

TPS Professional Development Activity

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Using Primary Sources to Bring Middle School Science to Life

- Overview** Middle school teachers will be provided with examples of how to use primary sources to help student make connections to how science is meaningful in their daily lives. This activity will also provide teachers will resources to show how science has changed and how it has impacted how we live. In addition to seeing the connection this PD will provide teachers the opportunity to look for resources that connect to their content and also create at least one lesson that uses primary sources.
- Investigative Question** How have the findings of Isaac Newton impacted how we see science and the impact it has on our daily lives?
- Audience** **This activity is best suited for educators of Grades 5-8**
This activity is best suited for educators of the following content areas
- Science
 - Math
- Time** Three separate 45-minutes sessions
- Goal** Participants will see how easy they can locate and use primary and secondary sources in science classes to help the students make stronger and more relevant connections. These connections would be accomplished through a variety of activities such as using the analysis tool, crop it activities, life in a box, zoom-in inquiry, and scavenger hunts.
- Standards**
- 21st Century Learner Standards <http://www.ala.org/aasl/standards-guidelines/learning-standards>
 - ISTE Standards for Teachers <http://www.iste.org/standards/standards-for-teachers>
 - Learning Forward The Professional Learning Association
 - http://learningforward.org/standards#.U8amn_lDUk0
- Learning Design and implementation standards from Learning Forward are key to the success of this professional development opportunity. Learning Design will help the individuals understand why this new strategy is important and also as I model for them how to find resources it will be more relatable. Creating a PD that not only models but requires the participants to be actively engaged will help them not only see how to use it in their classroom but also the benefits for the students. The standard of implementation is also a key component. I think it is key to provide teachers support and feedback as they try to implement a new strategy. This could involve observations and/or reflections.

Objectives

By the end of this PD Activity, participants will be able to:

- Describe examples of the benefits of teaching with primary sources.
- Analyze a primary source using Library of Congress tools.
- Access teaching tools and primary sources from loc.gov/teachers.
- Identify key considerations for selecting primary sources for instructional use (for example, student needs and interests, teaching s, etc.).
- Access primary sources and teaching resources from loc.gov for instructional use.
- Facilitate a primary source analysis using Library of Congress tools.
- Demonstrate how primary sources can support at least one teaching strategy (e.g., literacy, inquiry-based learning, historical thinking, etc.).
- Create primary source-based activities that help students engage in learning, develop critical thinking skills and construct knowledge.

Digital Resources**Primary sources from loc.gov:**

Images 20 and 21 of Notebook by Alexander Graham Bell, from April 18, 1876 to September 30, 1876. April 18, 1876 to September 30, 1876. Alexander Graham Bell

<https://www.loc.gov/resource/magbell.25300102/?sp=20>

<https://www.loc.gov/resource/magbell.25300102/?sp=21>

Image 6 of Diaries and Notebooks: 1919, Orville Wright. 1919. Orville and Wilbur Wright

<https://www.loc.gov/resource/mwright.01030/?sp=6>

Other resources:

What is the Scientific Method <https://explorable.com/what-is-the-scientific-method>

Classroom Materials

Laptop and projector, curriculum frameworks, flip charts, markers

Preparation

- Research different activities that involve science content that can be used to help teacher science and prepare at least two (one with the analysis tool and one with either scavenger hunt or zoom in approach).
- Create a reference sheet for the participants that help them locate a variety of resources.
- Create a cheat sheet on how to get to loc.gov and tpsnva.org and how to search the different sites and the different resources that exist.
- Copies of the different curriculum frameworks so they can reference when considering resources.
- Arrange the room with the projector and computer and also have power for them so they can use their own laptops during the second and third session.

Procedure**Session One**

- Begin by sharing how primary sources can be used to help students make connections to the content.
- Do an activity with the analysis tool that is connected to the scientific method so that it will cover all grades.
- Share different resources and at this point I will work with them to help them understand how to search for information at loc.gov.
- The end of the first session will be with them thinking of at least one area of their content they would like to search for a primary source that could help with instruction.

Session Two

- Begin by having them share some of the ideas they had at the end of the first session.
- Use the scavenger hunt or zoom in activity to share one more way to use primary sources.
- The last thing for this session would be to have the teachers to start to plan an activity they will do that uses at least one primary source and how it aligns with the curriculum framework.

Session Three

- Start this last session off with one more activity involving primary sources so that they can see the different ways it can be used.
- Have them share the different lessons they have created and have them provide feedback to one another.
- Have them brainstorm other possible objectives they could use primary sources and have them create at least one more lesson to add to a google folder.

**Assessment/
Reflection**

Have the participants complete a survey on the topic for my reflection. Ask the teachers to videotape their implementation of their lesson so as a means for review and feedback and possible next steps for them to use additional primary sources.



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