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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

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| 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

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| 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. * 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.). * 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

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| 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

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| Student-Facing Agenda | % of Lesson |
| **Standards:**   * Standards: W.11-12.8, W.11-12.7 |  |
| **Learning Sequence:**   1. Introduction of Lesson Agenda 2. Homework Accountability 3. Planning for Searches 4. Assessing Sources 5. Quick Write 6. Closing | 1. 10% 2. 10% 3. 25% 4. 40% 5. 10% 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 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

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| 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.** |
| *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 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.
* **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.”
* In the following unit, 12.3.2, students learn more about the importance of citations and how to use citations to avoid plagiarismwhen 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.
* 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?”
* 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.
* 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.
* 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.
* Consider using an electronic white board or document camera to display the search results.
* 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.
* 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 relevantsources 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.
* 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.
* Ideally, the two model sources selected exemplify one credible source and one unreliable source so students can assess the differences.
* Advise students to ask the teacher, librarian, or media specialist if they are not certain about the credibility of a source.
* 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.
* 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.
* **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.
* 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.
* 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.
* Instruct students to number their sources to keep them organized.
* **Differentiation Consideration**: Consider modeling how to assess a model source using the Assessing Sources Handout as a guide if students need additional support.
* 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.
* **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.
* 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?

* **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?





