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)

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.

- 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.

- Student responses are assessed using the Area Evaluation Checklist.

High Performance Response(s)

A High Performance Response should:

- 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)
• None.*
Vocabulary to teach (may include direct word work and/or questions)
• None.*
Additional vocabulary to support English Language Learners (to provide directly)
• 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: • Standards: W.11-12.7, W.11-12.4 **Learning Sequence:** 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	 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

Symbol	Type of Text & Interpretation of the Symbol
How to Use the Learning Sequence	
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.
	Italicized text indicates a vocabulary word.
▶	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.

- 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.

- **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.

- **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.

- 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.

- 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.

- **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.

- 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.

- 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?

- 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*.

- 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.

- 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:

  o Determine if there are multiple claims about the issue.

  o Decide whether there is enough about the area of investigation to investigate.

  o Determine whether there is a basic understanding of the issue.

  o 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.
- Remind students that an area of investigation provides multiple claims about a debatable issue.
- 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.
- 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.

- 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:

  o 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.

  o 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.

- 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.

- 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.

- 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.

- 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.	☐	
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.	☐	
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.	☐	
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.	☐	

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.

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.	☐	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.	☐	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.	☐	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 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.	☐	The area of investigation interests me because many developing nations struggle to attain economic equality with 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