

Annotated Bibliography

Answer the following questions below for each of the 10 sources of evidence you gather.

Research Question: How can we effectively incorporate scientific concepts and principles into a curriculum focused on the history and impact of slavery?

Review Paper 1

- Team member evaluation: — Alci
- Citation for the article:

Lehavi, Yaron, and Bat-Sheva Eylon. "Integrating Science Education Research and History and Philosophy of Science in Developing an Energy Curriculum." *History, Philosophy and Science Teaching: New Perspectives*, edited by Michael R. Matthews, Springer International Publishing, 2018, pp. 235–60. *Springer Link*, https://doi.org/10.1007/978-3-319-62616-1_9.

- 1-paragraph summary: This article is a review that discusses the process of curriculum development in science education, focusing on how scientific phenomena are interpreted and why certain interpretations are preferred. It suggests using four pillars—science, its history, philosophy, and findings from science education research—to guide curriculum design. The paper also illustrates how these domains influenced decisions in creating textbooks and instructional materials for teaching energy concepts at the middle school level 7th and 9th grades. The goal is to help students understand the evolution of scientific ideas and their foundational principles.

What information does this source contribute to your research question?

This source emphasizes the integration of scientific principles into designing a curriculum which aligns with our research question. This source offers a framework that incorporates the history and philosophy of science, making it easier to combine scientific and historical content related to the impact of slavery.

- How does the source relate to other sources in your bibliography?

Comparing this source to our other sources, this source provides a focus on curriculum design in science education.

- What are the strengths and weaknesses of the source?

A strength is that it provides a structured approach for using the four pillars and also offering a method for curriculum design. A weakness is that there isn't much information in this source about our topic

- How does the source fit into your research topic? Why is it useful?

This source is useful for our research because it provides a model for integrating scientific concepts into a historic topic.

Review Paper 2:

- Team member evaluation: Jonathan Brown
- citation for article: Santos, Luis. "The Role of Critical Thinking in Science Education." *Journal of Education and Practice*, vol. 8, no. 20, 2017, files.eric.ed.gov/fulltext/ED575667.pdf.
- 1-paragraph summary: This article highlights the importance of critical thinking in education, specifically science education. The role of critical thinking is "crucial and increasingly present" within education systems according to the article. According to Hagop A. Yacoubian, the Nature Of Science(NOS) is connected to critical thinking.
- What information does this source contribute to your research question? I think this information contributes to the role of critical thinking in science education.
- How does the source relate to other sources in your bibliography? This source relates to our overall science concept and how it can affect our learner.
- What are the strengths and weaknesses of the source?

Strengths: Great foundation, Great sources, directly links to our question.

Weakness: only 15 pages

- How does the source fit into your research topic? Why is it useful? It has a direct link to our question of teaching science and helps with the psychology of getting through to students.

Research Paper 1

- Team member evaluation: Alci

- Citation for the article: Klein, S. (2016). Preparing to Teach a Slavery Past: History Teachers and Educators as Navigators of Historical Distance. *Theory & Research in Social Education*, 45(1), 75–109. <https://doi.org/10.1080/00933104.2016.1213677>

- 1-paragraph summary:

The article examines how history teachers and museum educators address the sensitive topic of the Transatlantic Slave Trade and Slavery in their curricula. Using the concept of historical distance, the study found that participants' curriculum decisions were influenced by their personal values, beliefs, and professional context. Some teachers separated their personal perspectives from their teaching approach, while others did not. The study concludes that understanding these decisions requires deeper insight into how educators navigate between the past and present when teaching complex historical topics.

- What information does this source contribute to your research question?

Our research question is "How can we effectively incorporate scientific concepts and principles into a curriculum focused on the history and impact of slavery?". The source contributes to our research question by showing how educators navigate complex topics like the "Transatlantic slave Trade" through their curriculum decisions. The source also highlights the importance of developing a curriculum that involves multiple perspectives. We can use this framework to incorporate scientific concepts by understanding how different types of knowledge whether historical, scientific, ethical, etc are balanced and how educators approach sensitive topics.

- How does the source relate to other sources in your bibliography?

This source relates to other sources in our bibliography because of its topic of educators addressing complex topics through their curriculum.

- What are the strengths and weaknesses of the source?

A weakness is that this source doesn't specifically address our research question about integrating scientific concepts into a curriculum focused on the history and impact of slavery. It mainly highlights the importance of balancing historical narratives with education goals. However it does provide a great framework that we can follow.

- How does the source fit into your research topic? Why is it useful?

Our research topic/question is "how can we effectively incorporate scientific concepts and principles into a curriculum focused on the history and impact of slavery". This source is useful because it has key components we can use to effectively answer our research question.

Research Paper 2

- Team member evaluation: Alci
- Citation for the article: Legha, Rupinder K., et al. "Teaching the Legacy of Slavery in American Medicine and Psychiatry to Medical Students: Feasibility, Acceptability, Opportunities for Growth." *MedEdPORTAL*, Sept. 2023, p. 11349. *DOI.org (Crossref)*, https://doi.org/10.15766/mep_2374-8265.11349.

- 1-paragraph summary:

The article talks about a workshop aimed to help second-year medical students understand the legacy of slavery in American medicine and its ties to racial health inequities. The study increased awareness to 76% of students. They reported minimal prior knowledge and also the participants found the lecture format too scripted and wanted more interactive discussions. They expressed a strong need for a curriculum that fosters dialogue and connects historical insights to actionable anti-racist efforts.

- What information does this source contribute to your research question?

The information for this source contributes to our research question because it highlights the importance of understanding the legacy of slavery in addressing racial health inequalities into a history curriculum.

- How does the source relate to other sources in your bibliography?

This source relates to other sources by focusing on medical education which provides a new perspective on how historical context and scientific knowledge can inform anti-racist teaching.

- What are the strengths and weaknesses of the source?

A strength is that it provides a tested educational framework and evidence of its impact and a weakness is the limited interaction and engagement opportunities.

- How does the source fit into your research topic? Why is it useful?

This source fits into our research topic by illustrating how science and history can be combined.

Research Paper 3

- Team member evaluation: Alci

- Citation for the article:

Forato, Thaís Cyrino de Mello, et al. "History and Nature of Science in High School: Building Up Parameters to Guide Educational Materials and Strategies." *Science & Education*, vol. 21, no. 5, May 2012, pp. 657–82. *Springer Link*, <https://doi.org/10.1007/s11191-011-9419-3>.

- 1-paragraph summary:

- What information does this source contribute to your research question?

This source contributes to our research by providing examples of integrating historical and scientific narratives into a high school curriculum, which aligns with your goal of teaching about slavery while incorporating scientific principles.

- How does the source relate to other sources in your bibliography?

Like the "*Teaching Hard History* report", this source also deals with difficult topics and teaching challenges but focuses more specifically on science education. Both sources emphasize the importance of engaging students with the material and overcoming barriers to effective teaching.

- What are the strengths and weaknesses of the source?

The strength of this source lies in its methodological approach and its natural philosophy critique, which could be useful for teaching the scientific advancements tied to slavery. A weakness is that it will require us to delve deeper to address the historical and social context of slavery.

- How does the source fit into your research topic? Why is it useful?

This source is useful because it offers tested strategies for integrating history and philosophy of science into the classroom, which can be applied when developing a curriculum on slavery that includes scientific concepts.

Research Paper 4

- Team member evaluation: Jonathan Brown

- Citation for the article: Bailyn, Bernard. "Considering the Slave Trade: History and Memory." *The William and Mary Quarterly*, vol. 58, no. 1, 2001, pp. 245–52. *JSTOR*, <https://doi.org/10.2307/2674426>. Accessed 17 Nov. 2024. <https://www.jstor.org/stable/2674426?seq=1>

- 1-paragraph summary:
 1. What information does this source contribute to your research question? This information will be useful in actually teaching the learner about slavery.
- How does the source relate to other sources in your bibliography? It contributes to the social sciences of slavery and the mental aspects.
- What are the strengths and weaknesses of the source?

Strengths: develops the history and speaks on people's experiences.

weaknesses: it's less about science and speaks more about experiences

- How does the source fit into your research topic? Why is it useful?

It's about slavery and that's why it's useful as well.

Research Paper 5

- Team member evaluation: Jonathan Brown
- Citation for the article: Slave Voyages: Trans-Atlantic Slave Trade Database. Slave Voyages, www.slavevoyages.org.

- 1-paragraph summary: "The SlaveVoyages website is a collaborative digital initiative that compiles and makes publicly accessible records of the largest slave trades in history. Search these records to learn about the broad origins and forced relocations of more than 12 million African people who were sent across the Atlantic in slave ships, and hundreds of thousands more who were trafficked within the Americas. Explore where they were taken, the numerous rebellions that occurred, the horrific loss of life during the voyages, the identities and nationalities of the perpetrators, and much more."(<https://www.slavevoyages.org/>)

- What information does this source contribute to your research question? It contributes to the connection of social constructs and how they impact the development of people.

- How does the source relate to other sources in your bibliography? This is the result of digital sciences and how they can help research.

- What are the strengths and weaknesses of the source?

Strengths are being well versed, great archives, and all around good sources. Weakness is not being in paper form.

- How does the source fit into your research topic? Why is it useful? Our main point is to incorporate science into slavery so we need a background for slavery.

Research Paper 6

- Team member evaluation: Jonathan Brown
- Citation for the article: Austen, Ralph A. "The Slave Trade as History and Memory: Confrontations of Slaving Voyage Documents and Communal Traditions." *The William and Mary Quarterly*, vol. 58, no. 1, 2001, pp. 229–44. JSTOR, <https://doi.org/10.2307/2674425>.
- 1-paragraph summary: "THE publication of the Du Bois Institute transatlantic slave trade dataset represents a major landmark in the kind of historical research that an earlier generation of scholars would have described without inhibition as "objective." The value of these documents lies not only in their scope but also in their provenance. They are the working records of the very phenomenon we wish to understand, created for the purpose of managing the immediate business of slave commerce rather than shaping its image among contemporary or future critics"(https://www.jstor.org/stable/2674425?seq=1)
- What information does this source contribute to your research question? Shows social sciences of slave narratives
- How does the source relate to other sources in your bibliography? It relates to slavery and that's our main point
- What are the strengths and weaknesses of the source? It's 16 pages and its not directly connected to science
- How does the source fit into your research topic? Why is it useful? It's a valuable source for people to quote

Science Communication Paper 1

- Team member evaluation: Alci
- Citation for the article:

Turner, Cory. "Why Schools Fail To Teach Slavery's 'Hard History.'" *NPR*, 4 Feb. 2018. *NPR*, <https://www.npr.org/sections/ed/2018/02/04/582468315/why-schools-fail-to-teach-slaverys-hard-history>.

- 1-paragraph summary:

This source highlights and discusses major flaws in the way slavery is taught in American schools. It reveals that teachers often feel unprepared to tackle such a difficult subject, and the textbooks tend to gloss over its harsh realities, focusing more on figures like Harriet Tubman rather than the everyday horrors of slavery. The surveys show that many students have a poor understanding of slavery's causes and consequences, with some even confusing the Civil War with the Revolutionary War.

- What information does this source contribute to your research question?

This source provides critical insights into the shortcomings of how slavery is taught, supporting the idea that incorporating historical and scientific principles(as in my research question) is necessary for enhancing student engagement and understanding.

- How does the source relate to other sources in your bibliography?

Relates by highlighting educational gaps in history curriculum. I think it's also interesting and worth mentioning that this source emphasizes the emotional and social challenges faced by students and teachers.

- What are the strengths and weaknesses of the source?

A strength is the data it provides through surveys of students and teachers, who are making a strong case for the need to reform how slavery is taught. A weakness is that the report focuses heavily on qualitative data from specific regions which could possibly not fully account for other variations in how slavery is taught across different educational contexts.

- How does the source fit into your research topic? Why is it useful?

I will say this source fits into our research topic because it addresses the issue of ineffective education on slavery.

Science Communication Paper 2

- Team member evaluation: Jonathan Brown
- Citation for the article: Stang, Danielle Allen, Daina Ramey Berry, David W. Blight, Allen C. Guelzo, Robert Maranto, Ian V. Rowe, Adrienne. “Teaching about Slavery.” *Education Next*, 21 Sept. 2021, <https://www.educationnext.org/teaching-about-slavery-forum-guelzo-berry-blight-rowe-stang-allen-maranto/>.
- 1-paragraph summary: “Both race in the classroom and the *New York Times*’s 1619 Project have been the subject of recent state legislative efforts, heated debate, and extensive press coverage, both at *Education Next* (see, for example, “[Critical Race Theory Collides with the Law](#),” *legal beat*, Fall 2021, and “[The 1619 Project Enters American Classrooms](#),” *features*, Fall 2020) and elsewhere. The post-George Floyd racial reckoning and the new Juneteenth federal holiday have roused attention toward teaching the history of slavery in America. As part of our continuing coverage of these issues, we asked some of the nation’s foremost scholars and practitioners to respond to the prompt, “How should K–12 schools teach about slavery in America? What pitfalls should teachers and textbooks avoid? What facts and concepts should they stress? Are schools generally doing a good or bad job of this now?””(educationnext.org)
- What information does this source contribute to your research question? It shows how to teach
- How does the source relate to other sources in your bibliography? It teaches about the history of teaching
- What are the strengths and weaknesses of the source? non
- How does the source fit into your research topic? Why is it useful? It abbot teaches and we are making a curriculum.