

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

Trey Smith

Teacher Consultant & TPS Eastern Region Grantee, Philadelphia Writing Project
MPES/IES Fellow, School of Education & Social Policy, Northwestern University

2015-16 Teacher in Residence, Library of Congress

jftreysmith@gmail.com | @jftrey

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**?



PRIMARY SOURCE ANALYSIS TOOL



OBSERVE

REFLECT

QUESTION

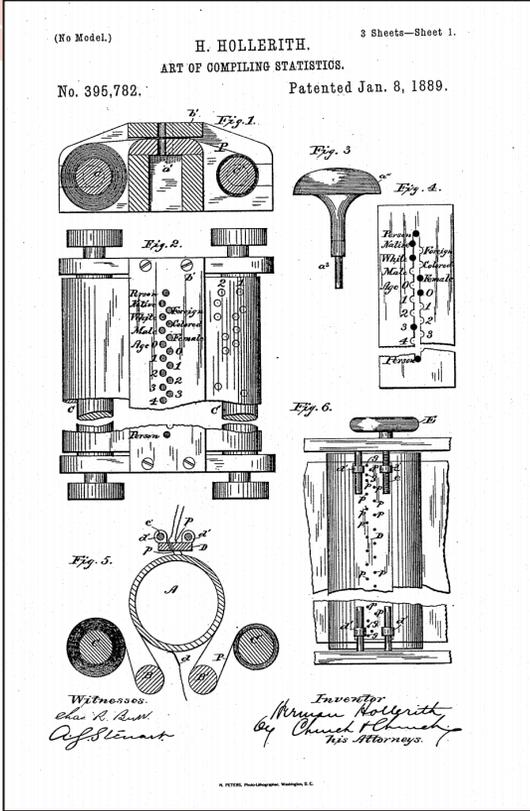
Handwriting practice area for the OBSERVE column, consisting of a light blue background with horizontal dashed lines.

Handwriting practice area for the REFLECT column, consisting of a light blue background with horizontal dashed lines.

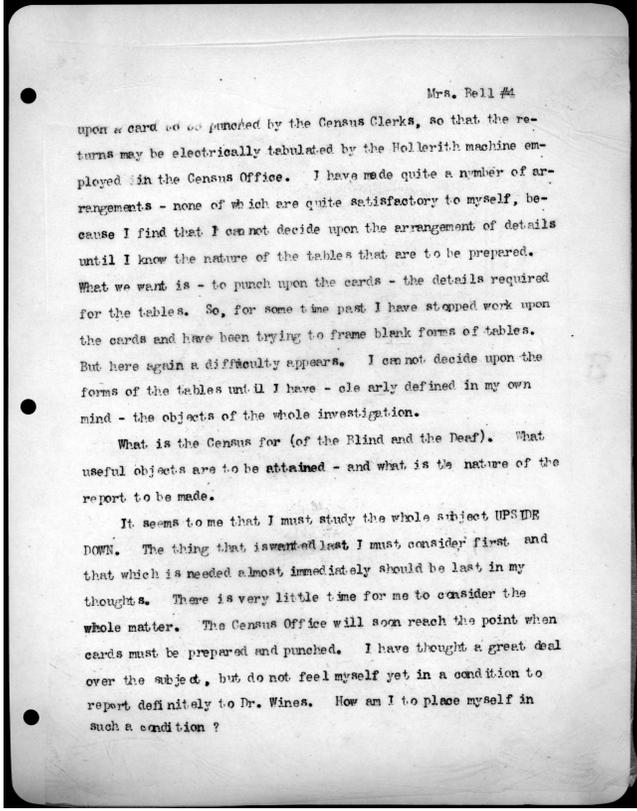
Handwriting practice area for the QUESTION column, consisting of a light blue background with horizontal dashed lines.

FURTHER INVESTIGATION

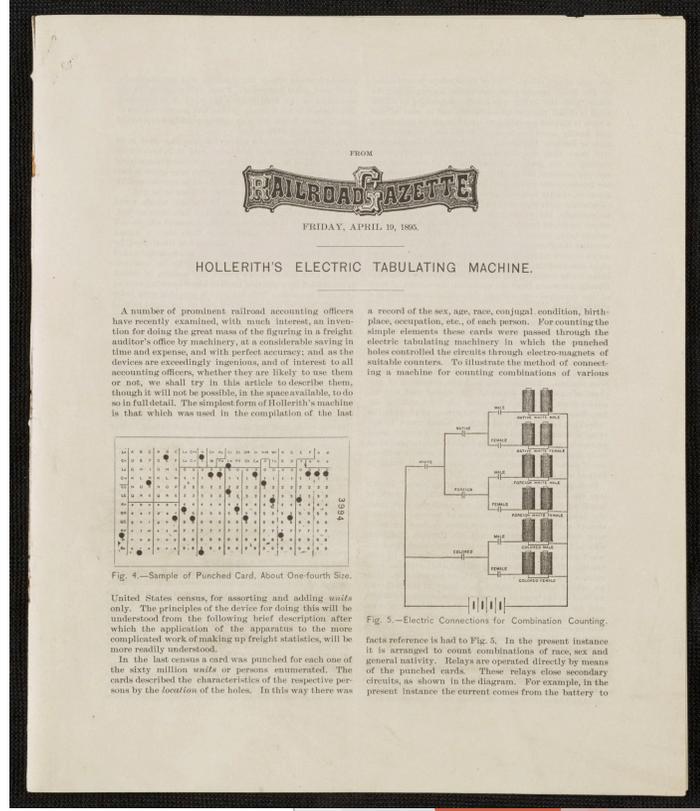
A wide, light blue rectangular area for further investigation notes.



1889



1901



1895

between 1915 and 1923



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:

- surface relevant prior knowledge and make connections

Thinking with and about Thinking Routines

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

- surface relevant prior knowledge and make connections
- identify **gaps in our current understanding** and questions that motivate further investigations

Thinking with and about Thinking Routines

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

- surface relevant prior knowledge and make connections
- identify **gaps in our current understanding** and questions that motivate further investigations
- recognize which of their ideas are observations that they might all agree on versus **inferences, which they may not agree on and may need to reconcile in some way**

Thinking with and about Thinking Routines

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

- surface relevant prior knowledge and make connections
- identify **gaps in our current understanding** and questions that motivate further investigations
- recognize which of their ideas are observations that they might all agree on versus **inferences, which they may not agree on and may need to reconcile in some way**

Problematizing

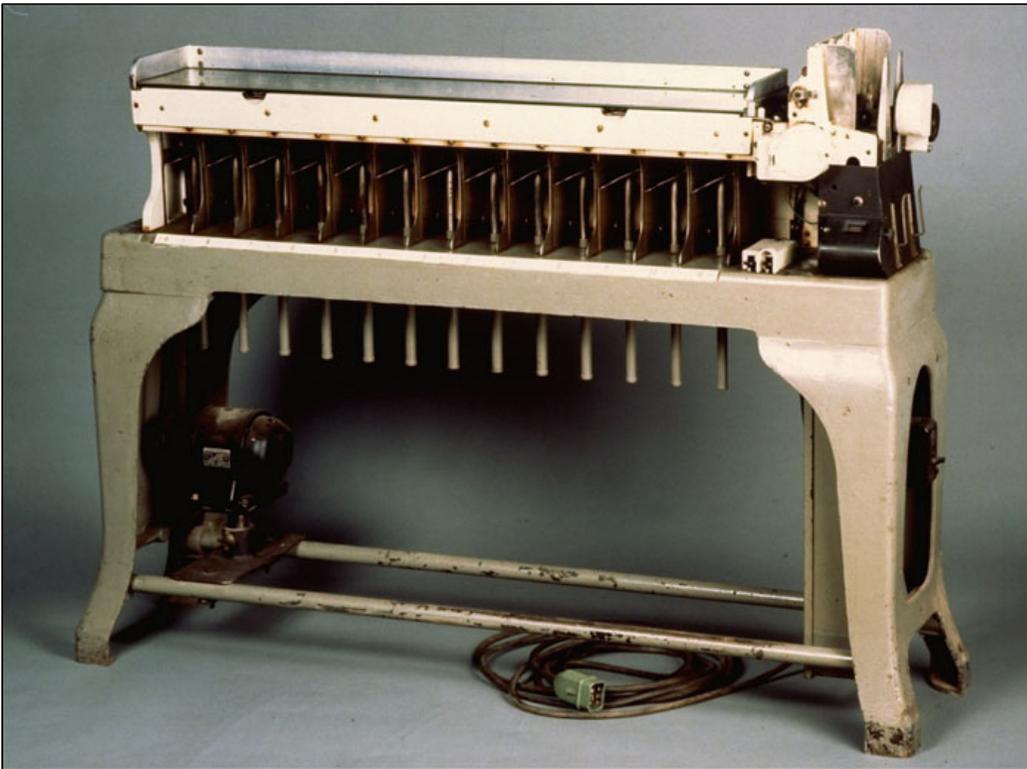
(Ballenger, 2004; Engle & Conant, 2002; Phillips, Watkins, & Hammer, 2018)

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

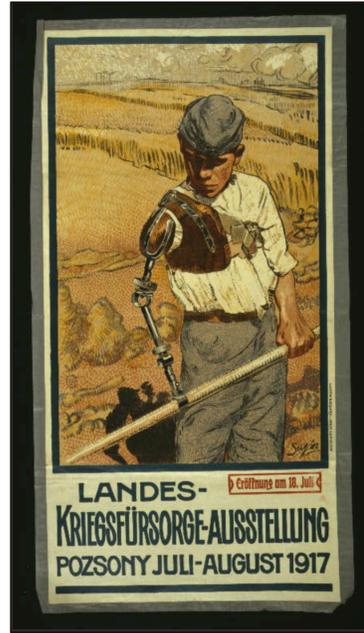
Classroom tools and routines can help learners make connections, as well as surface **gaps in understanding and inferences that there may be disagreement about** that can spark further inquiry.

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.



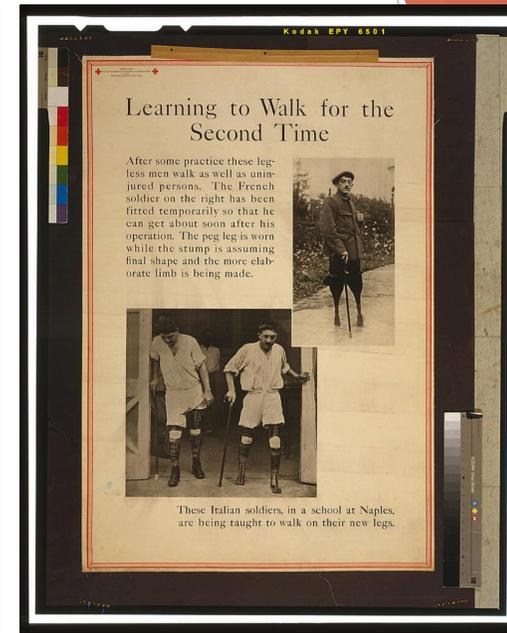
▲ c1919



▲ 1917



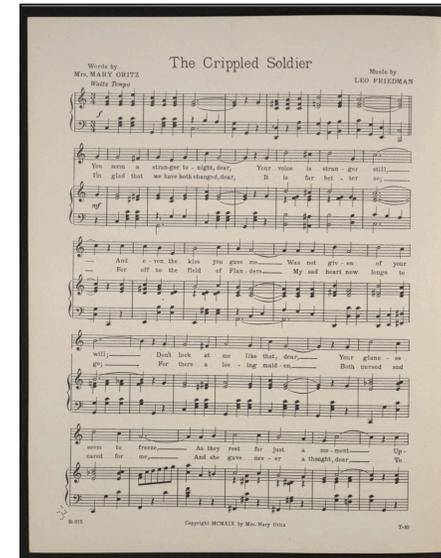
▲ 1915



▲ 1919

World War I, Veterans, and Prosthetic Limbs

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





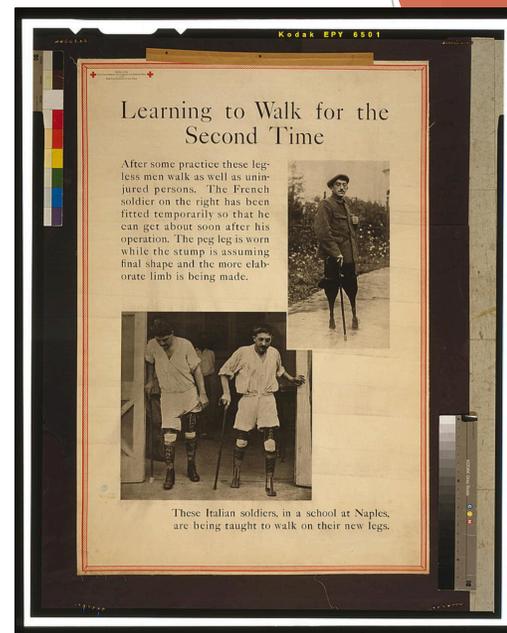
▲ c1919



▲ 1917



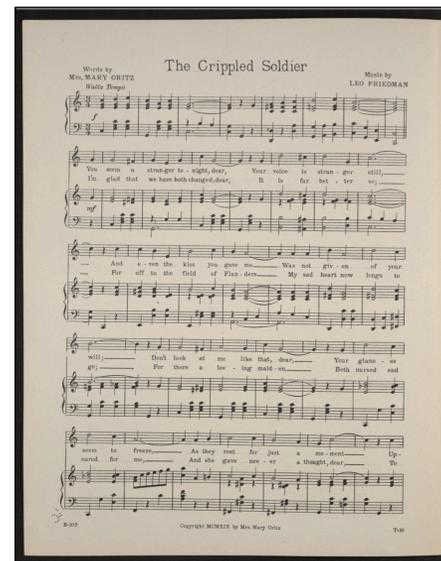
▲ 1915

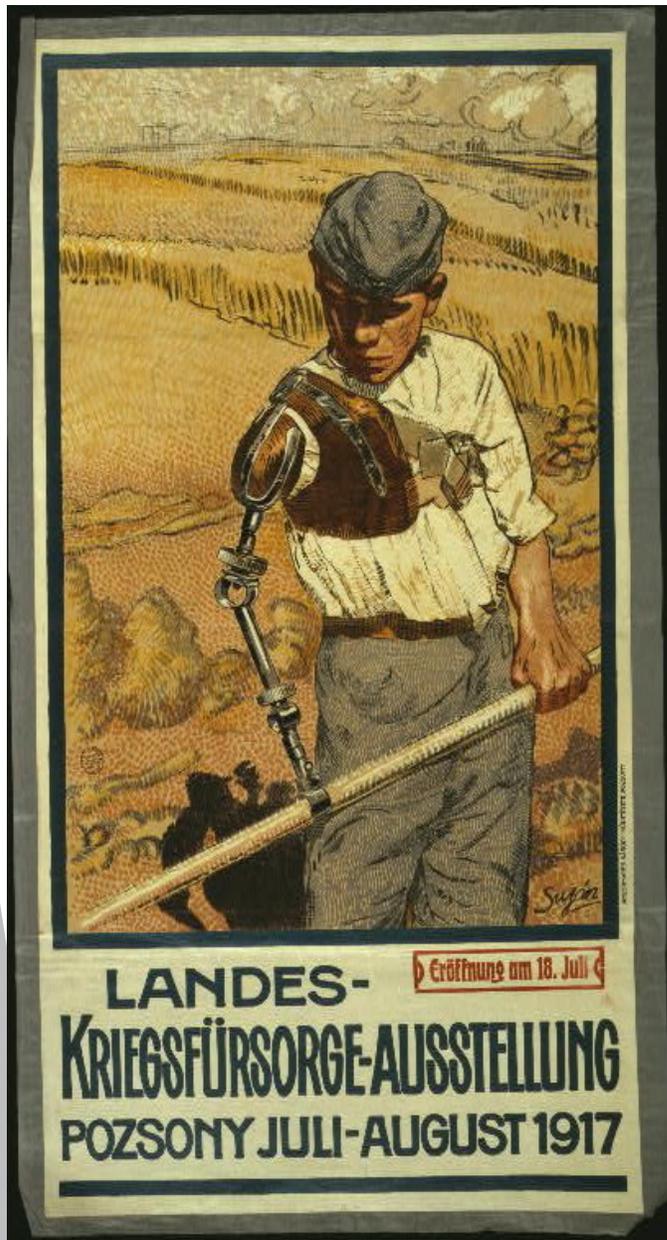


▲ 1919

World War I, Veterans, and Prosthetic Limbs

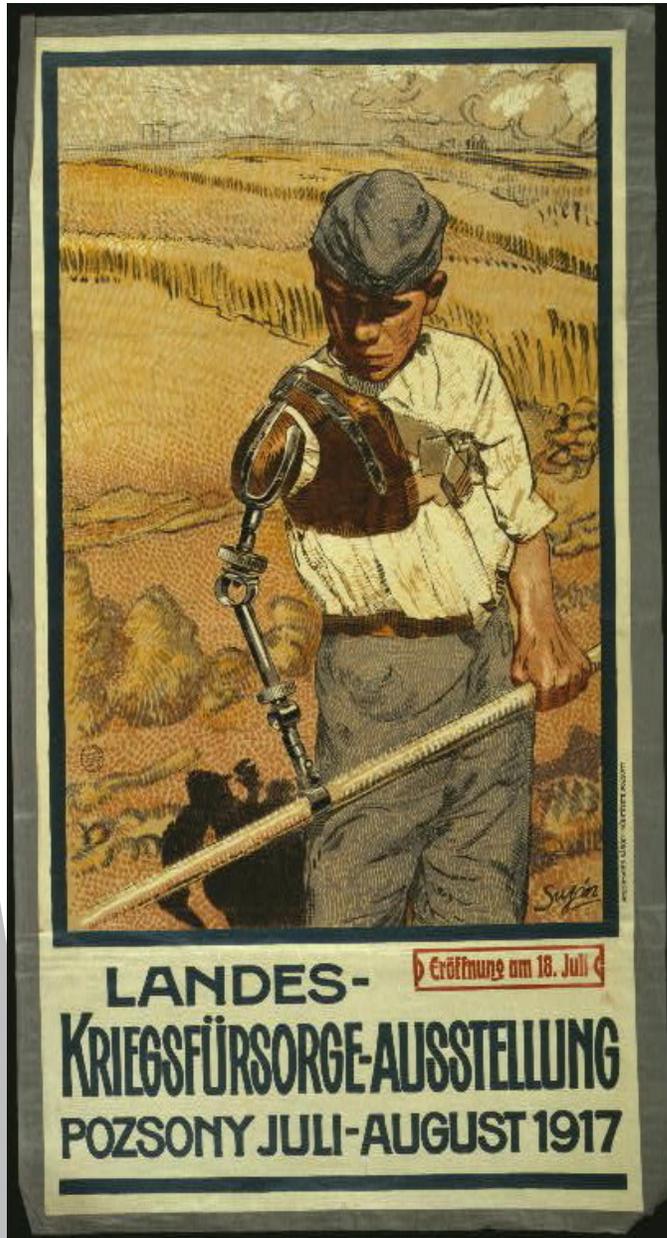
- Compare questions generated by your group.
- Group your questions based on similarities.





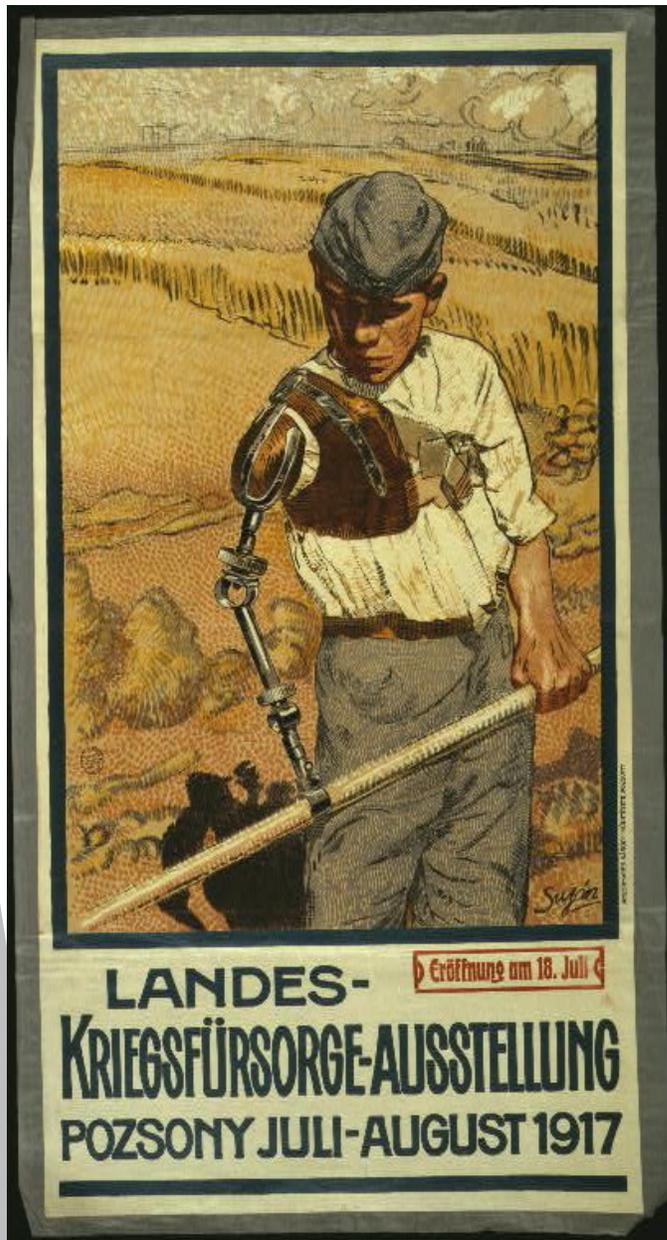
Consider **time**,
place, **audience**,
and **purpose**.

What do you notice?
Wonder?



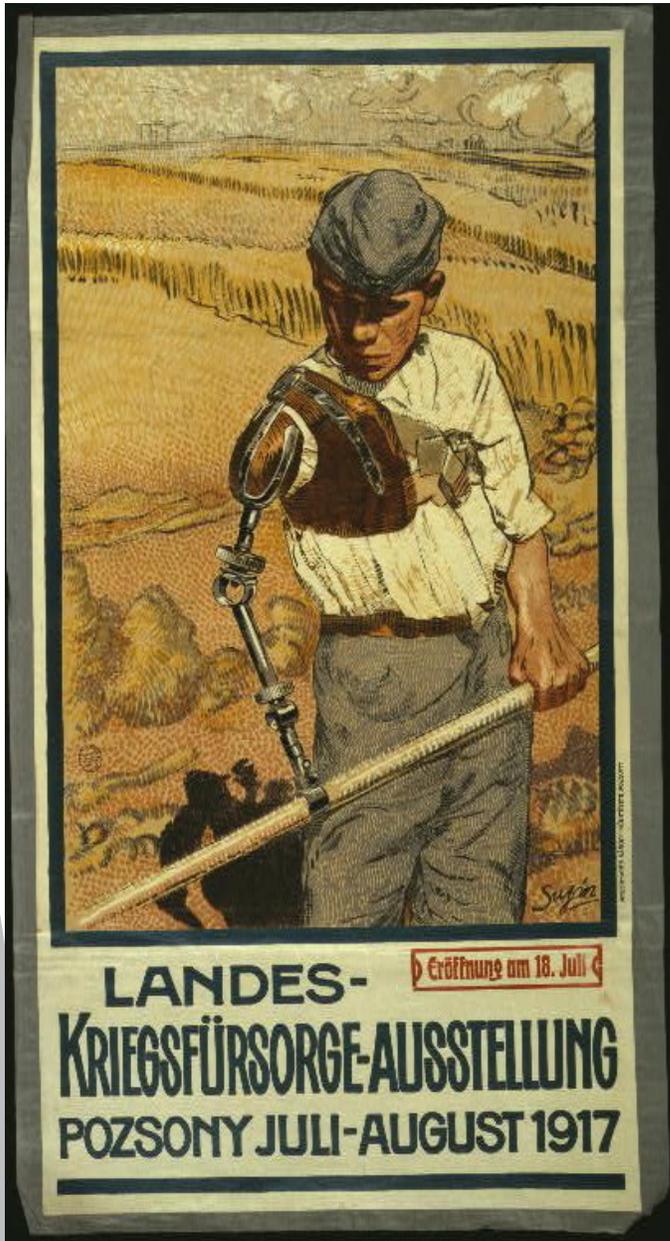
Consider **light, shadow,**
and **shading.**

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



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

National in scope.

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 institutions and ambulances, all of this being the vast field of activity which the government has put to motion to relieve suffering, prolong life, and secure to efficiency the men and women whose minds or bodies may have been broken in honestly's war.

Some one asked this officer why he always sat during the gigantic map, why he lifted his eyes to it so many times during the day? The answer was: "He 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 limb could have furnished the multitudinous variety of ways in which this benevolent measure would touch the lives and happiness of thousands of Americans.



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**

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

How have people collectively fought for clean water?

What does it mean for water to be dirty?

HISTORY, ART, & CIVICS

What water quality issues affect our communities today?

ENGINEERING

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

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



n.d.

1828



2015

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,

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

SECTION 1. SHORT TITLE.

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

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.

What About Water?

Where does our clean water come from?

SCIENCES

How have people collectively fought for clean water?

What does it mean for water to be dirty?

HISTORY, ARTS & CIVICS

ENGINEERING

What water quality issues affect our communities today?

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

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

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.

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?

Current Inquiry for
Philadelphia Writing Project

Summary

Sparking 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
<i>Treating classroom tools as ends rather than means</i>	<i>Treating disciplinary tools as ends rather than means</i>	<i>Treating understanding of history as ends rather than means</i>

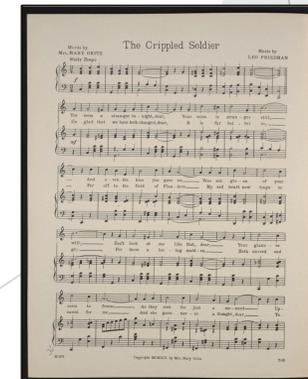
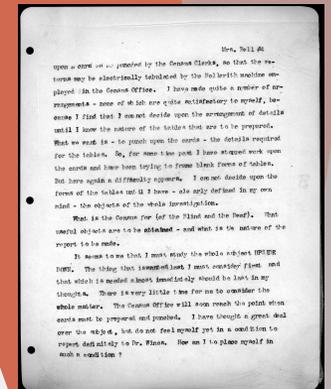
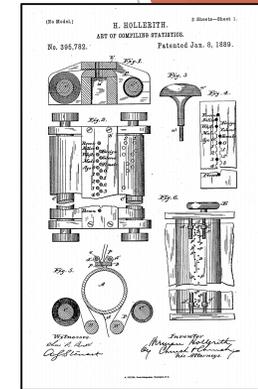
← Potential Pitfalls

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.