

Title: Technology, Coal Mining, and Labor through 100 Years of American History**Overview**

This lesson, as only one of the components of a larger unit entitled, “Immigration and Industrialization of America,” will allow the students in my classroom to analyze primary sources (photographs/prints) from the Library of Congress on coal mining and child labor in the 1900s focusing specifically on the forms of technology used in the coal mines. It will then transition to the development of coal mining through 2015 and how the technology and labor force has evolved over that time using class discussion and a live, classroom interview. The students will use primary sources, as well as a journal, questioning, and interviews through the inquiry process of completing the lesson. The culmination of the lesson will have the students create and design their own Venn Diagram(s) that compare(s) and contrast(s) the types of equipment and forms of technology used in coal mines over the course of the past 100 years in America.

Objectives

- The students will be able to identify (3) examples of forms of technology that were used in coal mines in the early-20th Century in the United States.
- The students will be able to describe in their classroom journals, using both analysis and observation, the development of the technology used in coal mines across the United States from 1900 through 2015.
- The students will be able to compare and contrast coal mining in the United States, focusing on technology and the labor force(s), by creating a Venn Diagram in class.
- The students will be able to explain the differences in how coal was mined from 1900 to 2015 after participating in a live, classroom interview with Mr. Carl Friend, a retired coal miner from Washington, PA.
- The students will be able to reflect on their own learning by using their classroom journals to explain concepts that were previously unfamiliar relating to coal mining, technology, and the labor force in America.

Time Required

In order to complete this lesson, the students will need approximately three (3) class periods of 42 minutes, as well as time outside of the classroom to complete the assignment and project that accompanies the conclusion of the lesson.

Recommended Grade Range

Grade(s) 6 to 8

Subject / Sub-Subject

Social Studies (American History)



Standards

- CC.8.5.6-8.A: Cite specific textual evidence to support analysis of primary and secondary sources.
- CC.8.5.6-8.G: Integrate visual information (e.g. in charts, graphs, photographs, videos, or maps) with other information in print and in digital texts.
- CC.8.5.6-8.B: Determine the central ideas or information of a primary and a secondary source; provide an accurate summary of how key events or ideas develop over the course of a text.
- CC.8.6.6-8.C: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- CC.8.6.6-8.H: Draw evidence from informational texts to support analysis, reflection, and research.

Credits

Mr. David Divelbliss

PREPARATION

Materials Used

Library of Congress Analysis Tools/Worksheets (Photographs/Prints), Library of Congress Bibliographic Organizer, Laptop Computer, Student/Classroom Journal, Interview Questions, Venn Diagram(s), Pencil

Resources Used

Print /Online Sources:

1. At the Close of the Day-Just Up from the Shaft, Lewis Hine, c1910 December:
<http://www.loc.gov/pictures/item/ncl2004002589/PP/>
2. A view of Ewen Breaker of the Pa. [Pennsylvania] Coal Co., Lewis Hine, c1911 January:
<http://www.loc.gov/pictures/item/ncl2004002610/PP/>
3. At the close of the day. Waiting for the cage to go up., Lewis Hine, c1911 January:
<http://www.loc.gov/pictures/item/ncl2004002599/PP/>
4. Shorpy Higginbotham, a "greaser" on the tippie at Bessie Mine, of the Sloss-Sheffield Steel and Iron Co. Said he was 14 years old, but it is doubtful., Lewis Hine, c1910 December:
<http://www.loc.gov/pictures/item/ncl2004000594/PP/>



5. Monongah, W. Va. Nola McKinney, Secretary, 1910, West Virginia Child Labor Committee. Frank P....., whose legs were cut off by a motor car in a coal mine in West Virginia when he was 14 years 10 months of age., Lewis Hine, c1910 March:

<http://www.loc.gov/pictures/item/ncl2004001959/PP/>

Description of Procedure

Day #1

1. The students will begin with a review question that is posted on the Promethean Board from the previous day in class: **Why were so many immigrants in America in 1900 forced to do backbreaking work in coal mines when they arrived from Europe?** These answers will be placed in their class journals as is the procedure each day in classroom.

2. The students will then be provided with the lesson's Essential Question: **How have both the forms of technology and labor force changed in the coal mining industry from 1900 to 2015?** The students will be asked to consider this question and will draw on prior knowledge on the process of coal mining and its technology from the past several lessons in class from the unit, "Immigration and Industrialization of America."

2. The students will then be divided into pre-determined classroom groups of (3) students. Each group will be provided with a Library of Congress Bibliographic Organizer, a Library of Congress Analysis Tool/Worksheet, a laptop computer, and their classroom journals that are used daily in class.

4. The students will be directed to a bookmarked page on the Library of Congress Prints and Photographs Online Catalog. The students will be instructed to locate the electronic sources on the Bibliographic Organizer. The students will then use the Library of Congress' Analysis Tool Worksheet to complete the analysis of the photographs from Lewis Hine and the NCLC. The students will be asked to "Observe", "Reflect", and "Question" from each of the (5) photographs and to record their analysis on the Library of Congress Analysis Tools Worksheet in their classroom groups.

5. One student in the group will serve as the recorder and the students will contribute to the discussion of each of the (5) photographs analyzed in class. The students will be instructed to make careful, and as detailed as possible, observations and comments, and then ask questions based on the photographs and their bibliographic information.

6. Students will be encouraged to consider the following: **What types and forms of technology did the workers have to use to dig the coal in the early 20th Century, and approximately what observations did you make about the workers and their ages?** The instructor will also encourage the students to think about how technology has changed today and why the work might be difficult as traveling from group to group in the classroom.



7. The students will then use their classroom journals to respond to the following question: **Describe the day in the life of a coal miner in 1900 based on the images, discussion, and prior knowledge on coal mining focusing on the forms technology and the age of the workers. (Please think about how difficult the work might have been using such forms of technology to mine coal and how the coal was mined from underground).** The responses will be shared the next day in class or at the end of the class period if there is still time remaining.

Day#2

1. The students will be provided with the Essential Question: **How have both the forms of technology and labor force changed in the coal mining industry from 1900 to 2015?**

2. The students will then share some of their reflections from the previous days' classroom journal activity. The question was: **Describe the day in the life of a coal miner in 1900 based on the images, discussion, and prior knowledge on coal mining considering the forms of technology and equipment used and the age of the workers.**

3. The students will then have the opportunity to interview retired coal miner, Mr. Carl Friend, who was employed as a foreman at the Bailey Coal Mine located in Waynesburg, PA. The students will have already created questions earlier in the week to ask Mr. Friend about the following topics: Mine Safety, a Typical Day Working in the Coal Mine, the Technology and Equipment Used to Mine Coal, and the Differences between Coal Mining from 1900 to 2015. Each student in the class will have copies of the questions and will write down the answers from Mr. Friend during the interview. The interview will last approximately (15 to 20) minutes in class. The students will be instructed to ask follow-up questions if needed of Mr. Friend to gain as much insight as possible from the interview.

4. The students will then be provided with their final assignment as a culminating activity from the three day lesson. It will be completed the next day in class. They will be instructed to complete a Venn Diagram that both compares and contrasts coal mining in the past 100 years that focuses on the forms of technology used to mine coal, the equipment used, and the age of the labor force based on the past two days in class' research and the interview. It is entitled "Coal Mining: A Comparison and Contrast over the Past 100 Years in America."

5. The students will then use their classroom journals to respond to the following question from the day in class: **How has coal mining changed since 1900 and what types of technology and equipment are now available to coal miners to make their jobs much more safe and how has the labor force evolved over time as well since the arrival of European immigrants in 1900?**

Day#3

1. The students will be provided with the Essential Question: **How have both the forms technology and labor force changed in the coal mining industry from 1900 to 2015?**

2. The students will then share some of their reflections from the previous days' journal activity. The question was: **How has coal mining changed since 1900 and what types of technology are**



now available to coal miners to make their jobs safer and how has the labor force evolved over time as well since the arrival of European immigrants in 1900?

3. The students will again work in their pre-determined classroom groups of (3) to complete the Venn Diagram project entitled “Coal Mining: A Comparison and Contrast in the Past 100 Years in America.” The students will use their classroom journals, prior knowledge on coal mining in 1900, classroom notes, and the previous two (2) days in class to both compare and contrast coal mining in the past 100 years that focuses on the forms of technology and equipment used and the age of the labor force in the coal mines.

4. One student in the group will serve as the recorder. The other (2) students in the group will be instructed to work with the recorder to complete the final Venn Diagram. It is worth (30) Points. I will assist the students in its creation and will facilitate questions and provide assistance as necessary in class to each of the classroom groups. Each group will only create and design (1) Venn Diagram.

5. The students (3) in each classroom group will briefly share their findings, comments, and observations to the remainder of the classroom groups at the end of the activity. The other student groups will be encouraged to ask questions of the students and to make observations from the other completed Venn Diagrams.

6. The students will then use their classroom journals to respond and reflect to the following question from the day in class: **What have I learned about how the coal mining industry has changed in the past 100 years focusing on the forms of technology used and the ages of the workers in the coal mines? How is this different than any ideas that I previously had on coal mining in America?**

Modifications/Adaptations:

The students will be provided with all modifications deemed necessary (specially designed instruction). This will include modified worksheets, partially completed discussion questions, and modified classroom journal assignments.

Extensions

This lesson topic could be extended through the rest of the unit entitled, “Immigration and Industrialization of America,” focusing on laborers and technology in steel mills, sweatshops, and in factories around the United States with similar results. A similar type of Inquiry Process could be used in the classroom with the students.

Evaluation:

Informal Assessment:

The students will be assessed informally using the classroom journals, classroom discussion, and group analysis using the Library of Congress Analysis Tool(s) based on the Bibliographic



Organizer of the photographs by Lewis Hine and the NCLC. The students will also be assessed using questioning in class that is facilitated by the instructor.

Formal Assessment:

The students will be assessed formally by completing the Coal Mining in 2015 Interview Questions to ask Mr. Friend and the Venn Diagram(s) entitled “Coal Mining: A Comparison and Contrast in the Past 100 Years in America.” Both assignments will be worth a combined **(50) Points**.

