



WHITE PAPER SERIES

BUILDING CRITICAL THINKING SKILLS WITH PRIMARY SOURCES:
INVESTIGATING BEYOND FACTS



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INTRODUCTION

"When students engage their minds on historical evidence, they practice inquiry, evaluation, problem solving, judgement, and synthesis..."²

Educational standards for learning in any subject area require that students compare and evaluate the information they find in different sources. Students are expected to compare sources and formats and to evaluate their reliability. They must understand how primary sources provide distinct kinds of information and how to interpret these sources differently from secondary sources. Critical thinking is a fundamental part of this process.

Primary sources provide firsthand accounts of a topic under investigation. They are the materials on which research is based. A primary source is deemed a primary source not by its format but by how it informs a topic of study or specific research question. Any kind of artifact, genre of writing, sound or video recording, photograph, work of art, or work of original research can be a primary source—when it gives firsthand information related to what is being studied.

"Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action."¹

PRIMARY SOURCE MATERIALS—

Original documents and objects which give firsthand information related to what is being studied.



ARTIFACTS



WRITTEN WORD



SOUND RECORDINGS



VIDEO RECORDINGS



PHOTOGRAPHS



WORKS OF ART

¹ Michael Scriven and Richard Paul, statement presented at the 8th Annual International Conference on Critical Thinking and Education Reform, Summer 1987, cited in "<http://www.criticalthinking.org/pages/defining-critical-thinking/766>

² Michael Edmonds et al., *History & Critical Thinking: A Handbook for Using Historical Documents to Improve Students' Thinking Skills in the Secondary Grades*, Wisconsin Historical Society, 2005. <http://www.wisconsinhistory.org/pdfs/lessons/EDU-History-and-Critical-Thinking-Handbook.pdf>

BUILDING CRITICAL THINKING SKILLS WITH PRIMARY SOURCES: INVESTIGATING BEYOND FACTS



*"Analyzing historical primary sources about science expands critical thinking and promotes student inquiry, just as it does in other disciplines. Students can learn about the history and application of various scientific discoveries through the use of primary sources. Using historical primary sources in science instruction also builds important skills, such as observation and inference, that are integral to experimentation and the scientific method."*³

In any learning environment, primary sources invite students to become actively involved in the learning process. Teaching with primary sources promotes authentic student inquiry and builds students' critical thinking skills. By providing a direct lens through which to view the past, a primary source gives students the opportunity to get curious about and connect to the person behind the firsthand account—and to study that person's perspective and reasons for creating the account the way any scholar would. The investigation of a primary source leads to an examination of the historical context in which it was created and a greater understanding of the topic of study. Ultimately, these deeper interpretations of historical events and the people who played a role in them will help students form richer understandings of themselves and their roles in present-day events.

Educational standards acknowledge the value in the process of thinking that students must follow as they work with primary sources. Notable sets of national standards, such as the Common Core State Standards for English Language Arts and the College, Career, and Civic Life (C3) Framework for Social Studies State Standards, provide descriptions of the expectations for student inquiry and critical thinking that a student should demonstrate when working with a primary source, whether that source is an original scientific model, a literary or informational text, or a historical artifact. Educators have also been making interesting connections between learning with primary sources in science and the Next Generation Science Standards, which like the CCSS and the C3 Framework stress the importance of students' thinking skills and inquiry within its descriptions of learning expectations.

This white paper focuses on how to identify and use primary sources effectively in the classroom to build critical thinking skills. It examines the kinds of primary sources teachers can use to support critical thinking about any subject at any grade level and how primary sources can drive learning that is student-centered and student-directed.

*"It is often difficult to distinguish clearly between primary and secondary sources. Some evidence can be both, at the same time. The first edition of Encyclopædia Britannica was a secondary source when first published in 1768; but today it is a primary source to historians."*⁴

³ Mark Newman and Carrie Copp, "Primary Sources and Science," *Teaching with Primary Sources Quarterly* 4, no. 1 (Winter 2011). <http://www.loc.gov/teachers/tps/quarterly/science/pdf/science.pdf>

⁴ "English Literature: Selected Electronic Resources: Primary Versus Secondary Sources." Boston College, accessed August 10, 2016, <http://libguides.bc.edu/englishlit/sources>

BEGINNING TO USE PRIMARY SOURCES

Before primary sources are used in the classroom, it is important to establish how they differ from secondary sources.

Primary Sources: A primary source is an original work that provides firsthand information about a topic.

It provides original data about a topic or expresses the viewpoint of a person who witnessed or participated in an event.

Speeches, songs, photographs, newspapers, letters, interviews, journals, lab notebooks, patents, technical reports, original documents (e.g., birth certificates or property deeds), audio and visual recordings, research data, artifacts (e.g., money, clothing, tools, or furniture) and original works of art or literature often fit into this category.

Secondary Sources: A secondary source offers an interpretation of the information that has been gathered from one or more primary sources. In general, a secondary source had been produced after the event or time period that it discusses. A secondary source does not express the viewpoint of a person who witnessed or participated in an event—rather it collects, distills, and organizes information from a number of primary sources to provide a summary or generalized interpretation of an event, time period, or other topic.

Textbooks, biographies, reviews, data compilations, article abstracts, encyclopedias, dictionaries, atlases, audio or video recordings of secondhand accounts, and works of interpretation or criticism often fit into this category.

Some examples of primary and secondary sources with regard to a particular topic:

Subject	Topic	Primary Sources	Secondary Sources
History	World War II	Film footage of Winston Churchill delivering a speech shortly after the attack on Pearl Harbor	A video that uses quotes by Winston Churchill to explain how Churchill's words inspired Great Britain and the Allies during World War II
Science	Theory of Evolution	<i>The Origin of the Species by Means of Natural Selection</i> , book by Charles Darwin	An illustrated timeline of some major evolutionary events
Art	Vincent van Gogh's paintings	<i>The Starry Night</i> (1889), painting by Vincent van Gogh	An encyclopedia entry about Vincent van Gogh's life and work
Literature	Haiku	A haiku poem by the master Japanese haiku poet Bashō	A book about how to write haiku

Remember that the format of a source does not necessarily determine what kind of source it is. Even the most artistic work may prove to be a secondary source if it is offering an interpretation rather than a firsthand account of the topic in question. Note, too, that a secondary source (such as an encyclopedia or a textbook) will often use important and influential primary sources to illustrate the summary or interpretation it provides about a topic. To determine whether a source is a primary source or a secondary source, ask the following questions:

- ✓ Who created the source?
- ✓ Why was the source created?
- ✓ Does the source offer a firsthand account of the topic?
- ✓ What is the creator's relationship to what is being described in the source?
- ✓ Is the source providing an opinion about another person's work or experience, or is it offering an opinion about the creator's own experience?

STUDENTS' WORK WITH PRIMARY SOURCES

Students must ask a number of questions about a primary source to identify what it is and what can be learned from it. As the investigation unfolds, students' questions should follow a progression that makes them evaluate the information they learn from the primary source and allows them to draw their own conclusions/interpretations from it. Delving deeper into the investigation involves comparing the primary source to other primary sources, analyzing its significance, and evaluating secondary-source interpretations about the topic to which the primary source under investigation relates. Student sharing should be a fundamental part of the process of inquiry, investigation, and interpretation. Here are some questions to prompt critical thinking about a primary source:

<p>REACT</p>	<p>What do you notice first when you look at it? What does it remind you of? What do you want to know more about when you look at it? What is your first impression of this source?</p>
<p>IDENTIFY</p>	<p>What is its form (e.g., newspaper, photograph, letter, etc.)? Who created it? What is known about the person? When was it made? Where was it made?</p>
<p>CONTEXTUALIZE IN HISTORY</p>	<p>What was happening in the world when this source was made? What role did the creator of this source play in the key events of the period? When and where was it made?</p>
<p>INVESTIGATE</p>	<p>What facts and opinions are presented in this source? What information has not been included that you wonder about? What information can be inferred from this source? Why? What questions do you still have about the source?</p>
<p>ANALYZE</p>	<p>How does the creator communicate the intended message in the source? What techniques or devices does the creator use to make a point? What effects do you think the source had on its intended audience? What effects does the source have on people today?</p>
<p>EVALUATE</p>	<p>How does this source's information compare to information from other primary and secondary sources about the same topic? Explain. What do you find least/most convincing in this source? Why? What would you still like to know that this source is not telling you?</p>
<p>FORM AND SHARE NEW INTERPRETATIONS</p>	<p>What beliefs does this source inspire you to have? Does this source change the way you understand the topic? How? How does it support or conflict with current understandings of the topic? Can people interpret this source in different ways? Why or why not?</p>

INCORPORATING PRIMARY SOURCES INTO THE CLASSROOM TO BUILD CRITICAL THINKING SKILLS

Here are specific examples for using primary sources to build critical thinking skills:



ELEMENTARY—SOCIAL STUDIES

1 Use the image and text versions of the Declaration of Independence to introduce a study of the history of democracy in the United States.

Primary Source Image: Encyclopædia Britannica ImageQuest, “DECLARATION OF INDEPENDENCE—Signed copy of the Declaration of Independence, 4 July 1776.” accessed 18 Jul 2016, http://quest.eb.com/search/140_1636469/1/140_1636469/cite

Primary Source Text: Thomas Jefferson, “The Declaration of Independence,” Britannica Original Sources, accessed Monday, July 18, 2016, <http://os.eb.com/Document.aspx?DocID=YSD8XUDID67CL99&H=1>

2 Have students examine the image to take note of the document's distinguishing text features. Encourage students to identify and react to the document by asking questions about what they see in the image before they examine the text version of the document.

Possible questions to ask:

- ✓ What is the date of this document?
- ✓ Who created this document?
- ✓ How many people signed this document?
- ✓ Which signers' names do you recognize, and for what are they known?
- ✓ What do you find most interesting about this document's title?
- ✓ Why was the document written?
- ✓ What do you think the document says?





MIDDLE SCHOOL—ENGLISH LANGUAGE ARTS & HISTORY

1 Use the text of John F. Kennedy’s Inaugural Address as part of a discussion about how an author’s purpose and message can be conveyed through the use of literary techniques.

Primary Source Image: Encyclopædia Britannica ImageQuest, “John F Kennedy,” accessed 19 Jul 2016, http://quest.eb.com/search/115_2246874/1/115_2246874/cite

Primary Source Text: John F. Kennedy, “John F. Kennedy: Inaugural Address,” in Britannica School Primary Sources & E-Books, accessed Tuesday, July 19, 2016, http://school.eb.com/levels/high/additionalcontent/primarysources?id=165442&path=/primary_source/eb/116922.html



2 Have students take note of words and phrases in the speech that help them define and understand its intended message as they read it. Afterwards, encourage students to share their notes, any questions they have about the text, and any passages that they found interesting.

Possible questions to ask:

- ✓ Why does Kennedy say at the beginning of his speech, “The world is very different now. For man holds in his mortal hands the power to abolish all forms of human poverty and all forms of human life”?
- ✓ Why does Kennedy address his audience variously as “my fellow Americans,” “my fellow citizens,” and “my fellow citizens of the world”?
- ✓ What passages in this speech contribute most strongly to its message? Why?
- ✓ How does the way in which this speech was written (e.g., its rhetoric and literary techniques) contribute to its message?

Next have students listen to a portion of the speech to further discuss how the way in which the speech was written and the way in which it was delivered contribute to its overall message.

Primary Source Audio Recording: Kennedy, John F.: Inaugural address, 1961, Audio, from Encyclopædia Britannica, accessed July 18, 2016, <http://media1.school.eb.com/eb-media/71/70171-005-3DC75C23.mp3>

Possible questions to ask:

- ✓ Did listening to Kennedy’s delivery of part of his speech make its message more powerful?
- ✓ How does the volume, tone, and pacing of Kennedy’s delivery contribute to the effectiveness of his speech?



HIGH SCHOOL—SCIENCE & HISTORY

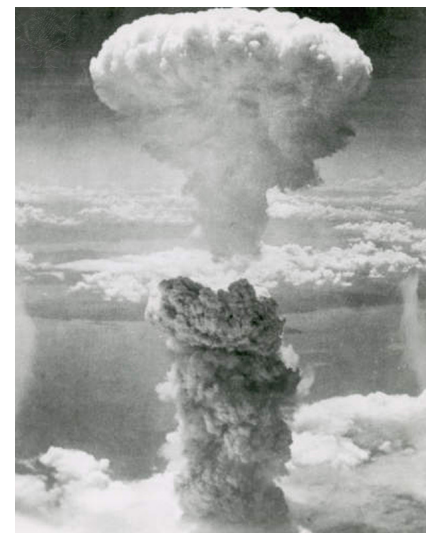
- 1** Use the letter from Albert Einstein to President Franklin Delano Roosevelt about the possible construction of an atomic bomb as part of a discussion about an atomic bomb’s nuclear energy and the devastation that it can cause. Have students contextualize the letter’s place in history.

Primary Source Image: Encyclopædia Britannica ImageQuest, “Atomic Bombing of Nagasaki,” accessed 21 Jul 2016, http://quest.eb.com/search/139_1913024/1/139_1913024/cite

Primary Source Text: Albert Einstein, “Einstein’s Atomic Bomb Proposal,” Einstein’s Atomic Bomb Proposal in Franklin D. Roosevelt Papers, Franklin D. Roosevelt Library Britannica Original Sources, accessed Thursday, July 21, 2016, <http://os.eb.com/Document.aspx?DocID=J95GBYCAJFQC4NF&H=1>.

Possible questions to ask:

- ✓ What was going on in the world on August 2, 1939?
- ✓ Who was Albert Einstein?
- ✓ What is the intent of the letter?



- 2** Discuss the purposes behind the building of the atomic bomb. Then use the U.S. Army Corps of Engineers report on the bombing of Hiroshima and Nagasaki to discuss the outcome of its use during World War II. Have students analyze the report’s intent and effect.

Possible questions to ask:

- ✓ What is the intended message of this report?
- ✓ Who is the intended audience?
- ✓ What strengths or weaknesses does this report have in terms of conveying its message?
- ✓ In the last paragraph, why are we told “The crux of the matter is whether total war in its present form is justifiable, even when it serves a just purpose”?

IN CONCLUSION...



Research in education stresses that the use of primary sources in K–12 classrooms has many learning benefits. In addition to expanding students’ world knowledge,⁵ offering opportunities for interdisciplinary learning, and increasing student engagement, teaching with primary sources helps students develop critical thinking skills.⁶ Studies also recognize that making meaning from primary sources is challenging, that students need clear guidance about how to work with different kinds of primary sources, and that both teachers and students require practice in analyzing primary sources.⁷ Educational researchers understand that students’ analyses of primary sources build critical thinking skills that are much needed and relevant for the 21st-century classroom.⁸ Additionally, research suggests that there are opportunities to build critical thinking with primary sources in all fields of study.

⁵ Denise N. Morgan and Timothy V. Rasinski, “The Power and Potential of Primary Sources,” *Reading Teacher* 65, no. 8 (2012): 584–94.

⁶ Katherine R. Morgan, “Using Primary Sources to Build a Community of Thinkers,” *English Journal* 91, no. 4 (2002): 69–74. <https://learningthroughmuseums.wikispaces.com/file/view/Using+Primary+Sources+to+Build+a+Community+of+Thinkers.pdf>

⁷ Bill Tally and Lauren B. Goldenberg, “Fostering Historical Thinking with Digitized Primary Sources,” *Journal of Research on Technology in Education* 38, no. 1 (2005): 1–21. <http://files.eric.ed.gov/fulltext/EJ719935.pdf>

⁸ Mary J. Johnson, “Primary Sources and Web 2.0: Unlikely Match or Made for Each Other?,” *Library Media Connection* 27, no. 4 (2009): 26–30.

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