Inform students that a formal style is used for writing academic papers in college and the workplace. It is important when writing a research-based argument paper to use a formal style because it makes the paper appealing and accessible to a wide audience and establishes credibility. A formal style includes accurate and specific language, correct grammar, and complete sentences. Remind students to avoid the use of contractions (e.g., *don't*), abbreviations (e.g., *gov't*, *LOL*), or slang (e.g., *epic fail*, *awesome*), unless they are directly quoting from a text that uses such words.

- ▶ Students listen.

① For further discussion of appropriate formal style, consider using:
<http://grammar.ccc.commnet.edu/grammar/composition/tone.htm>

Display the following two sentences for students:

- I mean, it's crazy to expect people to be able to give money and invest in their own countries if they don't have education, skills, or money in the bank as we speak.
- When people have access to quality education, they become potential investors in the market and can develop capital of their own.

Instruct student pairs to Turn-and-Talk to discuss whether each sentence is formal or informal.

- 🗣 Student responses should include:
 - The first sentence is informal. It uses conversational phrases like *I mean*, *it's crazy*, and *as we speak* and contractions like *it's* and *don't*. These words sound more casual, like someone is talking to a friend.

- The second sentence uses more formal and academic words like *access* and *potential*. The second sentence also does not use contractions and sounds more like it belongs in an academic paper or journal.
- ① **Differentiation Consideration:** Consider offering students some examples of informal vs. formal writing. Inform students that text messages and emails are usually informal, whereas formal writing is found in academic sources, like textbooks, or credible sources like newspapers and published research-based argument papers. Consider sharing with students the following source for further discussion of formal vs. informal style: <http://blog.ezinearticles.com/2011/03/formal-vs-informal.html>.
- ① Consider drawing students' attention to their application of standard L.11-12.3 through the process of applying appropriate knowledge of language to making more effective choices for meaning and style.

Explain to students that while it is important to use a formal style in their papers, it is equally important to use an objective tone rather than a subjective tone. When using an objective tone, writers should avoid expressing their unverified personal opinions and focus on presenting the information and conclusions gathered from the research. Writing with an objective tone also means using the third person point-of-view (i.e., *he, she, it, they, one*) most of the time rather than the first person point-of-view (i.e., *I, we, us, our*) or the second person point-of-view (i.e., *you, your*).

Provide students with the following definitions: *objective* means “a style of writing not influenced by personal feelings or opinions that is based on fact and makes use of the third-person point-of-view” and *subjective tone* means “the style of writing that involves personal opinion and expression.”

- ▶ Students listen.

Remind students that in *Guns, Germs, and Steel*, Diamond uses first person point-of-view to explain how he developed his perspective. For example, he states, “I realized that other modern, as well as prehistoric, encounters between peoples raised similar questions” (p. 27). Diamond also uses first person point-of-view to clarify his claims, using statements such as, “I do not mean to imply, however” (p. 75). Similarly, he uses personal anecdotes to structure and develop his ideas, as when he introduces Yali’s question in the Prologue or discusses how innovation across societies could be applied to American companies. Diamond also uses personal words such as *we* or *let’s* rhetorically, to suggest a collective understanding and imply shared beliefs between author and reader.

Explain to students that they should only use the first person point-of-view to develop their perspectives or as a rhetorical strategy to suggest shared beliefs between the author and reader.

- ▶ Students listen.

Display the following examples for students:

- When people have access to quality education, they become potential investors in the market and can develop capital of their own.
- We should make larger investments in education and technology in developing nations because it is not fair that we have so much and they have so little.

Ask student pairs to Turn-and-Talk to discuss whether each sentence uses an *objective tone*.

🗨️ Student responses should include:

- The first sentence uses *objective tone* because it makes a claim that is not a personal opinion and could easily be verified with evidence. It maintains an academic tone and conveys straightforward ideas based on logic rather than on personal opinions.
 - The second sentence has a subjective tone because the sentence relies on personal opinion and a value judgment: “it is not fair that we have so much and they have so little.”
- ① Consider creating examples tailored to students' degree of experience and fluency with *objective tone*.
- ① Consider adding more practice with formal style and objective tone by instructing students to select and revise one or two sentences from their papers for formal style and objective tone. Students could then share their revised sentences in pairs for feedback.

Activity 4: Independent Revision

15%

Instruct students to work individually to revise their writing by incorporating formal style and objective tone into their papers.

- ▶ Students independently revise their papers for formal style and objective tone.

Activity 5: Peer Review and Teacher Conference

30%

Explain to students that they have the opportunity for both peer review and teacher conferencing during this portion of the lesson and in the following lesson. Assign students an individual time for a teacher conference to receive feedback on their research-based argument paper. Instruct students to meet in their pre-established research teams when they are not in their conference, so that they can engage in peer review. Instruct students to share their work with a peer in their pre-established research group and provide feedback.

Instruct students to take out the 12.3.2 Rubric and Checklist. Direct students to turn to the “Coherence, Organization, and Style” portion of the 12.3.2 Rubric and Checklist. Remind students to refer to this

checklist while reviewing and editing for formal style and objective tone. Instruct students to pay particular attention to the W.11-12.1.d substandard in this section.

① The peer review and teacher conferences continue in 12.3.2 Lesson 8.

- ▶ Students examine the “Coherence, Organization, and Style” portion, focusing on W.11-12.1.d on their 12.3.2 Rubric and Checklist.

Inform students they should focus only on the formal and objective tone elements of the substandard for this assessment.

① **Differentiation Consideration:** Consider instructing students to mark W.11-12.1.d on their 12.3.2 Rubric and Checklist to concentrate their focus on this substandard only.

Transition to individual student conferences and peer review.

- ▶ Students meet with the teacher and engage in peer review.
- ① Remind students that in this lesson, they continue the work of collaborative discussion practices outlined in SL.11-12.1.
- ① Encourage students to keep in mind the Module Performance Assessment as they practice the skills inherent in standard SL.11-12.4: presenting information, findings, and supporting evidence clearly and following a line of reasoning; addressing alternate or opposing perspectives; and ensuring the development, substance, and style of their presentations are appropriate to the purpose, audience, and task. Remind students that they will present and discuss their multimedia journals at the end of Module 12.3 and that this activity provides an opportunity to continue preparing for the Module Performance Assessment.

Activity 6: Lesson Assessment

15%

Instruct students to revise two body paragraphs independently, based on peer and teacher feedback regarding formal style and objective tone.

① Students revise the rest of the paper for formal style and objective tone for homework.

Inform students that the assessment is based on their editing and incorporation of peer and teacher feedback. Inform students that these revisions are assessed using the W.11-12.d portion of the 12.3.2 Rubric and Checklist.

- ▶ Students revise two of the body paragraphs of their paper based on peer and teacher feedback regarding formal style and objective tone.
- 🗨 See the High Performance Response at the beginning of this lesson.

Activity 7: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to review and revise their entire research-based argument paper to ensure they are using formal style and objective tone. Remind students to refer to W.11-12.1.d on the 12.3.2 Rubric and Checklist to guide their revisions.

- ▶ Students follow along.

Homework

Review and revise your entire research-based argument paper to ensure you are using formal style and objective tone. Refer to W.11-12.1.d on the 12.3.2 Rubric and Checklist to guide your revisions.

12.3.2**Lesson 8****Introduction**

In this lesson, students continue to refine and revise their research papers. The instruction in this lesson focuses on editing for clarity and cohesion of the entire research paper. Students continue to provide peer feedback as well as conference individually with the teacher. Students use the 12.3.2 Rubric and Checklist to guide their peer review and make revisions to their research papers. Student learning is assessed via incorporation of peer and teacher feedback regarding overall clarity and cohesion of their research-based argument paper.

For homework, students revise their introductions and conclusions based upon the feedback they received about the cohesion and clarity of these paragraphs.

Standards

| Assessed Standard(s) | |
|-----------------------|---|
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| Addressed Standard(s) | |
| W.11-12.1.a,c,e | <p>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <ul style="list-style-type: none"> a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. e. Provide a concluding statement or section that follows from and supports the argument presented. |
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in |

| | |
|-------------|---|
| | groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others’ ideas and expressing their own clearly and persuasively. |
| SL.11-12.4 | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. |
| L.11-12.3.a | <p>Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.</p> <p>a. Vary syntax for effect, consulting references (e.g., Tufte’s <i>Artful Sentences</i>) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.</p> |

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via incorporation of peer and teacher feedback regarding overall clarity and cohesion of the research-based argument paper.</p> <p>① These revisions will be assessed using the W.11-12.1.a, c, e portions of the 12.3.2 Rubric.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> • Demonstrate thoughtful consideration of feedback received in class. • Edit the body of the paper to include transitional phrases, varied syntax, and a logical order of claims to improve cohesion. For example: <p>Original:</p> <p>The Internet and other technology solutions can help developing countries generate wealth. Countries can “improve ... quality of life by investing in labour-saving technology” (Ward et al. 44). Technology can reduce the number of people doing manual labor. More people can engage in high-end, efficient economic activity. Educational infrastructure should support them. Many developing countries have already instituted laborsaving technologies. “[A] large literature shows that men have been the primary adopters” of technologies (Gill et al. 2). Many women are employed in agriculture in developing countries. An opportunity can be missed as “women continue to use traditional, more labor-intensive methods, undermining their agricultural productivity” (Gill et al. 2). Women should be</p> |

freed from the burden of manual labor. Men are more free. And then they would have a higher capacity for more high-value economic activity. For technology to be harnessed most effectively, all people should get to use it.

Broadband Internet access has helped individual workers in developing nations. They “acquire skills (increasing their marketability as workers) and develop social networks through broadband-enabled Web applications, facilitating peer-to-peer communities and their integration with the economy” (Qiang et al. 36). High-speed Internet could probably be a supplement to quality education in the classroom. It can become a source of education itself. It can begin offering vital social experience between all citizens. It has impact in very rural, low-income communities. In India, some farming villages are “using a common portal that links multimedia personal computers by satellite” (Qiang et al. 40). The computers let farmers have access to information about the weather forecast, crop prices, nearby markets, and the latest sowing techniques. Qiang et al. say that “these improvements have resulted in productivity gains for the farmers” (40). Broadband Internet technology is good in lots of ways.

Revised:

Broadband Internet access has also helped individual workers in developing nations “acquire skills (increasing their marketability as workers) and develop social networks through broadband-enabled Web applications, facilitating peer-to-peer communities and their integration with the economy” (Qiang et al. 36). In this way, increasing access to high-speed Internet is not only a supplement to quality education in the classroom, it becomes a source of education itself, offering vital social interaction between all citizens of a nation regardless of gender or race. The impact of broadband access extends even into very rural, low-income communities. For example, in India, some farming villages are “using a common portal that links multimedia personal computers by satellite” (Qiang et al. 40). The computers afford farmers access to information about the weather forecast, crop prices, nearby markets, and the latest sowing techniques. Qiang et al. also note that “these improvements have resulted in productivity gains for the farmers” (40). This example highlights that broadband Internet technology is stimulating developing economies from all angles—from inside the classroom, in the living room, in the office, and on the farm.

In addition to the Internet, other technology solutions can help developing countries generate wealth. Countries can “improve ... quality of life by investing in labour-saving technology” (Ward et al. 44). If technology can reduce the number of people doing manual labor, more people can engage in high-caliber, efficient economic activity, assuming there is an educational infrastructure to support them. Many developing countries have already instituted laborsaving technologies, but unfortunately, “a large literature shows that men have been the primary adopters” of these technologies (Gill et al. 2). Many women are employed in agriculture in developing countries, making this a missed opportunity as

“women continue to use traditional, more labor-intensive methods, undermining their agricultural productivity” (Gill et al. 2). If women were freed from the burden of manual labor to the extent that men are, they would have a higher capacity for more high-value economic activity. Thus, for technology to be harnessed most effectively, like quality education, it must be made equally available to all people.

① See the revised example from the Sample Student Research-Based Argument Paper in 12.3.2 Lesson 11.

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*Students should incorporate relevant academic and/or domain-specific vocabulary from 12.3.1 into their research-based argument papers.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|---|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.4, W.11-12.1.a, c, e, SL.11-12.1, SL.11-12.4, L.11-12.3.a | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability Clarity and Cohesion of the Research-Based Argument Paper Independent Revision Peer Review and Teacher Conferences Lesson Assessment Closing | <ol style="list-style-type: none"> 5% 10% 20% 15% 25% 20% 5% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (Refer to 12.3.1 Lesson 3) (optional)
- Student copies of the 12.3.2 Rubric and Checklist (refer to 12.3.2 Lesson 1)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by introducing the agenda and the assessed standard for this lesson: W.11-12.4. Inform students that in this lesson, they are focusing on revising for clarity and cohesion across the entire research-based argument-paper.

- Students look at the agenda.

❗ **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard L.11-12.3.a. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

💬 Student responses should include:

- The standard asks students to use style guides and write sentences of different lengths to develop a style.
- The standard asks students to note how authors use syntax.

- ① **Differentiation Consideration:** If necessary, remind students that *varied syntax* refers to changes in sentence length, style, or complexity for stylistic effect.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Review and revise your entire research-based argument paper to ensure you are using formal style and objective tone. Refer to W.11-12.1.d on the 12.3.2 Rubric and Checklist to guide your revisions.) Instruct students to form pairs to discuss their revisions. Instruct students to refer to the W.11-12.1.d substandard on the 12.3.2 Rubric and Checklist to guide their discussion.

- Student responses vary according to their individual research-based argument papers.

Activity 3: Clarity and Cohesion of the Research-Based Argument Paper

20%

Inform students that in this activity, they build on previous lessons' work concerning what they have already learned about how to give their research papers cohesion and clarity. This builds on their work in previous lessons to allow students to examine their paper as a whole.

Remind students they have already learned about writing logically and using transitional words to aid cohesion. In this lesson, students review their entire paper for cohesion as well as consistency between the introduction and conclusion. Explain to students that when transitional words and phrases are not used effectively, papers can present relevant, grammatically correct information but lack clarity, especially between paragraphs.

- ▶ Students listen.

Display for students the following example of one paragraph leading into another paragraph:

- If many people in a nation are applying their skills to compete with one another, and if investment is attractive because returns are more likely, the country will be prosperous, which means that more individuals will have more money for investment. Thus, education creates a positive feedback loop: people become educated, refine their talents, compete with one another, attract investors, increase domestic prosperity, create more wealth at the individual level, become educated potential investors themselves, and in turn incentivize education and the development of talent to perpetuate the virtuous cycle. Countries must invest in equal quality education for *everyone* in a society, so that there is more quality human capital that contributes to economic prosperity.

However, Jared Diamond points out in *Guns, Germs, and Steel*: “you want your country, industry, industrial belt, or company to be broken up into groups that compete with one another while maintaining relatively free communication” (444). A developing nation must also seek out

communication to foster productive competition within the nation and technology plays a vital role. In order for communication to take place on a larger scale and contribute to economic growth, all citizens must have access to technology. In developing nations, “[d]eploying broadband networks at the community and municipal levels has become an important factor in allowing local businesses to grow and remain competitive” (Qiang et al. 38). The Internet provides vast opportunities for communication, and therefore fosters larger-scale competition among all people of a nation.

- ▶ Students follow along and read the example.

Ask students:

How effective is the use of transition between these two paragraphs?

- 💬 Even though these two paragraphs are linked by a transitional word, *however*, the ideas do not flow together from paragraph to paragraph. Therefore, the transition is ineffective.

Explain to students that it is important that a paper’s ideas flow together and that the cohesion goes beyond adding words that link paragraphs together. This can be achieved by reiterating a small portion of the idea expressed in the previous paragraph as a way of introducing and leading into the next paragraph. This is an example of a transitional phrase. It is important for the overall cohesion of the paper that these supporting claims strongly connect to support the central claim of the paper. Display the revised example for students:

- If many people in a nation are applying their skills to compete with one another, and if investment is attractive because returns are more likely, the country will be prosperous, which means that more individuals will have more money for investment. Thus, education creates a positive feedback loop: people become educated, refine their talents, compete with one another, attract investors, increase domestic prosperity, create more wealth at the individual level, become educated potential investors themselves, and in turn incentivize education and the development of talent to perpetuate the virtuous cycle. Countries must invest in equal quality education for *everyone* in a society, so that there is more quality human capital that contributes to economic prosperity.

This wealth-generating competition depends as much on the free flow of information as it does on skilled human capital. Jared Diamond points out in *Guns, Germs, and Steel*: “you want your country, industry, industrial belt, or company to be broken up into groups that compete with one another while maintaining relatively free communication” (444). A developing nation must also seek out communication to foster productive competition within the nation, and technology plays a vital role. In order for communication to take place on a larger scale and contribute to economic growth, all citizens must have access to technology. In developing nations, “[d]eploying broadband networks at the community and municipal levels has become an important factor in allowing local businesses to grow and remain competitive” (Qiang et al. 38). The Internet provides vast opportunities for communication, and therefore fosters larger-scale competition among all people of a nation.

- ▶ Students follow along and read the example.

Ask students the following question:

How effective is the use of transition between these two paragraphs?

💬 Student responses should include:

- The transitional phrase “This wealth-generating competition depends as much on the free flow of information as it does on skilled human capital” was added to the beginning of the second paragraph, making it more effective.
- This transitional phrase acknowledges the content of the first paragraph (“wealth-generating competition”) and introduces the idea of “the free flow of information,” which leads into the topic of the second paragraph (technology), making it more effective.

① **Differentiation Consideration:** Consider providing students with more examples of effective cohesion from the original and revised sections of the High Performance Response in this lesson.

Finally, remind students of the importance of varying the syntax of their research-based argument paper. Varied syntax serves to enhance readers’ comprehension of what they read, and improves the overall clarity and cohesiveness of the paper.

Explain to students that, along with transitional phrases, they should ensure that their papers have a logical sequence of claims. Explain that although students initially ordered their claims in a logical sequence when they developed their outlines, that organizational sequence may have changed, so students should revisit their claims to make sure they are logically ordered. Inform students the principle of organization may vary depending on the content of their research paper. One type of organizational structure is *climactic* order, which “builds so the strongest claim comes at the end to support the central claim.” Another type of organizational structure is *chronological* order, which “orders the information based on time.” A third type of organization is *categorical* order, which groups ideas, evidence, and reasoning into categories according to claim, supporting claims, and counterclaims.

- ▶ Students follow along.

① The Sample Student Research-Based Argument Paper is a strong example of *categorical* order.

Explain to students that to write a paper with cohesion and clarity, they must also make certain the introduction and conclusion fit well together. Remind students that they have learned the structure of an introduction and conclusion in previous lessons in 12.3.2. When they are reviewing, students should ensure that a version of the central claim is present in both the introduction and conclusion. Students should ensure the introduction is interesting and engaging, and the conclusion offers a new way of thinking about the issue.

- ▶ Students follow along.

Explain to students that there are many elements to consider when ensuring clarity in an argument text. When editing their research-based argument papers, it is important to consider cohesion, transitions, formal style, objective tone, as well as norms and conventions of academic and argument writing. It may be helpful to read the paper multiple times while editing, focusing on clarity and cohesion.

- ▶ Students listen.

Activity 4: Independent Revision

15%

Instruct students to work individually to revise their writing by incorporating overall clarity and cohesion into their papers.

- ▶ Students independently revise their papers for overall clarity and cohesion.

Activity 5: Peer Review and Teacher Conferences

25%

Inform students that during this part of the lesson, they peer review for clarity and cohesion and meet in conferences with the teacher. Review the individual assigned times to meet with students to provide feedback for their research paper. Instruct students to meet in their pre-established research teams when they are not in their conference, so they can engage in peer review. Instruct students to share their work with a peer in their pre-established research group and provide feedback. Remind students to refer to the W.111-12.1.a, c, e section of the 12.3.2 Rubric and Checklist to guide their peer review.

- ① Suggest to students that an effective strategy for review is to read a paper aloud as it will help highlight any areas that may not be clear.

Transition to individual student-teacher conferences and peer review.

- ▶ Students who are scheduled for a teacher conference meet with the teacher to discuss their research papers; students not participating in a conference continue to peer review each other's body paragraphs.
- ① **Differentiation Consideration:** Depending on class size, this time can be used for continued peer review and teacher conferences from the previous lesson, or for a second round of peer and teacher conferences.
- ① Remind students that in this lesson, they continue the work of collaborative discussion practices outlined in SL.11-12.1.
- ① Encourage students to keep in mind the Module Performance Assessment as they practice the skills inherent in standard SL.11-12.4: presenting information, findings, and supporting evidence clearly

and following a line of reasoning; addressing alternate or opposing perspectives; and ensuring the development, substance, and style of their presentations are appropriate to the purpose, audience, and task. Remind students that they will present and discuss their multimedia journals at the end of Module 12.3 and that this activity provides an opportunity to continue preparing for the Module Performance Assessment.

Activity 6: Lesson Assessment

20%

Instruct students to independently revise their drafts by focusing on the entire paper's body paragraphs and using the W.11-12.1.c section of the 12.3.2 Rubric and Checklist. Students will be assessed on the clarity and cohesion of their entire draft (L.11-12.3.a).

- ▶ Students independently revise their drafts based on peer and teacher feedback.
- 🗨 See the High Performance Response at the beginning of this lesson.

Activity 7: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to revise their introductions and conclusions based upon the feedback they received about the cohesion and clarity of these paragraphs. Refer students to the W.11-12.1.a, c, e section of the 12.3.2 Rubric and Checklist to guide their revisions. Instruct students to come to class prepared to discuss the revisions to their papers.

- ▶ Students follow along.

Homework

Revise your introductions and conclusions based upon the feedback you received about the cohesion and clarity of these paragraphs. Refer to the W.11-12.1.a, c, e section of the 12.3.2 Rubric and Checklist to guide your revisions. Be prepared to discuss your revisions in the following lesson.

12.3.2

Lesson 9

Introduction

In this lesson, students continue to edit and revise their papers. Students are introduced to language standards L.11-12.2.a, b, as well as to common hyphenation conventions through the Hyphenation Conventions Handout. Students continue the peer review process by editing for capitalization, punctuation, and spelling. Student learning is assessed via effective editing and revisions for use of hyphens, capitalization, punctuation, and spelling for two paragraphs.

For homework, students continue to edit their research papers using L.11-12.2 on the 12.3.2 Rubric and Checklist, and prepare to discuss one or two edits in the following lesson.

Standards

| Assessed Standard(s) | |
|-----------------------|---|
| W.11-12.5 | Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. |
| Addressed Standard(s) | |
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. |
| SL.11-12.4 | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. |
| L.11-12.1.b | Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. b. Resolve issues of complex or contested usage, consulting references (e.g., <i>Merriam-Webster's Dictionary of English Usage</i> , <i>Garner's Modern American Usage</i>) as needed. |
| L.11-12.2.a,b | Demonstrate command of the conventions of standard English capitalization, |

| | |
|--|---|
| | <p>punctuation, and spelling when writing.</p> <ol style="list-style-type: none"> Observe hyphenation conventions. Spell correctly. |
|--|---|

Assessment

| Assessment(s) |
|---|
| <p>Student learning is assessed via effective editing and revisions for use of hyphens, capitalization, punctuation, and spelling for two paragraphs.</p> <p>① These revisions will be assessed using the L.11-12.2 portion of the 12.3.2 Rubric.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Observe correct hyphenation conventions where necessary (e.g., “Most people think of formal classroom education as an example of a high-quality educational experience, but classroom education and high student attendance do not by themselves result in quality education”). Edit spelling, capitalization, and punctuation. For example: <ul style="list-style-type: none"> Original: Many countries have technically provided access to formal education in the way of providing classrooms and teachers, but the quality of an education is much more than time spend in the classroom, a student could spend years in a classroom; and hypothetically emerge with no real skills Revised: Many countries have technically provided access to formal education by providing classrooms and teachers, but the quality of an education is based on much more than time spent in the classroom; a student could spend years in a classroom and, hypothetically, emerge with no real skills. <p>① See the revised example from the Sample Student Research-Based Argument Paper in 12.3.2 Lesson 11.</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |

| Vocabulary to teach (may include direct word work and/or questions) |
|--|
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*Students should incorporate relevant academic and/or domain-specific vocabulary from 12.3.1 into their research-based argument papers.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|---|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.5, SL.11-12.1, SL.11-12.4, L.11-12.1.b, L.11-12.2.a,b | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Editing Instruction 4. Independent Revision 5. Peer Review 6. Revision and Lesson Assessment 7. Closing | <ol style="list-style-type: none"> 1. 10% 2. 10% 3. 15% 4. 15% 5. 30% 6. 15% 7. 5% |

Materials

- Student copies of the 12.3 Common Core Learning Standards Tool (refer to 12.3.1 Lesson 3) (optional)
- Copies of the Hyphenation Conventions Handout for each student
- Student copies of the 12.3.2 Rubric and Checklist (refer to 12.3.2 Lesson 1)

① Differentiation Consideration: Copies of the Colon and Semicolon Handout for each student

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

10%

Begin by reviewing the agenda and the assessed standard for this lesson: W.11-12.5. Inform students that this lesson focuses on capitalization, punctuation, and spelling. Students are also introduced to hyphenation conventions and engage in peer review in preparation for the following lesson's final peer review and the End-of-Unit Assessment in 12.3.2 Lesson 11.

- Students look at the agenda.

❗ **Differentiation Consideration:** If students are using the 12.3 Common Core Learning Standards Tool, instruct them to refer to it for this portion of the lesson introduction.

Post or project standard L.11-12.1.b. Instruct students to talk in pairs about what they think the standard means. Lead a brief discussion about the standard.

💬 Student responses should include:

- This standard is about using references to resolve issues of contested usage when needed.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Revise your introductions and conclusions based upon the feedback you received about the cohesion and clarity of these paragraphs. Refer to the W.11-12.1.a,c,e section of the 12.3.2 Rubric and Checklist to guide your revisions. Be prepared to discuss your revisions in the following lesson.) Instruct students to form pairs and discuss their revisions. Instruct students to refer to the W.11-12.1.a,c,e section of the 12.3.2 Rubric and Checklist to guide their discussion.

- Student responses vary according to their individual research-based argument papers.

Activity 3: Editing Instruction

15%

Remind students that they can strengthen their writing, communication skills, and their credibility as writers by using proper language conventions. Instruct students to take out their Hyphenation Conventions Handout from 12.1.3 Lesson 7, or distribute a new version of the handout. Instruct students to review their Hyphenation Conventions Handout.

- Students examine the Hyphenation Conventions Handout.

Ask students the following question:

What are some specific ways in which hyphens are used to strengthen writing?

- Student responses may include:
 - Hyphens are used to connect two words or multiple words into a single thought.
 - Hyphens can help writers avoid potentially confusing sentences or unclear combinations of letters and words by connecting words to form a single idea.
 - Hyphens should be used with certain prefixes such as *self-*, *all-*, *anti-*, *mid-*, and *ex-*.

Lead a whole-class discussion of student responses.

Remind students that, in addition to following hyphenation conventions, they should always incorporate proper capitalization, spelling, and punctuation into their writing.

- Differentiation Consideration:** If individual students need more focused instruction on specific capitalization, punctuation, or spelling conventions, consider providing Web resources for students' reference such as <https://owl.english.purdue.edu/> (search terms: *capitalization*; *spelling conventions*).
- Differentiation Consideration:** If individual students need additional support for the proper use of colons and semicolons, consider distributing and providing instruction on the Colon and Semicolon Handout.

Activity 4: Independent Revision

15%

Instruct students to work individually to revise their writing by incorporating proper capitalization, spelling, and punctuation into their papers.

- Students independently revise their papers for proper capitalization, spelling, and punctuation.

Activity 5: Peer Review

30%

Instruct students to work in pairs to continue to peer review their drafts for correct use of capitalization, punctuation, and spelling. Instruct students to look for instances in their classmates' papers where hyphens could be used. Ask students to take out their 12.3.2 Rubric and Checklist. Direct students to turn to the "Control of Conventions" portion of the 12.3.2 Rubric and Checklist and look for standard L.11-12.2. Remind students to refer to this checklist during their peer review. Instruct students to finalize their drafts during the next two lessons (L.11-12.2.a, b).

- ▶ Student pairs read standard L.11-12.2 on their 12.3.2 Rubric and Checklist, and continue to revise their papers through peer review.
- ① **Differentiation Consideration:** Consider instructing students to mark L.11-12.2 on the 12.3.2 Rubric and Checklist to concentrate their focus on this standard. Complete any remaining teacher conferences with students.
- ① **Differentiation Consideration:** Consider instructing student pairs to read their drafts aloud, focusing on reading for punctuation (e.g., pausing based on the use of commas, periods, etc.). This strategy can help students identify where punctuation may be needed or where its use is problematic. Remind students to consult references such as <https://owl.english.purdue.edu/> (search terms: *capitalization; spelling conventions; punctuation*) if they notice recurring misuse of punctuation, spelling, or capitalization (L.11-12.1.b). (This strategy is incorporated from Odell Education's Building Evidence-Based Argumentation Unit Plan.)
- ① **Differentiation Consideration:** Consider instructing students who have a strong grasp of language conventions to use this peer review activity to strengthen their paper based on a selected area of improvement from the 12.3.2 Rubric and Checklist. For instance, some students may require additional editing for formal style and objective tone while others may need to work on the organization of their claims. This additional peer editing benefits students as they prepare for the small group review in the following lesson and finalize their research-based argument papers in the final lesson of 12.3.2.
- ① Remind students that in this lesson, they continue the work of collaborative discussion practices outlined in SL.11-12.1.
- ① Encourage students to keep in mind the Module Performance Assessment as they practice the skills inherent in standard SL.11-12.4: presenting information, findings, and supporting evidence clearly and following a line of reasoning; addressing alternate or opposing perspectives; and ensuring the development, substance, and style of their presentations are appropriate to the purpose, audience, and task. Remind students that they will present and discuss their multimedia journals at the end of Module 12.3 and that this activity provides an opportunity to continue preparing for the Module Performance Assessment.

Activity 6: Revision and Lesson Assessment

15%

Instruct students to independently review and edit two paragraphs of their drafts based on the peer review. Inform students that the assessment is based on their revisions and incorporation of peer and teacher feedback, and will be assessed using L.11-12.2 on the 12.3.2 Rubric and Checklist. Remind students to refer to the checklist as they are working.

- ▶ Students independently edit two paragraphs of their paper using L.11-12.2 on the 12.3.2 Rubric and Checklist.
- 🗨 See the High Performance Response at the beginning of this lesson.

Activity 7: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to make further edits to the entire draft of their paper. Remind students to refer to standard L.11-12.2 on the 12.3.2 Rubric and Checklist in preparation for final peer review in the following lesson.

- ▶ Students follow along.

Homework

Continue to edit your research papers using L.11-12.2 on the 12.3.2 Rubric and Checklist, and be prepared to discuss one or two edits in the following lesson.

Hyphenation Conventions Handout

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Common and proper uses of hyphens:

- Use a hyphen to join two words into a single thought.
 - Rather, “education is a set of processes and outcomes that are defined qualitatively” (UNESCO 28), and a high-quality education focuses on both cognitive and emotional growth.
- Use a hyphen to promote clarity in writing and avoid unclear combinations of words.
 - This wealth-generating competition depends as much on the free flow of information as it does on skilled human capital.
- Use a hyphen with certain prefixes such as *self-*, *all-*, *anti-*, and *mid-*.
 - *Self-sustaining*
 - *All-seeing*
 - *Anti-war*
 - *Mid-1900s*

Further reference: The Purdue University Online Writing Lab (OWL): <http://owl.english.purdue.edu>
(search terms: *hyphen*, *hyphenation convention*)

Colon and Semicolon Handout

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Common and proper uses of the colon:

- Use a colon when introducing a quotation after an independent clause. An *independent clause* contains both a subject and a verb, and can stand alone as a complete sentence.
 - This leads to more competition within and between industries: “Product markets are more competitive if all would-be entrepreneurs can use their talents” (Ward et al. ix).
- Use a colon when introducing a list.
 - Thus, education creates a positive feedback loop: people become educated, refine their talents, compete with one another, attract investors, increase domestic prosperity, create more wealth at the individual level, become educated potential investors themselves, and in turn incentivize education and the development of talent to perpetuate the virtuous cycle.

Common and proper uses of the semicolon:

- Use a semicolon to connect two *independent clauses* that are related to one another.
 - Education is not a luxury; it is the sustaining force of a developed economy and functioning government.

Further reference: The Purdue University Online Writing Lab (OWL): <http://owl.english.purdue.edu> (search terms: *semicolons*, *colons*)

12.3.2**Lesson 10****Introduction**

In this lesson, students participate in a peer review activity in which they offer constructive feedback to their classmates about the entire research-based argument paper. Students review their peers' papers for elements of the W.11-12.1 standard and supporting standards (W.11-12.1.a-e) that have been introduced in 12.3.2. Additionally, students peer review for English grammar, usage, and writing conventions. Student learning is assessed via the completion of the Peer Review Accountability Tool and the quality of their revisions.

For homework, students continue to implement revisions based on peer feedback. Additionally, students read their drafts aloud (to themselves or someone else) to identify errors in syntax, grammar, or logic in order to prepare for the following lesson's End-of-Unit Assessment.

Standards

| Assessed Standard(s) | |
|-----------------------|---|
| W.11-12.5 | Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. |
| Addressed Standard(s) | |
| W.11-12.1.a-e | <p>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <ul style="list-style-type: none"> a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. |

| | |
|---------------|---|
| | <p>c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.</p> <p>d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.</p> <p>e. Provide a concluding statement or section that follows from and supports the argument presented.</p> |
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
| SL.11-12.1 | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively. |
| SL.11-12.4 | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. |
| L.11-12.1 | Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. |
| L.11-12.2.a,b | <p>Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <p>a. Observe hyphenation conventions.</p> <p>b. Spell correctly.</p> |
| L.11-12.3.a | <p>Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.</p> <p>a. Vary syntax for effect, consulting references (e.g., Tufte's <i>Artful Sentences</i>) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.</p> |

Assessment

| Assessment(s) |
|---|
| <p>Student learning at the end of the lesson is assessed via:</p> <ul style="list-style-type: none"> • Implementation of peer review edits (from the Peer Review Accountability Tool) to the research-based argument paper • Individual student responses to the peer editing on the Peer Review Accountability Tool (“Final Decision and Explanation” column only) <p>① Student implementation of peer review edits will be assessed using the relevant portions of the 12.3.2 Rubric.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> • Include thoughtful responses on the Peer Review Accountability Tool (Final Decision and Explanation Column) that describe how the student chose to address their peers’ concerns and suggestions (e.g., It is not clear to me what sorts of technology you are talking about here. Provide more detail so your audience can have a better understanding of what is meant by “laborsaving technology.”). • Effectively integrate at least one suggestion and/or revision, as appropriate, into the draft of the research-based argument paper (e.g., I revised this section to include a more in-depth discussion of technology to show that reductions in the amount of manual labor in developing countries can improve economic prosperity.). <p>① See the Model Peer Review Accountability Tool at the end of this lesson. .</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> • None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> • None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> • None.* |

*Students should incorporate relevant academic and/or domain-specific vocabulary from 12.3.1 into their research-based argument papers.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.5, W.11-12.1.a-e, W.11-12.8, SL.11-12.1, SL.11-12.4, L.11-12.1, L.11-12.2.a,b, L.11-12.3.a | |
| Learning Sequence: <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Peer Review Round Robin 4. Lesson Assessment 5. Closing | <ol style="list-style-type: none"> 1. 5% 2. 10% 3. 60% 4. 20% 5. 5% |

Materials

- Sticky notes, colored pens or pencils, or computer-based peer review software (such as Track Changes in Microsoft Word or Google Docs editing tools)
- Copies of the Peer Review Accountability Tool for each student
- Student copies of the 12.3.2 Rubric and Checklist (refer to 12.3.2 Lesson 1)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ► | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standard for this lesson: W.11-12.5. In this lesson, students participate in a peer review of the entire research-based argument paper. Students read drafts of three of their classmates' papers addressing specific elements of W.11-12.1.a-e and several language standards, and respond to their classmates using constructive criticism. Students use their classmates' constructive criticism to revise and improve their drafts.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Continue to edit your research papers using L.11-12.2 on the 12.3.2 Rubric and Checklist, and be prepared to discuss one or two edits in the following lesson.) Instruct student pairs to share briefly one or two grammatical edits they made for homework and to explain their decisions, referencing L.11-12.2 on the 12.3.2 Rubric and Checklist.

- 💬 Student responses vary according to the individual research-based argument paper.

Activity 3: Peer Review Round Robin

60%

Instruct students to get into their pre-established research teams. Students remain in these teams throughout the peer review process. Instruct students to take out their research-based argument paper drafts.

- ① Consider placing students into new groups instead of their pre-established research teams to provide a broader range of peer review for the students.

- ▶ Students listen.

- ① Encourage students to keep in mind the Module Performance Assessment as they practice the skills inherent in standard SL.11-12.4: presenting information, findings, and supporting evidence clearly and following a line of reasoning; addressing alternate or opposing perspectives; and ensuring the development, substance, and style of their presentations are appropriate to the purpose, audience, and task. Remind students that they will present and discuss their multimedia journals at the end of Module 12.3 and that this activity provides an opportunity to continue preparing for the Module Performance Assessment.

Instruct students to number the paragraphs in the left margin of their papers so that peer reviewers can easily reference the paragraphs.

- ▶ Students number the paragraphs.

Explain that students should provide constructive criticism to their peers during this peer review process. Remind students that they have been progressing toward this more formal peer review by participating in mini-peer reviews in previous lessons.

Differentiation Consideration: Provide students with the following definition: *constructive criticism* means “criticism or advice that is useful and intended to help or improve something, often with an offer of possible solutions.” Explain to student that *constructive criticism* helps them share advice with their peers in a positive and academic manner. Additionally, students should add suggestions or comments that give the writer some way to fix the problem, instead of just identifying the problem. Consider providing examples of *non-constructive criticism* and showing how they can be made constructive (e.g., “This doesn’t make sense” vs. “This might make more sense if you explain...”).

Inform students that this activity involves reading three papers in three rounds of peer review. For each round of feedback, students focus on different standards that appear in the 12.3.2 Rubric and Checklist.

Display and explain the peer review process to students:

- During the first review, students read for the central claim, supporting claims, and counterclaims while also evaluating reasoning and evidence (W.11-12.1.a, W.11-12.1.b, and W.11-12.1.e).
- During the second review, students focus on transitions between sentences, paragraphs, and larger ideas and the paper’s overall cohesiveness. Additionally, students focus on including formal style, objective tone, and argument norms and conventions (W.11-12.1.c, W.11-12.1.d).
- During the third review, students focus on formatting and conventions, including MLA format, and mechanical and grammatical conventions (L.11-12.1, L.11-12.2.a,b, and W.11-12.8).
- After the third and final review, writers revise their papers based on the peer feedback provided.
 - ▶ Students examine the peer review process.

Distribute one Peer Review Accountability Tool to each student. Display the Model Peer Review Accountability Tool for all students to see. Model where Reviewers 1, 2, and 3 enter their most significant revision for the writer.

- ▶ Students listen, following along with the modeling.

Point to the first column, labeled “Original.” Explain that in this section, students write the paragraph number and a few words from the sentence to indicate where in the paper the revision needs to be made.

Point to the second column, labeled “Peer Suggestion.” Explain that students make a suggestion for how to revise the paper in this section. Student reviewers should think about how they would revise the paper as if it were their own, and provide constructive criticism accordingly. For example, if the writer did not include a counterclaim, it is not enough to just write, “Add a counterclaim.” Instead, students should provide some suggestions of possible counterclaims.

Once the student reviewer completes a review, the reviewer should record the most significant revision to their peer’s paper on the Peer Review Accountability Tool. Each reviewer uses one row of the tool per review.

► Students examine the Peer Review Accountability Tool.

- ① If students write directly on the papers, they may want to use different colored pens or pencils to distinguish different reviewers’ feedback. Students can also use color-coded sticky notes.
- ① Students can also peer review by tracking their changes in a word-processing program. Google Docs and other document-sharing programs have their own protocols for tracking changes. Ensure students know how to use these tools before they begin modifying their peers’ drafts. Remind students to save their original documents with a different file name to safeguard against accidental deletions or corruption.
- ① If handwriting is a barrier to the peer editing process, allow students to read aloud their drafts to one another to provide clarity.

Explain that during the first round of revision, peer reviewers focus on the strength of substandards W.11-12.1.a, W.11-12.1.b, and W.11-12.1.e. Instruct students to take out their copies of the 12.3.2 Rubric and Checklist and look at these substandards.

Instruct students to focus on these skills for their constructive criticism in this first round of review.

- ① W.11-12.1.a was taught in 12.3.2 Lessons 1 and 4; W.11-12.1.b was taught in 12.3.2 Lesson 2; W.11-12.1.e was taught in 12.3.2 Lesson 6.

Ask students to name suggestions, based on the W.11-12.1.a,b,e skills listed in the 12.3.2 Rubric and Checklist for possible review.

💬 Student responses may include:

- Suggest a peer remove evidence that does not effectively support a claim.
- Propose that a peer rearrange claims or pieces of evidence to better support the argument.
- Suggest limitations that might be included in the development of a claim, if the writer has not included any limitations.
- Suggest ways to address possible audience knowledge level, concerns, values, and potential biases.
- Suggest that the concluding statement tie more closely to the arguments presented.

Instruct students to pass their research-based argument paper drafts to the student on the right to complete the first round of review, adding constructive feedback regarding substandards W.11-12.1.a, b, e.

- ▶ Students pass their drafts to the peer on their right, and review peer papers, adding constructive criticism in the margin, on sticky notes, or electronically.

① **Remind students that in this lesson they continue the work of collaborative discussion practices outlined in SL.11-12.1.**

After the first round of review, instruct peer reviewers to determine the most significant revision regarding the standards analyzed in this first round of review. Allow peer reviewers time to select the most significant revision from this first round of review, and add it to the first row of the Peer Review Accountability Tool. Students should complete both the “Original” and the “Peer Suggestion” columns of the first row of the tool.

- ▶ Peer reviewers select the most significant revision and add it to the first row of the Peer Review Accountability Tool by completing the Original and Peer Suggestion column.
-

Instruct students to pass the research-based argument papers to the right again, so each student has a new draft to peer review for the second round of review.

- ▶ Students pass papers to the right.

Inform students that during this second round of review, peer reviewers focus on the strength of substandards W.11-12.1.c and W.11-12.1.d.

- ▶ Students examine substandards W.11-12.1.c and W.11-12.1.d on the 12.3.2 Rubric and Checklist.

① **W.11-12.1.c was taught in 12.3.2 Lessons 5 and 8, W.11-12.1.d was taught in 12.3.2 Lesson 7.**

① **Differentiation Consideration:** Remind students to refer to the Connecting Ideas Handout in 12.3.1 Lesson 5 for more support if needed.

Ask students:

What are some examples of constructive criticism that focus on the skills in substandards W.11-12.1.c and W.11-12.1.d?

- 💬 Student responses may include:

- Suggest a different transition word than what is provided to clarify the relationship between two ideas.
- Suggest a phrase be added to clarify the relationship between a claim and evidence.
- Identify portions of the text where the tone is less formal and/or objective and suggest revisions.
- Suggest varied syntax to create cohesion and link ideas together in the paper.

Instruct students to review their peers' papers, adding constructive feedback based on substandards W.11-12.1.c and W.11-12.1.d. Instruct students to select the most significant revision and add it to the Peer Review Accountability Tool.

- ▶ Students review their peers' papers and add constructive feedback for substandards W.11-12.1.c and W.11-12.1.d, select the most significant revision, and add it to the second row of the Peer Review Accountability Tool.

Instruct students to pass the papers to the right again, so each peer reviewer has a new draft to read for the third round of review.

- ▶ Students pass papers to the right.

Explain to students that during this third round of review, peer reviewers focus on the skills in substandards L.11-12.2.a, b, L.11-12.3.a, and standards W.11-12.8, L.11-12.1.

- ▶ Students examine substandards L.11-12.2.a, b, L.11-12.3.a, and standards W.11-12.8, L.11-12.1 on their 12.3.2 Rubric and Checklist.
- ① Consider displaying the sample research-based argument paper to show criticism focused on these skills.
- ① L.11-12.1 was taught in 12.3.2 Lesson 5, L.11-12.3.a was taught in 12.3.2 Lesson 8, L.11-12.2.a, b were taught in 12.3.2 Lesson 9, W.11-12.8 was taught in 12.3.2 Lesson 3.

Ask students:

What types of constructive criticism would focus on the skills in substandards L.11-12.2.a,b, L.11-12.3.a, and standards W.11-12.8, L.11-12.1?

💬 Student responses may include:

- Identify grammatical errors and suggest a revision.
- Identify misspelled words and provide the correct spellings.
- Suggest the use of specific or precise terms relevant to the issue rather than general terms.
- Identify misuse of hyphens and suggest a correction.

- Identify an overreliance on one source in the claims and evidence and suggest a broader scope of evidence.
- Identify varied syntax for effect and make suggestions about the effectiveness of this choice, consulting references as needed.
- Identify places where MLA format is improperly applied and suggest corrections.

Instruct students to review their peers' papers, adding constructive feedback based on the focus standards W.11-12.8, L.11-12.1, and substandards L.11-12.2.a, b, L.11-12.3.a. Instruct students to select the most significant revision and add it to the Peer Review Accountability Tool in the third row.

- ▶ Students review their peers' papers, adding constructive feedback, and select the most significant revision and add it to the Peer Review Accountability Tool.

① Consider instructing students to discuss the peer review process, identifying ways in which the process strengthens their writing and reading skills, and naming challenges inherent in the process.

Activity 4: Lesson Assessment

20%

Explain to students that when they receive the feedback from their peers, they do not have to accept all the suggestions, but they should consider each suggestion carefully before revising their papers. Instruct students to collect the draft paper and the Peer Review Accountability Tool from their peers.

- ▶ Students collect their draft papers and the Peer Review Accountability Tools from their peers.

Remind students that they have three revisions that their peers have identified as the most significant on the Peer Review Accountability Tool. Explain that in this section, students decide whether to implement the feedback or not and explain why.

- ▶ Students examine their Peer Review Accountability Tools.

Instruct students to read through all the constructive criticism carefully, and complete one row of the Peer Review Accountability Tool ("Final Decision and Explanation") for a revision they plan to implement. Instruct students to make that revision in the paper. Remind students that their responses will be assessed.

① Consider modeling a completed "Final Decision and Explanation" section of the Peer Review Accountability Tool if students need support.

Collect Peer Review Accountability Tools.

- 💬 See the High Performance Response at the beginning of this lesson.

Activity 5: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to continue to implement revisions based on peer feedback. Additionally, instruct students to read their drafts aloud to themselves or someone else to identify errors in syntax, grammar, or logic in order to prepare for the following lesson's End-of-Unit Assessment.

- ▶ Students follow along.

Homework

Continue to implement revisions based on peer feedback. Additionally, read your drafts aloud to yourself or someone else to identify errors in syntax, grammar, or logic in order to prepare for the following lesson's End-of-Unit Assessment.

Sample Student Research-Based Argument Paper with Revisions

What Are the Best Ways for Developing Nations to Increase Economic Prosperity?

Nearly half of the globe lives on less than \$2.50 per day, and “[a]t least 80% of humanity lives on less than \$10 a day” (Shah). In the U.S. alone, nearly 50 million people live below the poverty line (Fessler). While people all over the globe suffer as a result of poverty from income disparity, it is particularly devastating for developing nations. **What** is the best way for developing nations to increase their economic prosperity? It is a complex question with no single, one-size-fits-all solution, but the most effective way for developing nations to become more prosperous is by investing in human capital, providing quality education and technology to all citizens, regardless of gender or race.

Commented [R1_1]: Consider using a transitional phrase here to connect these sentences.

Before describing the practical measures developing nations must take in order to work toward economic prosperity, one must first define several terms. What do we mean when we say *prosperity*? In fact, what do we mean by *developing*? **Basically, if someone says the term “developing nation” they are also saying that there is also a “developed” nation.** It would be easy to take a very Eurocentric position and claim that the developing world is just what is outside the developed, predominantly Western world. This stance is problematic because it assumes that all countries and cultures want to develop in the way the Western world has. Still, *developing world* or *developing nation* is the most common term in the available research. For most, the term means a nation with a lower material standard of living, lower life expectancy, and weaker industrial base when compared to more industrialized nations (e.g., the U.S., United Kingdom, Japan, Canada, Denmark). Therefore, *prosperity*, for the purposes of this paper, refers to a material standard of living, poverty rate, life expectancy, and industrial base comparable to more industrialized nations.

Commented [R1_2]: Revise this sentence to make it more formal.

Next, what is “human capital”? Human capital is defined as the “accumulated stock of skills and talents ... [that] manifests itself in the educated and skilled workforce in the region” (Ogunade 2). In other words, human capital is all of the “skills and talents” that workers in a society offer. Countries rely on a “skilled workforce” to increase their economic power and improve their standard of living.

Finally, you might be asking yourself, what is “quality education,” and why is quality even that important? Formal classroom education is often the first type of educational experience that comes to mind but classroom education and high student attendance do not by themselves result in quality education. As UNESCO notes in its “Education for All Global Monitoring Report, 2005”, “The quantity of children who participate is by definition a secondary consideration: merely filling spaces called ‘schools’ with children would not address even quantitative objectives if no real education occurred” (28–29). Many countries have technically provided access to formal education in the way of providing classrooms and teachers, but in reality they have done a really bad job and it is obvious because their people are in horrible shape. The quality of an education is much more than time spent in the classroom; a student could spend years in a classroom and, hypothetically, emerge with no real skills. Rather, “education is a set of processes and outcomes that are defined qualitatively” (28), and a high-quality education focuses on both cognitive and emotional growth.

Equal access to quality education for men and women has economic implications for developing nations to prosper. For example, in many countries, women do not receive equal access to education, even though “[b]etter-educated women can undertake higher-value economic activity” (Ward et al. viii). Such economic activity requires higher caliber cognitive skills, so education is a necessary investment for countries that wish to increase their high-value economic activity. Furthermore, equity in education is strongly connected to the prosperity of a country. “With the exceptions of resource-rich Oman, Bahrain

Commented [R1_3]: Revise this sentence to give it a more formal style.

Commented [R1_4]: This statement is not very objective. Consider revising in order to present your information more objectively.

Commented [R1_5]: Develop the idea of equality in education to include racial and ethnic equality, in addition to gender equality.

and Saudi Arabia, no country has achieved both GDP per capita of over \$10,000 and a ratio of girls to boys in primary education of less than 90 per cent” (viii). However, the resource-rich countries of Oman, Bahrain, and Saudi Arabia have wealth based on resources rather than an investment in educational equity. The point still stands, though, that investment in quality education consistently benefits economies.

Equal access to quality education results in wealth not only for countries as a whole but for the individuals who live in these countries. When people have access to quality education they become potential investors in the market and can develop capital of their own. This leads to more competition within and between industries, “Product markets are more competitive if all would-be entrepreneurs can use their talents” (Ward et al. ix). Competition is a motivator, so the more people use their talents within a specific industry, the harder people will work in the industry to be able to compete. Competition and hard work will also result in a more reliable monetary return, which in turn incentivizes individual and shared investment: “A more productive workforce, through greater equality in employment and education, increases expected rates of return, which in turn generates a modest increase investment and promotes growth” (ix).

If many people in a nation are applying their skills to compete with one another, and if investment is attractive because returns are more likely, the country will be more prosperous, which means that more individuals will have more money for investment. Thus, education created a positive feedback loop: people become educated, refine their talents, compete with one another, attract investors, increase domestic prosperity, create more wealth at the individual level, become educated potential investors themselves, and in turn incentivize education and the development of talent to

Commented [R1_6]: Edit this sentence. It seems like you need other punctuation to more clearly separate the quote from the rest of the sentence.. Perhaps a colon?

Commented [R1_7]: This should be “creates” to remain consistent with the rest of the paragraph which is present tense.

perpetuate the virtuous cycle. Countries must invest in equal quality education for *everyone* in a society, so that there is more quality human capital that contributes to economic prosperity.

This wealth-generating competition depends as much on the free flow of information as it does on skilled human capital. Jared Diamond points out in his book: “you want your country, industry, industrial belt, or company to be broken up into groups that compete with one another while maintaining relatively free communication” (444). A developing nation must also seek out communication to foster productive competition within the nation, and technology plays a vital role. In order for communication to take place on a larger scale and contribute to economic growth, all citizens must have access to technology. In developing nations, “[d]eploying broadband networks at the community and municipal levels has become an important factor in allowing local businesses to grow and remain competitive” (Qiang et al. 38). The Internet provides vast opportunities for communication, and therefore fosters larger-scale competition among all people of a nation.

Broadband Internet access has also helped individual workers in developing nations “acquire skills (increasing their marketability as workers) and develop social networks through broadband-enabled Web applications, facilitating peer-to-peer communities and their integration with the economy” (Qiang et al. 36). In this way, increasing access to high-speed Internet is not only a supplement to quality education in the classroom; it becomes a source of education itself, offering vital social interaction between all citizens of a nation regardless of gender or race. The impact of broadband access extends even into very rural, low-income communities. For example, in India, some farming villages are “using a common portal that links multimedia personal computers by satellite” (40). The computers afford farmers access to information about the weather forecast, crop prices, nearby markets, and the latest sowing techniques. Qiang et al. also note that “these improvements have

Commented [R1_8]: You should probably provide the title of his book here because your audience might not be familiar with the book

resulted in productivity gains for the farmers” (40). This example highlights that broadband Internet technology is stimulating developing economies from all angles—from inside the classroom, in the living room, in the office, and on the farm.

In addition to the Internet, other technology solutions can help developing countries generate wealth. If countries really want to improve their economic standing, they should totally “improve ... quality of life by investing in labour-saving technology” (Ward et al. 44). If women were freed from the burden of manual labor to the extent that men are, they would have a higher capacity for more high-value economic activity. As Revenga notes, “If women farmers have the same access as men to productive resources ... agricultural output in developing countries could increase by as much as 2.5 to 4 percent” (41). Thus, for technology to be harnessed most effectively, like quality education, it must be made equally available to all people.

Some scholars and policymakers argue that, although education and technology are important in the development of a more robust economy, they are not the most important pieces in this complicated puzzle. After all, in order for nations to make these types of investments in the first place, there must be some amount of foundational stability and reliable governance. United Nations *Millennium Projector* director Jeffrey Sachs and a group of other scholars insist, “Sometimes the problem is poor governance, marked by corruption, poor economic policy choices, and denial of human rights” (29). Economic development fails if a government cannot uphold its own rule of law or even begin to institute its ideal policies in the first place.

Furthermore, in the examples above, the potential benefits of education and technology depend on equality for all groups. As Sachs et al. state, “In many places, access to public goods and services is restricted for certain groups. Minority groups, for their language, religion, or race, suffer discrimination

Commented [R1_9]: This statement does not seem objective or formal.

Commented [R1_10]: It is not clear to me what sorts of technology you are talking about here. Provide more detail so your audience can have a better understanding.

at the hands of more powerful groups” (31). If there isn’t foundational equality in the first place, such as a constitution declaring all citizens equal and a legal infrastructure to uphold that law, all the benefits of instituting education and technology will be limited to the privileged and remain ultimately ineffective on a large economic scale.

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Other scholars argue that developing nations are not able to create the infrastructure necessary for education and technology. Some countries are stuck in “a poverty trap, with local and national economies too poor to make the needed investments” (29). If a country is too poor to build and maintain solid educational and technological infrastructure, these items cannot be made a priority in economic development. In addition, the opportunity costs are high for having people in school rather than paid work. For example, there are a number of challenges to educating children in a rural impoverished area. In such areas, “[c]hildren are ‘economic assets’ on the farm, and many of them, especially girls, do not attend school because they are home performing household work” (32). Thus, it is not an investment to send children to school; it is a direct, material loss of income with little chance of payoff if the country is not ready to employ those who do attend school. Hypothetically, a girl could attend school, study, and gain a formal education. Meanwhile, she will have missed all opportunities to gain practical knowledge on the farm. She is likely to be unemployed with an education that means nothing in a struggling rural economy. No amount of formal education or Internet access would solve her problem.

Others may argue that good health comes before education and technology. In order to invest in human capital through education and technology, humans themselves must be healthy. In very poor countries, “[l]ife expectancy is less than 50 years (as opposed to 80 years in high-income countries), and child mortality is 100 per 1,000 live births or higher ... Infectious diseases are rife” (Sachs et al. 33). How

can people begin to take advantage of a quality education system if they are suffering from disease? This line of reasoning leads one to the conclusion that investing in human capital through equal and affordable healthcare is more important or effective than education, insofar as able minds rely on able bodies.

Thus, **it's** argued that without proper governance, legal infrastructure, a baseline amount of wealth, and basic healthcare needs met, a suffering population will not benefit from the luxuries of the classroom or technology. To end this poverty trap, a country must:

raise the economy's capital stock—in infrastructure, human capital, and public administration—to the point where the downward spiral ends and self-sustaining economic growth takes over. This requires a “big push” of basic investments ... in key infrastructure (roads, electricity, ports, water and sanitation, accessible land for affordable housing, environmental management), human capital (nutrition, disease control ...) and public administration. (39)

These are all valid concerns. Indeed, it seems as if meeting developing nations' basic necessities is more important than investing in human capital through quality education and technology. **But you can't** equate foundational with most important or most effective, because that makes no sense.

Although basic necessities may need to come first before education and technology, it is not necessarily true that basic necessities are more important or pivotal in solving the poverty problem in developing nations. What comes first in a sequence of events is not necessarily more important than what comes after. Although the establishment of a solid legal infrastructure is foundational and must come before the establishment of a system of quality education, the argument can be made that the latter is more important in the long-term development of a stable economy. While equal access to quality education

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Commented [R1_13]: This sentence needs to be edited for objectivity and formal style.

depends on a certain level of legal and economic infrastructure in the first place, an educated citizenry renders that infrastructure more solid, valuable, and sustainable, thus, education and technology are more effective long-term investments for developing nations.

Additionally, there is some evidence that foreign investment is more likely to come to countries that have invested in education and technology. Companies looking to locate in a country want a skilled workforce that guarantees returns, as well as certain technological advancements like functional highways, electricity, and communication systems (Sachs et al. 46). Thus, developing nations need literate or educated workers and technological advances in order to manage foreign investments productively.

An informed, educated, literate citizenry is also necessary for a stable government, which is a requirement for a productive economy. Education is not a luxury; it is the sustaining force of a developed economy and functioning government. “Strong civil society engagement and participation are crucial to effective governance because they bring important actors to the fore, ensure the relevance of public investments...” (Sachs et al. 32). Thus, as addressed earlier, “strong” societal engagement comes from quality education for all, which in turn contributes to a stable government and prosperous economy.

A strong education system also serves as a solid foundation for better health care and the physical wellbeing of a population. In the case of female education in relation to healthcare, Sperling points out the following:

An extra year of female education can reduce infant mortality by 5% to 10%. In Africa, children of mothers who receive five years of primary education are 40% less likely to the [sic] before age 5 than are children of uneducated mothers. Across both Africa and

Southeast Asia, mothers who have a basic education are [sic] 50% more likely than uneducated mothers to immunize their children. (Sperling)

Education gives people the knowledge to protect themselves from disease. It is obviously no surprise, then, that “[e]ducation has also proven to be one of the most powerful tools to prevent the spread of HIV/AIDS. A recent study in rural Uganda found that, in comparison with young people with no education, those with some secondary education were three times less likely to be HIV-positive, and those with some primary schooling were about half as likely to be HIV-positive” (Sperling). Many catastrophic epidemics could be fought more effectively if only people had the education and knowledge to protect themselves. Indeed, education is itself a preventative health measure.

Thus, although expanding equal access to quality education and installing broadband Internet in all homes may not be the first foundational step toward building a brighter economic future in developing countries, it’s in many ways the most important element. Education and technology make sustainable internal economic growth possible.

The future wellbeing of developing nations depends on investment in human capital. It is a complex question with no single, one-size-fits-all solution, but the most effective way for developing nations to become more prosperous is by investing in human capital, providing quality education and technology to all citizens, regardless of gender or race.

Commented [R1_14]: Edit to make this sound more objective.

Commented [R1_15]: No contractions in formal writing.

Commented [R1_16]: This conclusion is mainly a restatement of your central claim verbatim. Consider paraphrasing your central claim and offering some concluding thoughts.

Peer Review Accountability Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Use this tool to record suggestions for revisions from your peer's review. Provide the original text, peer suggestion, and explanation of your decision about the final revision.

| Original | Peer suggestion | Final decision and explanation |
|----------|-----------------|--------------------------------|
| | | |
| | | |
| | | |

Model Peer Review Accountability Tool

| | | | | | |
|--------------|--|---------------|--|--------------|--|
| Name: | | Class: | | Date: | |
|--------------|--|---------------|--|--------------|--|

Directions: Use this tool to record suggestions for revisions from your peer's review. Provide the original text, peer suggestion, and explanation of your decision about the final revision.

| Original | Peer suggestion | Final decision and explanation |
|---|---|--|
| Paragraph 5: "Equal access to quality education for men and women has economic implications for developing nations to prosper." | Develop the idea of equality in education to include racial and ethnic equality, in addition to gender equality. | I went back to my sources and found additional information to incorporate that addresses ethnic and racial inequality in education. The source discusses the fact that a quality education is necessarily bound with equality and the absence of discrimination, so that all people can develop cognitively. |
| Paragraph 10: "In addition to the Internet, other technology solutions can help developing countries generate wealth. Countries can 'improve ... quality of life by investing in labour-saving technology' (Ward et al. 44). If women were freed from the burden of manual labor to the extent that men are, they would have a higher capacity for more high-value economic activity. As Revenga notes, 'If women farmers have the same access as men to productive resources ... agricultural output in developing countries would increase by as much as 2.5 to 4 percent.' Thus, for technology to be harnessed most effectively, like quality | It is not clear to me what sorts of technology you are talking about here. Provide more detail so your audience can have a better understanding of what is meant by "laborsaving" technology. | I revised this section to include a more in-depth discussion of technology that can reduce the amount of manual labor in the developing world. |

| | | |
|---|---|---|
| education, it must be made equally available to all people. | | |
| Paragraph 25: “The future wellbeing of developing nations depends on investment in human capital. It is a complex question with no single, one-size-fits-all solution, but the most effective way for developing nations to become more prosperous is by investing in human capital, providing quality education and technology to all citizens, regardless of gender or race.” | This conclusion is mainly a restatement of your central claim verbatim. Consider paraphrasing your central claim and offering some concluding thoughts or insights. | I revised my conclusion. I deleted the restatement of my claim and paraphrased it instead, as well as offered some concluding statements that give my paper a resolution. |

12.3.2

Lesson 11

Introduction

In this final lesson of the unit, the End-of-Unit Assessment, students finalize their research-based argument papers by editing, polishing, and rewriting as necessary. Students are assessed on how their final draft aligns to the criteria of the 12.3.2 Rubric and Checklist. The final draft should present a precise claim that is supported by relevant and sufficient evidence and valid reasoning. The draft should be well organized and distinguish claims from alternate and opposing claims. It should use transitional language that clearly links the major sections of the text and clarifies relationships among the claims, counterclaims, evidence, and reasoning. Finally, the draft should demonstrate control of the conventions of written language and maintain a formal style and objective tone.

For homework, students prepare for their presentation in the Module Performance Assessment by listening to and evaluating two podcasts using the 12.3 Speaking and Listening Rubric to evaluate the speaker's presentation skills. Additionally, students complete a final multimedia journal entry, responding to the following prompt: How did the process of researching an issue, constructing an argument, and crafting a research-based argument paper influence your perspective on your issue? Discuss any surprises you encountered or unexpected discoveries you made along the way.

Standards

| Assessed Standard(s) | |
|----------------------|---|
| W.11-12.1. a-e | <p>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <ul style="list-style-type: none"> a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. |

| | |
|------------------------------|---|
| | <p>c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.</p> <p>d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.</p> <p>e. Provide a concluding statement or section that follows from and supports the argument presented.</p> |
| L.11-12.1 | Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. |
| L.11-12.2 | Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. |
| L.11-12.3 | Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. |
| Addressed Standard(s) | |
| W.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| W.11-12.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |
| W.11-12.9 | Draw evidence from literary or informational texts to support analysis, reflection, and research. |
| SL.11-12.4 | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. |
| SL.11-12.5 | Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. |
| SL.11-12.6 | Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. |
| L.11-12.1.b | Demonstrate command of the conventions of standard English grammar and usage |

| | |
|---------------|---|
| | <p>when writing or speaking.</p> <p>b. Resolve issues of complex or contested usage, consulting references (e.g., <i>Merriam-Webster's Dictionary of English Usage</i>, <i>Garner's Modern American Usage</i>) as needed.</p> |
| L.11-12.2.a,b | <p>Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <p>a. Observe hyphenation conventions.</p> <p>b. Spell correctly.</p> |
| L.11-12.3.a | <p>Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.</p> <p>a. Vary syntax for effect, consulting references (e.g., Tufte's <i>Artful Sentences</i>) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.</p> |
| L.11-12.6 | <p>Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.</p> |

Assessment

| Assessment(s) |
|--|
| <p>End-of-Unit Assessment: Student learning in this lesson is assessed via the research-based argument paper.</p> <p>① The research-based argument paper is assessed using the 12.3.2 Rubric.</p> |
| High Performance Response(s) |
| <p>A High Performance Response should:</p> <ul style="list-style-type: none"> Adhere to the criteria in the 12.3.2 Rubric and Checklist. <p>① See Sample Student Research-Based Argument Paper at the end of this lesson.</p> |

Vocabulary

| Vocabulary to provide directly (will not include extended instruction) |
|--|
| <ul style="list-style-type: none"> None.* |
| Vocabulary to teach (may include direct word work and/or questions) |
| <ul style="list-style-type: none"> None.* |
| Additional vocabulary to support English Language Learners (to provide directly) |
| <ul style="list-style-type: none"> None.* |

*Students should incorporate relevant academic and/or domain-specific vocabulary from 12.3.1 into their research-based argument papers.

Lesson Agenda/Overview

| Student-Facing Agenda | % of Lesson |
|--|--|
| Standards: <ul style="list-style-type: none"> Standards: W.11-12.1.a-e, L.11-12.1, L.11-12.2, L.11-12.3, W.11-12.4, W.11-12.8, W.11-12.9, SL.11-12.4, SL.11-12.5, SL.11-12.6, L.11-12.1.b, L.11-12.2.a,b, L.11-12.3.a, L.11-12.6 | |
| Learning Sequence: <ol style="list-style-type: none"> Introduction of Lesson Agenda Homework Accountability 12.3.2 End-of-Unit Assessment: Final Research-Based Argument Paper Closing | <ol style="list-style-type: none"> 5% 10% 80% 5% |

Materials

- Student copies of the 12.3.2 Rubric and Checklist (refer to 12.3.2 Lesson 1)
- Copies of the 12.3.2 End-of-Unit Assessment for each student
- Student copies of the 12.3 Speaking and Listening Rubric and Checklist (refer to 12.3.1 Lesson 3)

Learning Sequence

| How to Use the Learning Sequence | |
|----------------------------------|---|
| Symbol | Type of Text & Interpretation of the Symbol |
| 10% | Percentage indicates the percentage of lesson time each activity should take. |
| no symbol | Plain text indicates teacher action. |
| | Bold text indicates questions for the teacher to ask students. |
| | <i>Italicized text indicates a vocabulary word.</i> |
| ▶ | Indicates student action(s). |
| 💬 | Indicates possible student response(s) to teacher questions. |
| ❗ | Indicates instructional notes for the teacher. |

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the lesson agenda and assessed standards for this lesson: W.11-12.1.a-e, L.11-12.1, L.11-12.2, and L.11-12.3. In this lesson, students complete the final drafts of their research-based argument papers to be evaluated for the 12.3.2 End-of-Unit Assessment. Students work independently and hand in their final papers at the end of class.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability

10%

Instruct students to take out their responses to the previous lesson's homework assignment. (Continue to implement revisions based on peer feedback. Additionally, read your drafts aloud to yourself or someone else to identify errors in syntax, grammar, or logic in order to prepare for the following lesson's End-of-Unit Assessment.) Ask student volunteers to briefly share one or two edits they made for homework based on the peer review session and to explain their decisions by referencing the corresponding checklist(s) in their 12.3.2 Rubric and Checklist.

- ▶ Students share one or two edits made for homework.
- 💬 Student responses vary by individual research paper and specific feedback received.

Activity 3: 12.3.2 End-of-Unit Assessment: Final Research-Based Argument Paper

80%

Provide students with the 12.3.2 End-of-Unit Assessment and instruct students to spend the remaining portion of the class completing the final draft of their research-based argument papers. Inform students

that they may use their sources, notes, optional tools, all checklists and rubrics used in 12.3.2, and previous versions of their research-based argument papers with peer comments to guide the creation of the final draft. Advise students that they should use this time to edit, polish, and rewrite as they see fit, using all the skills they have learned over the course of 12.3.2.

Instruct students to review the components of W.11-12.4, which include producing clear, coherent writing that employs organization and style appropriate to the task, purpose, and audience. Remind students to keep these skills in mind as they finalize their paper. Additionally, remind students to apply correct punctuation, spelling, and capitalization while also using domain-specific vocabulary when finalizing their drafts (L.11-12.2.a,b, L.11-12.3.a, L.11-12.6). Students should also finalize their works cited page and format their paper according to MLA style. Remind students that the final draft will be assessed using the 12.3.2 Rubric. The draft will be assessed on its alignment to the conventions of an argument text, including reference to citations as well as proof that students developed an evidence-based central claim from research and supported it with sufficient evidence (W.11-12.8 and W.11-12.9).

- ▶ Students work independently to finalize their research-based argument papers.

Activity 4: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to prepare for their presentations in the Module Performance Assessment by listening to the following podcasts: “How Not to Pitch a Billionaire” by Alex Blumberg at <http://gimletmedia.com/> (Google search terms: Gimlet, How Not to Pitch a Billionaire) and “Startups Are a Risky Business” by Alex Blumberg at <http://gimletmedia.com/> (Google search terms: Gimlet, Startups Are a Risky Business). Instruct students to listen to the first 6 minutes and 40 seconds of Episode 1: “How Not to Pitch a Billionaire” and the first 6 minutes of Episode 4: “Startups Are a Risky Business,” and use the 12.3 Speaking and Listening Rubric and Checklist for standards SL.11-12.4, SL.11-12.5, and SL.11-12.6 to evaluate the speaker’s presentation skills.

Additionally, instruct students to complete a final multimedia journal entry, responding to the following prompt:

How did the process of researching an issue, constructing an argument, and crafting a research-based argument paper influence your perspective on your issue? Discuss any surprises you encountered or unexpected discoveries you made along the way (SL.11-12.5).

- ① Completion of this homework is necessary to ensure students are prepared for the Module Performance Assessment.

- ▶ Students follow along.

Homework

Prepare for your presentation in the Module Performance Assessment by listening to the following podcasts: “How Not to Pitch a Billionaire” by Alex Blumberg at <http://gimletmedia.com/> (Google search terms: Gimlet, How Not to Pitch a Billionaire) and “Startups Are a Risky Business” by Alex Blumberg at <http://gimletmedia.com/> (Google search terms: Gimlet, Startups Are a Risky Business) . Listen to the first 6 minutes and 40 seconds of Episode 1: “How Not to Pitch a Billionaire” and the first 6 minutes of Episode 4: “Startups Are a Risky Business,” and use the 12.3 Speaking and Listening Rubric and Checklist for standards SL.11-12.4, SL.11-12.5, and SL.11-12.6 to evaluate the speaker’s presentation skills.

Additionally, complete a final multimedia journal entry, responding to the following prompt:

How did the process of researching an issue, constructing an argument, and crafting a research-based argument paper influence your perspective on your issue? Discuss any surprises you encountered or unexpected discoveries you made along the way.

12.3.2 End-of-Unit Assessment

Final Research-Based Argument Paper

Your Task: Rely on the evidence you have gathered to write the final draft of your research-based argument paper. In crafting your paper, include a precise central claim that is derived from your research and supported by relevant and sufficient evidence and valid reasoning. Be sure to use evidence from at least 5 of your identified sources, distinguishing claims from alternate and opposing claims. Use transitional language that clearly links the major sections of the text and clarifies relationships among the claims, counterclaims, evidence, and reasoning. Use your research materials, checklists and rubrics, and previous versions of your research-based argument paper with peer comments to guide the creation of your final draft.

Your writing will be assessed using the 12.3.2 Rubric.

Guidelines

Be sure to:

- Review your writing for alignment with all components of W.11-12.1.a-e.
- Establish your precise central claim about the problem-based question.
- Distinguish your central claim from alternate or opposing claims.
- Establish and organize the central claim, supporting claims, counterclaims, reasoning, and evidence.
- Develop supporting claims and counterclaims equally while explaining the strengths and limitations of both as well as anticipating the audience's knowledge level, concerns, values, and possible biases.
- Use relevant and sufficient evidence and valid reasoning from at least 5 of the sources to develop your argument without overreliance on one source.
- Identify the sources that you reference in MLA format.
- Organize your ideas in a cohesive and clear manner that clarifies the relationships between supporting claims and reasoning, between reasoning and evidence, between supporting claims and counterclaims, and uses varied syntax to create cohesion.
- Maintain a formal and objective style of writing while attending to the norms and conventions of argument writing.
- Follow the conventions of standard written English.
- Accurately use general academic and domain-specific words and phrases appropriate to the subject of the research-based argument paper.

CCSS: W.11-12.1.a-e, L.11-12.1, L.11-12.2, L.11-12.3

Commentary on the task:

This task measures W.11-12.1.a-e because it demands that students:

- Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
- Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence.
- Develop claim(s) and counterclaims fairly, supplying evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.
- Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
- Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
- Provide a concluding statement or section that follows from and supports the argument presented.

This task measures L.11-12.1 and L.11-12.2 because it demands that students:

- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

This task measures L.11-12.3 because it demands that students:

- Understand how language functions in context and make effective choices for meaning and style.

Sample Student Research-Based Argument Paper

What Are the Best Ways for Developing Nations to Increase Economic Prosperity?

Nearly half of the globe lives on less than \$2.50 per day, and “at least 80% of humanity lives on less than \$10 a day” (Shah). In the U.S. alone, nearly 50 million people live below the poverty line (Fessler). While people all over the globe suffer as a result of poverty from income disparity, it is particularly devastating for developing nations. We are thus faced with an important question: What is the best way for developing nations to increase their economic prosperity? It is a complex question with no single, one-size-fits-all solution, but the most effective way for developing nations to become more prosperous is by investing in human capital, providing quality education and technology to all citizens, regardless of gender or race.

Before describing the practical measures developing nations must take in order to work toward economic prosperity, one must first define several terms. What do we mean when we say *prosperity*? In fact, what do we mean by *developing*? To say *developing nation* is to claim that there exists a developed nation. It would be easy to take a very Eurocentric position and claim that the developing world is just what is outside the developed, predominantly Western world. This stance is problematic because it assumes that all countries and cultures want to develop in the way the Western world has. Still, *developing world* or *developing nation* is the most common term in the available research. For most, the term means a nation with a lower material standard of living, lower life expectancy, and weaker industrial base when compared to more industrialized nations (e.g., the U.S., United Kingdom, Japan, Canada, Denmark). Therefore, *prosperity*, for the purposes of this paper, refers to a material standard of living, poverty rate, life expectancy, and industrial base comparable to more industrialized nations.

Next, what is *human capital*? Human capital is defined as the “accumulated stock of skills and talents ... [that] manifests itself in the educated and skilled workforce in the region” (Ogunade, 2). In other words, human capital is all of the “skills and talents” that workers in a society offer. Countries rely on a “skilled workforce” to increase their economic power and improve their standard of living.

Finally, what is *quality education*, and why is quality important? Most people think of formal classroom education as an example of a high-quality educational experience, but classroom education and high student attendance do not by themselves result in quality education. As UNESCO notes in its “Education for All Global Monitoring Report, 2005, “The quantity of children who participate is by definition a secondary consideration: merely filling spaces called ‘schools’ with children would not address even quantitative objectives if no real education occurred” (28-29). Many countries have technically provided access to formal education in the way of providing classrooms and teachers, but the quality of an education is much more than time spent in the classroom; a student could spend years in a classroom and, hypothetically, emerge with no real skills. Rather, “education is a set of processes and outcomes that are defined qualitatively” (28), and a high-quality education focuses on both cognitive and emotional growth:

[T]wo principal objectives are at stake: the first is to ensure the cognitive development of learners. The second emphasises the role of education in nurturing the creative and emotional growth of learners and in helping them to acquire values and attitudes for responsible citizenship. Finally, quality must pass the test of equity: an education system characterized by discrimination against any particular group is not fulfilling its mission.

(Foreword)

Additionally, a quality education is necessarily bound with equality and the absence of discrimination so that all people can develop cognitively as well as learn to become “responsible” (Foreword) citizens. Furthermore, quality education is not limited to the classroom, as Ogunade notes that the development of human capital “includes experience; practical learning that takes place on the job, as well as, non-traditional technical training regimens that enhance skill development” (3). Thus, quality education is an umbrella term for many different kinds of education that happen inside a classroom, on the job, or through other experiences, which contribute to the development of human capital.

For developing nations to prosper, men and women of all races must have equal access to quality education. For example, in many countries, women do not receive equal access to education, even though “[b]etter-educated women can undertake higher-value economic activity” (Ward et al. viii). Such economic activity requires higher caliber cognitive skills, so education is a necessary investment for countries that wish to increase their high-value economic activity. Furthermore, equity in education is strongly connected to the prosperity of a country. “With the exceptions of resource-rich Oman, Bahrain and Saudi Arabia, no country has achieved both GDP per capita of over \$10,000 and a ratio of girls to boys in primary education of less than 90 per cent” (viii). However, the resource-rich countries of Oman, Bahrain, and Saudi Arabia have wealth based on resources rather than an investment in educational equity. The point still stands, though, that investment in quality education consistently benefits economies.

Equal access to quality education results in wealth not only for countries as a whole, but for the individuals who live in these countries. When people have access to quality education, they become potential investors in the market who can develop capital of their own. This leads to more competition within and between industries: “Product markets are more competitive if all would-be entrepreneurs

can use their talents” (Ward et al. ix). Competition is a motivator, so the more people use their talents within a specific industry, the harder people will work in the industry to be able to compete. Competition and hard work will also result in more reliable monetary return, which in turn incentivizes individual and shared investment: “A more productive workforce, through greater equality in employment and education, increases expected rates of return, which in turn generates a modest increase investment and promotes growth” (ix).

If many people in a nation are applying their skills to compete with one another, and if investment is attractive because returns are more likely, the country will be prosperous, which means that more individuals will have more money for investment. Thus, education creates a positive feedback loop: people become educated, refine their talents, compete with one another, attract investors, increase domestic prosperity, create more wealth at the individual level, become educated potential investors themselves, and in turn incentivize education and the development of talent to perpetuate the virtuous cycle. Countries must invest in equal quality education for *everyone* in a society, so that there is more quality human capital that contributes to economic prosperity.

This wealth-generating competition depends as much on the free flow of information as it does on skilled human capital. Jared Diamond points out in *Guns, Germs, and Steel*: “you want your country, industry, industrial belt, or company to be broken up into groups that compete with one another while maintaining relatively free communication” (444). A developing nation must also seek out communication to foster productive competition within the nation and technology plays a vital role. In order for communication to take place on a larger scale and contribute to economic growth, all citizens must have access to technology. In developing nations, “[d]eploying broadband networks at the community and municipal levels has become an important factor in allowing local businesses to grow

and remain competitive” (Qiang et al. 38). The Internet provides vast opportunities for communication, and therefore fosters larger-scale competition among all people of a nation.

Broadband Internet access has also helped individual workers in developing nations “acquire skills (increasing their marketability as workers) and develop social networks through broadband-enabled Web applications, facilitating peer-to-peer communities and their integration with the economy” (Qiang et al. 36). In this way, increasing access to high-speed Internet is not only a supplement to quality education in the classroom; it becomes a source of education itself, offering vital social interaction between all citizens of a nation regardless of gender or race. The impact of broadband access extends even into very rural, low-income communities. For example, in India, some farming villages are “using a common portal that links multimedia personal computers by satellite” (40). The computers afford farmers access to information about the weather forecast, crop prices, nearby markets, and the latest sowing techniques. Qiang et al. also note that “these improvements have resulted in productivity gains for the farmers” (40). This example highlights that broadband Internet technology is stimulating developing economies from all angles—from inside the classroom, in the living room, in the office, and on the farm.

In addition to the Internet, other technology solutions can help developing countries generate wealth. Countries can “improve ... quality of life by investing in labour-saving technology” (Ward et al. 44). If technology can reduce the number of people doing manual labor, more people can engage in high-caliber, efficient economic activity, assuming there is an educational infrastructure to support them. Many developing countries have already instituted laborsaving technologies, but unfortunately, “a large literature shows that men have been the primary adopters” of these technologies, (Gill et al. 2). Many women are employed in agriculture in developing countries, making this a missed opportunity as

“women continue to use traditional, more labor-intensive methods, undermining their agricultural productivity” (2). If women were freed from the burden of manual labor to the extent that men are, they would have a higher capacity for more high-value economic activity. As Revenga notes, “If women farmers have the same access as men to productive resources ... agricultural output in developing countries could increase by as much as 2.5 to 4 percent” (41). Thus, for technology to be harnessed most effectively, like quality education, it must be made equally available to all people.

Some scholars and policymakers argue that, although education and technology are important in the development of a more robust economy, they are not the most important pieces in this complicated puzzle. After all, in order for nations to make these types of investments in the first place, there must be some amount of foundational stability and reliable governance. United Nations *Millennium Projector* director Jeffrey Sachs and a group of other scholars insist, “Sometimes the problem is poor governance, marked by corruption, poor economic policy choices, and denial of human rights” (29). Economic development fails if a government cannot uphold its own rule of law or even begin to institute its ideal policies in the first place.

Furthermore, in the examples above, the potential benefits of education and technology depend on equality for all groups. As Sachs, et al. state, “In many places, access to public goods and services is restricted for certain groups. Minority groups, for their language, religion, or race, suffer discrimination at the hands of more powerful groups” (31). If there is not foundational equality in the first place, such as a constitution declaring all citizens equal and a legal infrastructure to uphold that law, all the benefits of instituting education and technology will be limited to the privileged and remain ultimately ineffective on a large economic scale.

Other scholars argue that developing nations are not able to create the infrastructure necessary for education and technology. Some countries are stuck in “a poverty trap, with local and national economies too poor to make the needed investments” (29). If a country is too poor to build and maintain solid educational and technological infrastructure, these items cannot be made a priority in economic development. In addition, the opportunity costs are high for having people in school rather than paid work. For example, there are a number of challenges to educating children in a rural impoverished area. In such areas, “[c]hildren are “economic assets” on the farm, and many of them, especially girls, do not attend school because they are home performing household work” (32). Thus, it is not an investment to send children to school; it is a direct, material loss of income with little chance of payoff if the country is not ready to employ those who do attend school. Hypothetically, a girl could attend school, study, and gain a formal education. Meanwhile, she will have missed all opportunities to gain practical knowledge on the farm. She is likely to be unemployed with an education that means nothing in a struggling rural economy. No amount of formal education or Internet access would solve her problem.

Others may argue that good health comes before education and technology. In order to invest in human capital through education and technology, the humans themselves must be healthy. In very poor countries, “[l]ife expectancy is less than 50 years (as opposed to 80 years in high-income countries), and child mortality is 100 per 1,000 live births or higher ... Infectious diseases are rife,” (Sachs et al. 33). How can people begin to take advantage of a quality education system if they are suffering from disease? This line of reasoning leads one to the conclusion that investing in human capital through equal and affordable healthcare is more important or effective than education, insofar as able minds rely on able bodies.

Thus, it is argued, that without proper governance, legal infrastructure, a baseline amount of wealth, and basic healthcare needs met, a suffering population will not benefit from the luxuries of the classroom or technology. To end this poverty trap, a country must

raise the economy's capital stock—in infrastructure, human capital, and public administration—to the point where the downward spiral ends and self-sustaining economic growth takes over. This requires a “big push” of basic investments ... in key infrastructure (roads, electricity, ports, water and sanitation, accessible land for affordable housing, environmental management), human capital (nutrition, disease control . . .) and public administration. (39)

These are all valid concerns. Indeed, it seems as if meeting developing nation's basic necessities is more important than investing in human capital through quality education and technology. It is important, however, to avoid equating foundational with most important or most effective. Although basic necessities may need to come first before education and technology, it is not necessarily true that basic necessities are more important or pivotal in solving the poverty problem in developing nations. What comes first in a sequence of events is not necessarily more important than what comes after. Although the establishment of a solid legal infrastructure is foundational and must come before the establishment of a system of quality education, the argument can be made that the latter is more important in the long-term development of a stable economy. While equal access to quality education depends on a certain level of legal and economic infrastructure in the first place, an educated citizenry renders that infrastructure more solid, valuable, and sustainable, thus, education and technology are more effective long-term investments for developing nations.

Additionally, there is some evidence that foreign investment is more likely to come to countries that have invested in education and technology. Companies looking to locate in a country want a skilled workforce that guarantees returns, as well as certain technological advancements like functional highways, electricity, and communication systems (Sachs et al. 46). Thus, developing nations need literate or educated workers and technological advances in order to manage foreign investments productively.

An informed, educated, literate citizenry is also necessary for a stable government, which is a requirement for a productive economy. Education is not a luxury; it is the sustaining force of a developed economy and functioning government. “Strong civil society engagement and participation are crucial to effective governance because they bring important actors to the fore, ensure the relevance of public investments,,,” (Sachs et al. 32). Thus, as addressed earlier, “strong” societal engagement comes from quality education for all, which in turn contributes to a stable government and prosperous economy.

A strong education system also serves as a solid foundation for better healthcare and the physical wellbeing of a population. In the case of female education in relation to healthcare, Sperling points out the following:

An extra year of female education can reduce infant mortality by 5% to 10%. In Africa, children of mothers who receive five years of primary education are 40% less likely to the [sic] before age 5 than are children of uneducated mothers. Across both Africa and Southeast Asia, mothers who have a basic education ate [sic] 50% more likely than uneducated mothers to immunize their children. (Sperling)

Education gives people the knowledge to protect themselves from disease. It is no surprise, then, that “[e]ducation has also proven to be one of the most powerful tools to prevent the spread of HIV/AIDS. A recent study in rural Uganda found that, in comparison with young people with no education, those with some secondary education were three times less likely to be HIV-positive, and those with some primary schooling were about half as likely to be HIV-positive” (Sperling). Many catastrophic epidemics could be fought more effectively if only people had the education and knowledge to protect themselves. Indeed, education is itself a preventative health measure.

Thus, while expanding equal access to quality education and installing broadband Internet in all homes may not be the very first, foundational step toward building a brighter economic future in developing countries, it is in many ways the most important element. Education and technology make sustainable internal economic growth possible.

The future wellbeing of developing nations depends on investment in human capital. When the barriers of all forms of inequality are abolished, and everyone has equal access to quality education and technology, skilled workers will thrive at their fullest, and economies will grow. Of course, quality education and thriving industry will look different from one developing nation to another, and as of yet, no country in the world has formulated the perfect solution to poverty and human suffering; there is no single solution. In an ideal world, all nations would come together, acknowledge potential areas for growth, and help one another toward a common goal of global economic prosperity.

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12.3

Performance Assessment

Introduction

In this Performance Assessment, students complete their multimedia research journals by crafting a single 5–10 minute multimedia narrative that includes elements of their individual research processes and findings. This Performance Assessment comprises three lessons: After responding to a final retrospective prompt in the previous lesson’s homework, students spend the first two lessons editing and synthesizing the multimedia journal entries they created over the course of Module 12.3 into a succinct, cohesive narrative, adding effects, narration, and other stylistic elements as needed to enhance the final product. Students’ final products should include highlights from the entire research process, including their first areas of investigation and pre-searches, as well as the final central claim, several supporting claims, reasoning, and evidence. The final products should draw clear connections between early research and the final claims to create a story that documents that development. In the third and final lesson of this Performance Assessment, students present their multimedia narratives to an audience and respond to questions. Students are assessed on their final multimedia narrative presentations and on their responses to audience questions following their presentations.

Each of the three lessons in this Performance Assessment is likely to last one class period; however, timing may vary depending on individual class schedules and student needs.

This Performance Assessment is evaluated using the 12.3 Speaking and Listening Rubric.

- ① Students’ final multimedia narrative products may be audio, video, or a blend of both formats. Students were introduced to the multimedia journal in 12.3.1 Lesson 9.

Standards

| Assessed Standard(s) | |
|----------------------|--|
| SL.11-12.1.d | Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i> , building on others’ ideas and expressing their own clearly and persuasively. d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and |

| | |
|------------------------------|---|
| | determine what additional information or research is required to deepen the investigation or complete the task. |
| SL.11-12.4 | Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. |
| SL.11-12.5 | Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. |
| SL.11-12.6 | Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. |
| Addressed Standard(s) | |
| L.11-12.1 | Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. |
| L.11-12.6 | Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. |

Prompt

Over the course of Module 12.3, you have analyzed an issue in response to your problem-based question. You have developed your understanding of the issue through research and arrived at your own perspective. You have presented your central claim, supporting claims, counterclaims, reasoning, and evidence in a formal research-based argument paper. You have also documented this process by responding periodically to multimedia journal prompts.

To answer the prompt, begin by reflecting on the work you have done over the course of Module 12.3 and the progression of your research process as reflected in your multimedia journal entries. Build on your research and analysis by crafting a single 5–10 minute multimedia narrative that conveys how your research process led you to your findings. Using relevant excerpts from the multimedia journal entries you completed over the course of this module, your final product should depict cohesively the evolution of your research. Your final product should present a cohesive story of the research process

that led you to your final central claim, and should therefore include your final central claim, several supporting claims, reasoning, and evidence. The final product should draw clear connections between early research and the final claims, as this project documents that development. Edit, delete, paste together, and add voiceover, interviews, and effects where appropriate in order to achieve this goal.

Finally, present your multimedia narratives to an audience, with whom you will engage in a question and answer session following your presentation. The audience comprises peers, community members, teachers, alumni, and/or other students.

High Performance Response

High Performance Response(s)

A High Performance Response should:

- Edit and synthesize excerpts from the multimedia journal entries completed over the course of Module 12.3 in order to craft a cohesive multimedia narrative detailing the individual research process and findings.
- Make strategic use of multimedia to convey a firsthand or personal experience of the research process.
- Incorporate voiceover and various effects effectively, when appropriate to enhance the audience's understanding of findings.
- Make strategic use of the multimedia format to articulate evidence, claims, and reasoning in a succinct and engaging manner.
- Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that the audience can follow the development of reasoning.
- Demonstrate a command of appropriate tone and language throughout the multimedia narrative presentation and the question and answer session.

 Student multimedia narratives and responses to questions are evaluated using the 12.3 Speaking and Listening Rubric.

Standard-Specific Demands of the Performance Assessment

This Performance Assessment requires students to meet numerous demands required by the ELA/Literacy standards for grades 11–12.

Throughout Module 12.3, students have engaged deeply in an iterative research process in order to arrive at a distinct perspective. Additionally, students have edited, revised, and refined their writing through the preparation and completion of a research-based argument paper.

This Performance Assessment requires that students reach back to their multimedia journal entries recorded at key intervals throughout the research process, engage retrospectively with the process, and use these firsthand accounts to construct a polished narrative detailing the path that led them to the research-based argument paper. The Performance Assessment demands that students make strategic use of digital media to convey an understanding of findings, reasoning, and evidence and to add interest (SL.11-12.5). Students must also ensure that the organization, development, substance, and style are appropriate to purpose, audience, and task of a multimedia narrative (SL.11-12.4). Additionally, this assessment requires that students adapt speech to align with the task and context of a multimedia narrative constructed from firsthand accounts (SL.11-12.6). Presenters must also answer audience questions, requiring them to respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task (SL.11-12.1.d).

Process

This Performance Assessment requires that students engage retrospectively with the research process by editing and synthesizing multimedia journal entries recorded at key intervals throughout Module 12.3, in order to convey an understanding of the path that led to the creation of the research-based argument paper. Students first respond to a final multimedia journal entry prompt from the previous lesson's homework, before beginning to synthesize their responses to previous prompts, adding effects where appropriate. This multimedia journal should enhance analysis and add interest, leveraging the flexibility of digital media to create a dynamic lens through which the audience sees the research process. Students also deepen their understanding of their issue by applying considerations for a new audience, and modifying the content to craft a research story. Once students have finished synthesizing their 5–10 minute multimedia narratives, they present their final products to an audience that comprises peers, community members, teachers, alumni, and/or other students. After the presentation of their narratives, students respond to questions from the audience.

Lesson 1

Based on the previous lesson's homework, instruct students to form pairs and respond briefly to the following question: How are your multimedia journal entries different from or similar to Alex Blumberg's podcasts? Lead a brief discussion of student responses.

Next, instruct students to begin the process of editing all of their multimedia journal entries into a final 5–10 minute narrative. Remind students that because the final multimedia narrative should be 5–10 minutes long, they must be judicious as they edit, including only the most necessary pieces from each entry while also focusing on seamless transitions and a polished presentation. Students must take into account and reflect on their entire research process as they select highlights for their final narrative. Additionally, students should include details about how they arrived at their final central claim, supporting claims, evidence, and reasoning.

- ① **Differentiation Consideration:** Consider encouraging students to develop a storyboard before they start editing in order to conceptualize and plan their presentations. This step will assist them in determining where and how to include journal excerpts, effects, music, and other multimedia components.
- ① Consider sharing the following links for online editing tools and presentation platforms with students to assist in the development of the final multimedia narrative:
 - <http://theaudacitytopodcast.com/> (search terms: Record, Edit, Podcast, Audacity)
 - <http://www.voiceovertimes.com/> (search terms: Editing Podcast, GarageBand)
 - <http://www.thesitsgirls.com/> (Google search terms: The Sits Girls, Vlogging Series, Edit a Video Blog)
 - <http://www.thesitsgirls.com/> (Google search terms: The Sits Girls, Vlogging Series, Hold 'Em, Fold 'Em)
- ① For additional support, encourage students to consult with school media or technology specialists.
- ① The final multimedia narrative presentation should include a complete audio or video file (such as an MP3 or similar format). Consider providing technology in the classroom to support student multimedia presentations. See 12.3.1 Lesson 9 for a list of supportive technology.
- ① Students have saved their multimedia journal entries from Module 12.3 in a secure place on a computer for access during this Performance Assessment. Remind students to continue to save their project work in a secure place, such as Dropbox or Google Drive.

Lesson 2

Students finish editing their 5–10 minute multimedia narrative presentations, making strategic use of multimedia to convey a firsthand experience of the research process and findings. Instruct students to use voiceover techniques, volume manipulation, and various other multimedia techniques in order to create a polished and cohesive final product.

Lesson 3

Students present their final multimedia narratives to an audience by playing their audio or video presentations. Students also engage in a brief question and answer session following each presentation. Students respond thoughtfully to audience questions and comments and clarify, verify, or challenge ideas if necessary.

- ① Consider composing an audience of peers, community members, teachers, alumni, and/or other students for the presentations.
- ① Audience members may generate and pose questions for presenters immediately following each presentation.
- ① Depending upon time and space limitations, consider making students' multimedia narratives available for audience members to view or listen to prior to the question and answer sessions.

Module 12.3 Performance Assessment

Text-Based Response

Your task: Begin by reflecting on the work you have done over the course of Module 12.3 and the progression of your research process as reflected in your multimedia journal entries. Build on your research and analysis by crafting a single 5–10 minute multimedia narrative that conveys how your research process led you to your findings. Using relevant excerpts from the multimedia journal entries you completed over the course of Module 12.3, your final product should be a cohesive depiction of the evolution of your research. This means that your final product should present a cohesive story of the research process that led you to your final central claim, and should therefore include your final central claim, several supporting claims, reasoning, and evidence. The final product should draw clear connections between early research and the final claims, as this project documents that development. Edit, delete, paste together, and add voiceover, interviews, and effects where appropriate in order to achieve this goal.

Finally, present your multimedia narratives to an audience, with whom you will engage in a question and answer session following your presentation. The audience comprises your peers, community members, teachers, alumni, and/or other students.

Your response will be assessed using the 12.3 Speaking and Listening Rubric for standards SL.11-12.1.d, SL.11-12.4, SL.11-12.5, and SL.11-12.6.

Guidelines

Be sure to:

- Read the prompt closely.
- Organize your ideas and evidence.
- Edit your multimedia journal entries together fluidly.
- Take strategic advantage of multimedia to convey a firsthand experience of the research process.

CCSS: SL.11-12.1.d, SL.11-12.4, SL.11-12.5, SL.11-12.6

Commentary on the task:

This task measures SL.11-12.1.d because it demands that students:

- Respond thoughtfully to diverse perspectives.
- Synthesize comments, claims, and evidence made on all sides of an issue.
- Resolve contradictions when possible.
- Determine what additional information or research is required to deepen the investigation or complete the task.

This task measures SL.11-12.4 because it demands that students:

- Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning.
- Present their own perspective and alternative or opposing perspective and ensure the organization, development, substance, and style are appropriate to purpose, specific audience, and task.

This task measures SL.11-12.5 because it demands that students:

- Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

This task measures SL.11-12.6 because it demands that students:

- Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.