

Inquiry Trajectories, Disciplinary Tools and Traditions, and Taking Informed Action

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Mapping My Journey

Modeling, arguing, and explaining
as core activities in science 2017



2009

Reading, writing, and
making change with texts
created for a range of
purposes and audiences



2015

Engaging students, developing
critical thinking, and constructing
knowledge with primary sources

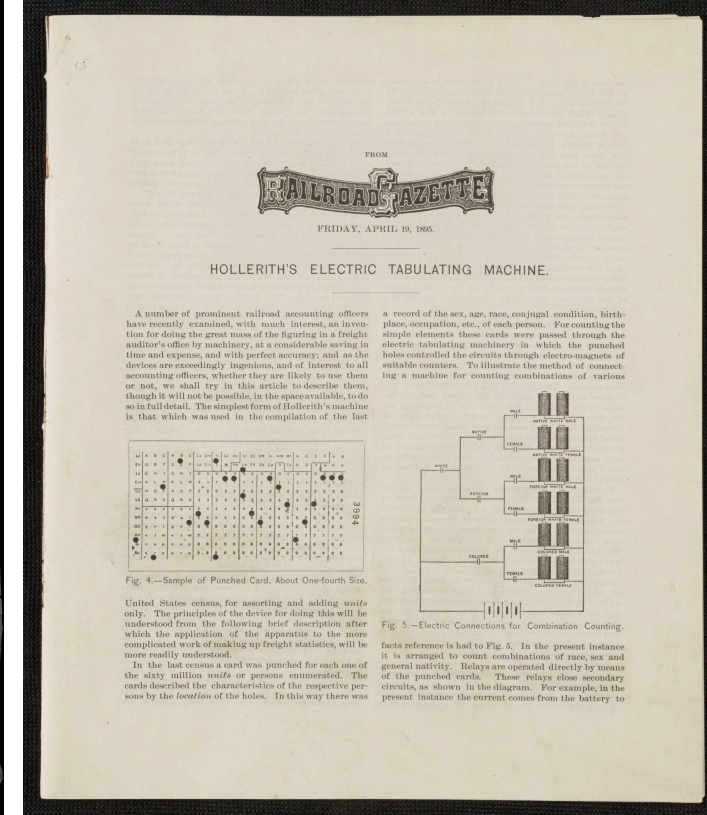
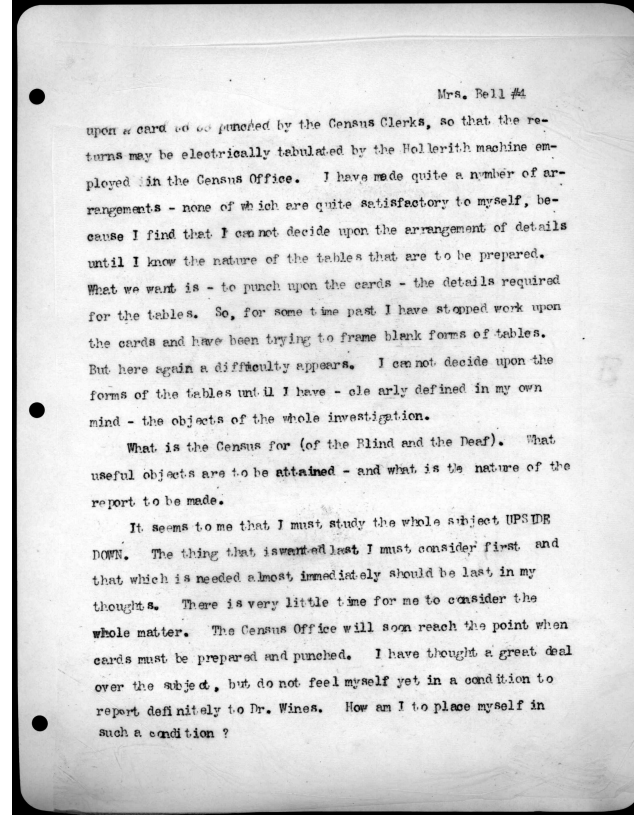
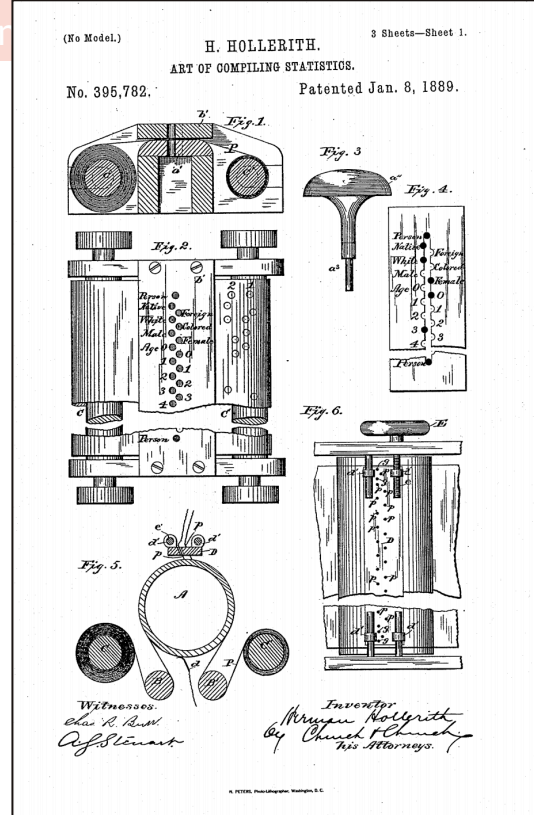


Overview

- (1) How might teachers and their students use primary sources and students' questions to **spark multiple/parallel inquiry trajectories**?
- (2) How might teachers and students together make use of discipline-specific tools and traditions (i.e., sciences, engineering, history, civics, visual arts) to **deepen and respond to those inquiries**?
- (3) How might teachers and their students connect classroom learning to **taking informed action in the broader community**?

QUESTION

1889



between
1915
and
1923



1901

1895

Hollerith machine and U.S. Census

- Observe
- Reflect
- Question

Thinking with and about Thinking Routines

What are some benefits of analyzing primary sources with the LOC's Primary Source Analysis Tool or with a See-Think-Wonder Routine?

Thinking with and about Thinking Routines

Primary Source Analysis Tool or See-Think-Wonder Routine can help learners:

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Problematizing

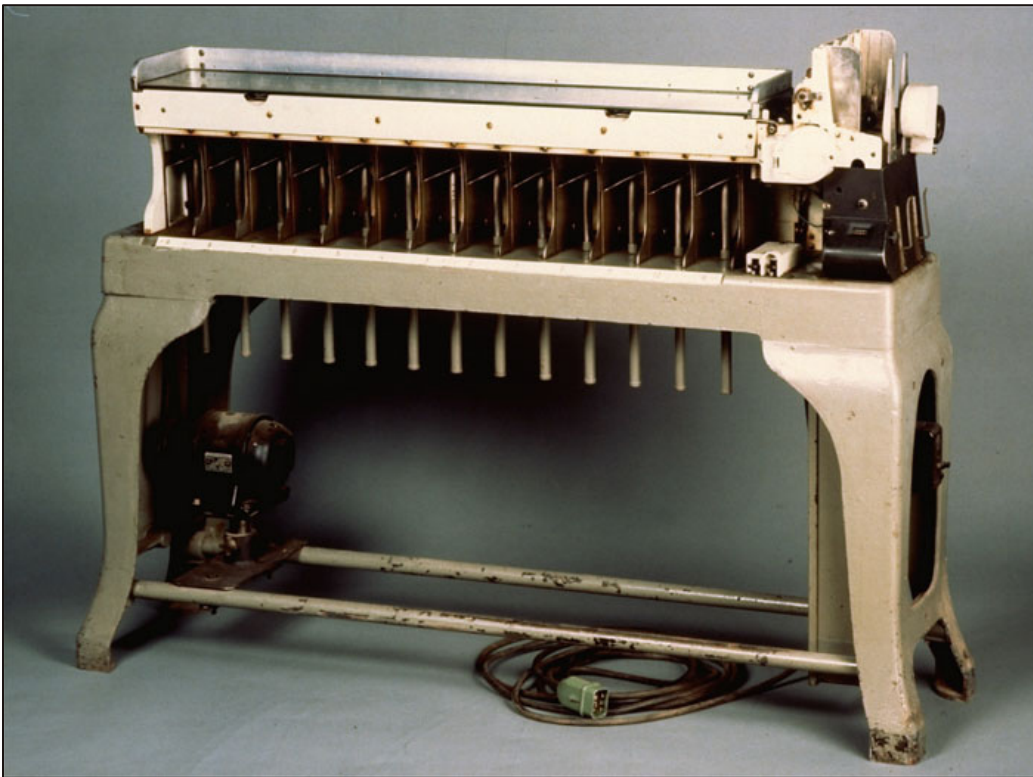
(Ballenger, 2004; Engle & Conant, 2002; Phillips, Watkins, & Hammer, 2018)

Thinking with and about Thinking Routines

Can you imagine any potential downside to a scaffold like the Primary Source Analysis Tool or a See-Think-Wonder Routine (or even DBQ)?

Tools and Their Uses

In what ways might a tool be (mis)used?
What are the consequences?



116TH CONGRESS
1ST SESSION

H. R. 1734

To amend title 13, United States Code, to prohibit the use of questions on citizenship, nationality, or immigration status in any decennial census, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MARCH 13, 2019

Ms. NORTON introduced the following bill; which was referred to the Committee on Oversight and Reform

A BILL

To amend title 13, United States Code, to prohibit the use of questions on citizenship, nationality, or immigration status in any decennial census, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 SECTION 1. SHORT TITLE.

4 This Act may be cited as the “Ensuring Full Partici-
5 pation in the Census Act of 2019”.

6 SEC. 2. PROHIBITING CENSUS QUESTIONS ON CITIZENSHIP, 7 NATIONALITY, OR IMMIGRATION STATUS.

8 Section 141 of title 13, United States Code, is
9 amended—

Key Takeaways

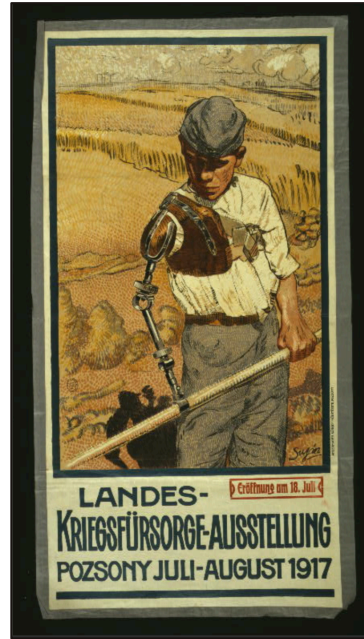
Classroom tools and routines can help learners make connections, as well as surface **gaps in understanding and inferences that there may be disagreement about** that can spark further inquiry.

This problematizing is a powerful lever of inquiry.

A classroom tool and routine is a **means to an end**—and should fade as it is no longer needed.



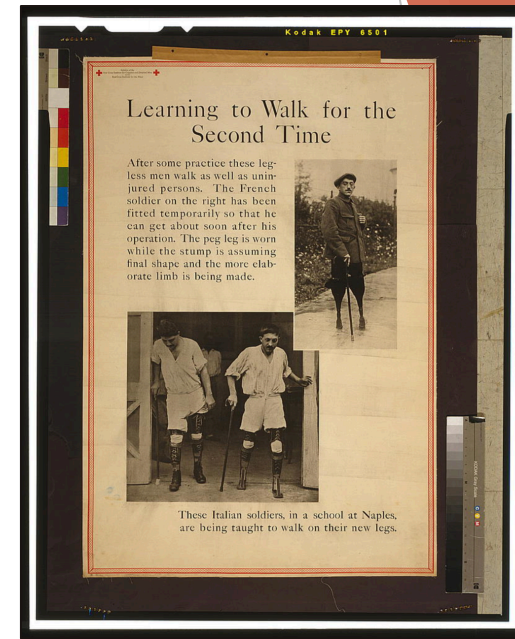
▲ c1919



▲ 1917



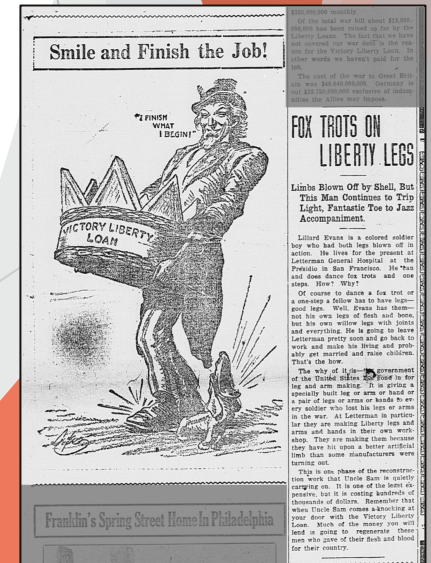
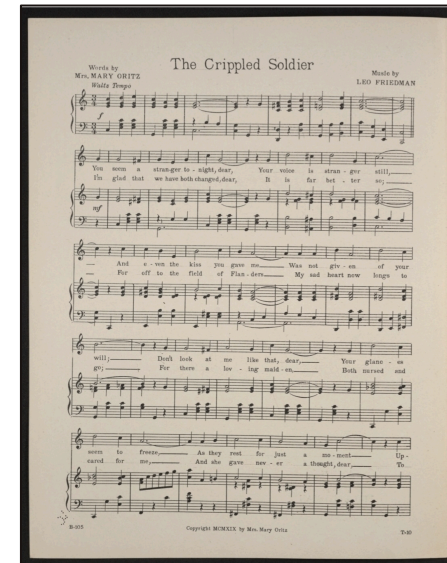
▲ 1915



1919 ◆

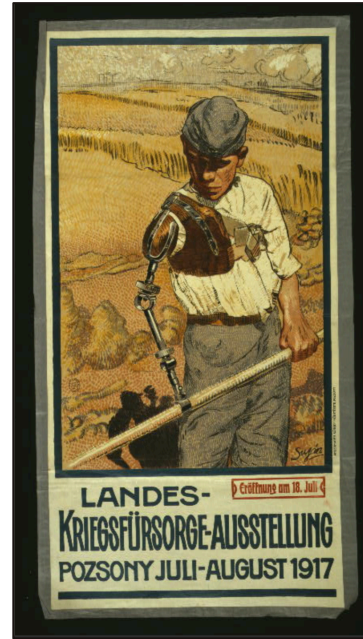
World War I, Veterans, and Prosthetic Limbs

- What questions might students pursue with any of these items?





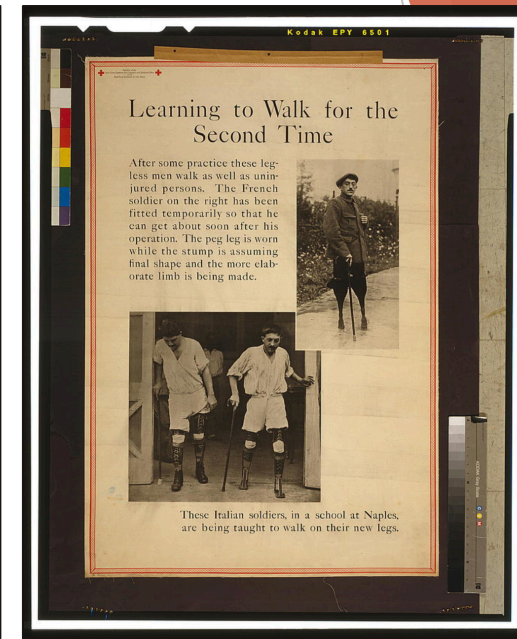
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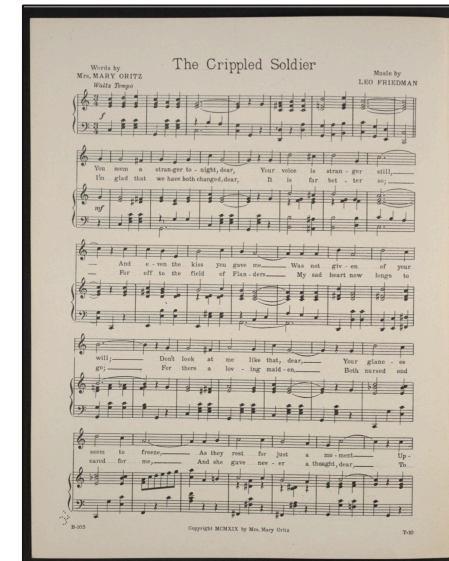
▲ 1915



1919 ◆

World War I, Veterans, and Prosthetic Limbs

- Compare questions generated by your group.
- Group your questions based on similarities.





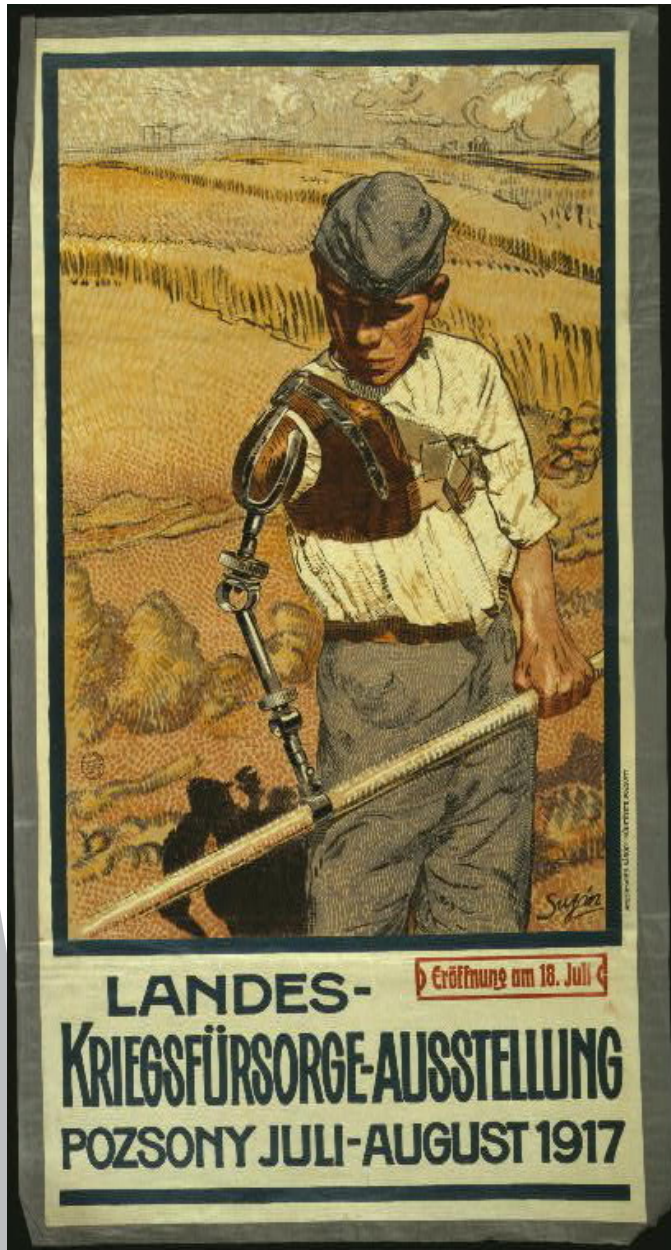
Consider **time**,
place, **audience**,
and **purpose**.

What do you notice?
Wonder?



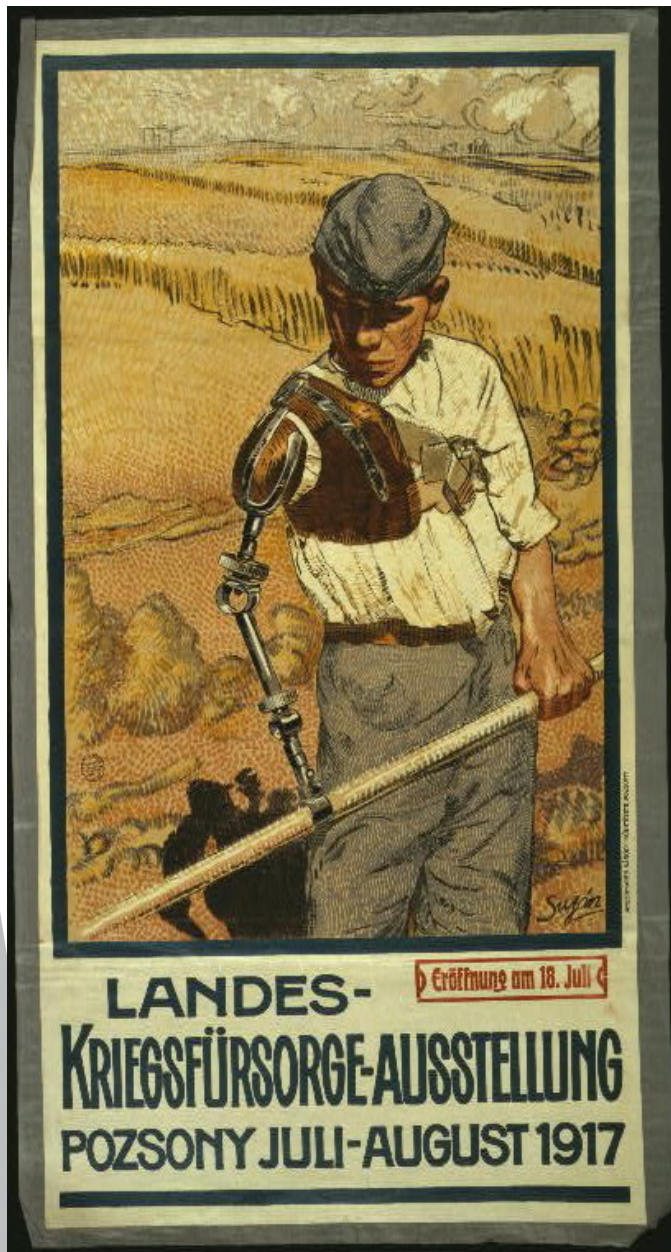
Consider **light**, **shadow**,
and **shading**.

What do you notice?
Wonder?



Consider **structure**
and **function**.

What do you notice?
Wonder?



Art light and shadow

What might the artist have been communicating? How?

propaganda

Who made this? Why?

**Social Studies /
ELA**

What was happening when this was made?

human
cost of war

What kinds of engineering problems existed at this time?

Science / Engineering structure and function

U.S. History Classroom

Taking on the role of historian

Inquiring into the **lives of soldiers** during World War I using primary sources, question prompts, and Socratic seminar discussions

Designing prosthetic limbs by applying knowledge about human body **structures and their functions**



BEST OF MEDICAL AND SURGICAL RELIEF FOR DISABLED HEROES OF WORLD WAR



Learning to Walk for the Second Time



There is a man in Washington who sits all day long facing a gigantic map of the United States. On it he shows every railroad, town and hamlet of the nation. Colored pins locate the hospitals, dispensaries, medical and surgical establishments and convalescent homes all of this being the vast field machinery which the government has put in motion to relieve suffering, prolong life, and return to efficiency the men and women whose minds or bodies may have been broken in honest war.

Some one asked this officer why he always sat facing this gigantic map, why he lifted his eyes to it so many times during the day? The answer was: "So that I may always keep before me the fact that the problem is national in the scope and can be solved only by the maximum breadth of vision."

When congress passed the war risk Insurance act little did anyone dream of its far-reaching effect.

The human body could have furnished the multifarious variety of ways in which this beneficent measure would touch the lives and happiness of thousands of Americans.

Anatomy & Physiology Classroom

Modeling structures and function in human body
Taking on the roles of scientists and engineers



What About Water?

Where does our clean water come from?

SCIENCE

What does it mean for water to be dirty?

ENGINEERING

How might we design cheaper / more efficient systems to clean water?

How have people collectively fought for clean water?

HISTORY, ART, & CIVICS

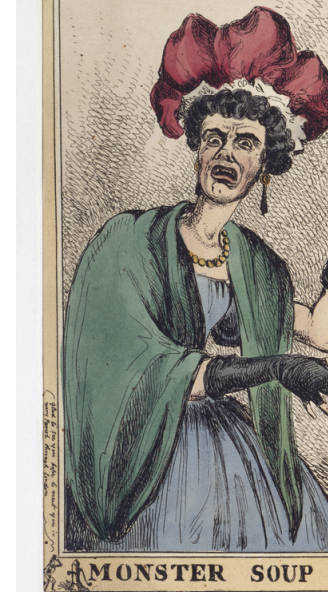
What water quality issues affect our communities today?

What should we do to take informed action on a water quality issue?



n.d.

1828



Public Law 114-114
114th Congress

An Act

To amend the Federal Food, Drug, and Cosmetic Act to prohibit the manufacture and introduction or delivery for introduction into interstate commerce of rinse-off cosmetics containing intentionally-added plastic microbeads.

Dec. 28, 2015
[H.R. 1321]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Microbead-Free Waters Act of 2015".

Microbead-Free Waters Act of 2015.
21 USC 301 note.

SEC. 2. PROHIBITION AGAINST SALE OR DISTRIBUTION OF RINSE-OFF COSMETICS CONTAINING PLASTIC MICROBEADS.

(a) IN GENERAL.—Section 301 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 331) is amended by adding at the end the following:

"(ddd)(1) The manufacture or the introduction or delivery for introduction into interstate commerce of a rinse-off cosmetic that contains intentionally-added plastic microbeads."

2015

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Disciplinary Literacies

“Historically, instructional efforts in literacy have focused on highly generalizable skills and abilities, such as decoding, fluency, and basic comprehension strategies that can be applied to most texts and reading circumstances across the content areas. This is reasonable with younger children, but it becomes increasingly problematic as students advance through the grades because many literacy skills and texts are highly specialized and require actions that are relatively unique...**More recent treatments and the data from this study suggest that as students move through school, reading and writing instruction should become increasingly disciplinary, reinforcing and supporting student performance with the kinds of texts and interpretive standards that are needed in the various disciplines or subjects**” (Shanahan & Shanahan, 2008, pp. 56-57).

Key Takeaways

Consider “argumentation,” “text,” “observation and inference,” “cause and effect,” or “stability and change”: These terms may show up across disciplines and invite us to reflect on **similarities among disciplines**.

Despite these shared core building blocks there are some **differences in these disciplines in terms of what kinds of questions get asked or what kinds of evidence are valued**.

Our work in school can be to **introduce learners over time to the tools and traditions of problem-solvers who have come before them**—and support them in transforming these tools.



2018 Philadelphia Writing Project
Invitational Summer Institute on Writing and Literacy
tinyurl.com/philwp2018

Whose Renaissance Is It?

These middle-schoolers spent months exploring the bridges that connect their gentrifying community and the barriers that divide it.

Issue 61, Spring 2019

By Jey Ehrenhalt



“The class capped off their year-long expedition with a city-wide art project, painting four murals across the city.”

Key Takeaways

Sets of historical/cultural/social ideas, practices, and tools allow us **to solve problems, to do new things in our present, to imagine new futures.**

Community partnerships can be central to planning opportunities for students to imagine and take informed action.

What happens when we only present stories of oppression and injustice? Do we risk leaving students feeling hopeless?

Key Takeaways

Sets of historical/cultural/social ideas, practices, and tools allow us **to solve problems, to do new things in our present, to imagine new futures.**

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Current Inquiry for
Philadelphia Writing Project

Summary

Sparkling Inquiries

Sustaining Inquiries

Taking Informed Action

**Classroom Routines
for Surfacing Ideas
and Connections**

**Disciplinary Tools and
Traditions That Support
Inquiries and Problem Solving**

**Building on Understanding of
Past to Imagine and
Construct Community**

*Treating classroom tools
as ends rather than
means*

*Treating disciplinary tools
as ends rather than
means*

*Treating understanding of
history as ends rather than
means*

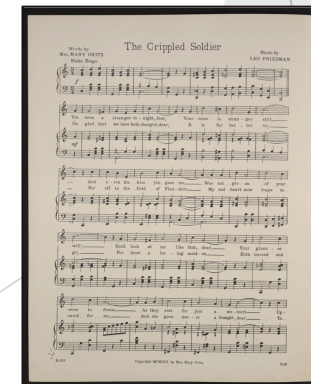
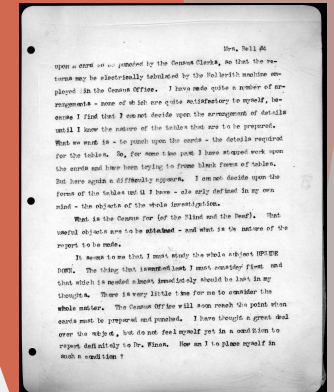
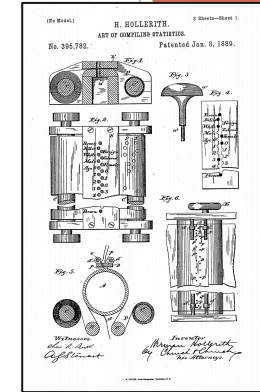
← **Potential
Pitfalls**

More Ideas for Taking Informed Action

Consider the sets of primary sources related to the U.S. Census and to World War I and Veterans.

What kinds of informed action do you imagine young people might engage in as part of a unit with these items?

(Also consider how you might create space for young people to make decisions themselves about what kinds of action they might take.)



References and Resources

tinyurl.com/tpserc2019

Ballenger, C. (2004). The puzzling child: challenging assumptions about participation and meaning in talking science. *Language Arts*, 81(4), 303.

Engle, R. A., & Conant, F. R. (2002). Guiding principles for fostering productive disciplinary engagement: Explaining an emergent argument in a community of learners classroom. *Cognition and Instruction*, 20(4), 399-483.

Phillips, A. M., Watkins, J., & Hammer, D. (2018). Beyond “asking questions”: Problematizing as a disciplinary activity. *Journal of Research in Science Teaching*, 55(7), 982-998.

Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review*, 78(1), 40-59.