

Lesson Plan: Industrial Revolution

Grades: High school

Subject: U.S. History, English/Language Arts

Time Required: Up to 5 50-minute class periods

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OVERVIEW

This project-based learning lesson plan attempts to develop collaborative and communicative skills as well as higher order thinking by having students work together on teams to research the industrial revolution using primary and secondary sources. They will then create a product or presentation that answers the driving question and present their work to the class. **Note: You can choose not to complete the research and presentation component of the procedure and complete the lesson in one class period.*

UNDERSTANDING GOAL

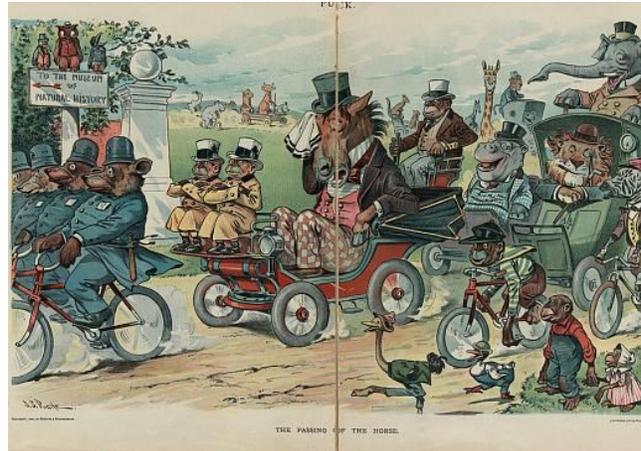
Students will understand the economic, environmental, and societal effects that each invention had upon the population by researching key figures, events, documents, maps, photos, videos, and recordings. Students will learn the fundamentals of a research project and how to develop a product and presentation.

OBJECTIVES

Students will work together to create a paper (or product) and presentation that aims to answer the driving question. The presentation will meet the given rubric. Throughout the research and creation process, students will be assessed by their progress as shown in their drafts and their individual journals.

INVESTIGATIVE QUESTIONS

Which industry proved to be the most beneficial to American society at the turn of the 20th century?



[The passing of the horse](#) [February 22 1899]

CURRICULUM STANDARDS

- US.1 Explain patterns of agricultural and industrial development as they relate to climate, use of natural resources, markets and trade, the growth of major urban areas, and describe the geographic considerations that led to the location of specialized industries such as textiles, automobiles, and steel. (E, G)
- US.6 Describe the changes in American life that resulted from the inventions and innovations of business leaders and entrepreneurs of the period: Henry Bessemer , George Pullman , Alexander Graham Bell , Andrew Carnegie , Thomas Edison , J.P. Morgan, John D. Rockefeller, Swift and Armour, Cornelius Vanderbilt (C, E)
- US.7 Analyze the movement of people from rural to urban areas as a result of industrialization. (E, G)
- US.13 Describe the rise of trusts and monopolies, their subsequent impact on consumers and workers, and the government’s response, including the Sherman Anti-Trust Act of 1890. (E, P)
- US.14 Describe working conditions in industries including the use of labor by women and children. (C, E)

CURRICULUM STANDARDS *(cont.)*

11th-12th English/Language Arts (Common Core)

- CCSS.ELA-Literacy.SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.
- CCSS.ELA-Literacy.SL.11-12.2 Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.
- CCSS.ELA-Literacy.W.11-12.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
- CCSS.ELA-Literacy.W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
- CCSS.ELA-Literacy.RI.11-12.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
- CCSS.ELA-Literacy.RI.11-12.2 Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.
- CCSS.ELA-Literacy.RI.11-12.3 Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.
- CCSS.ELA-Literacy.RI.11-12.7 Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

MATERIALS

- Computer access for students
 - [Background on Project-based Learning](#)
 - [Presentation Rubric](#)
 - [Primary Source Analysis Tool](#)
 - [Project Team Contract](#)
 - [Citing Primary Sources](#)
 - [Self-reflection on Project](#)
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RESOURCES

- [America at the Turn of the Century](#)
- [Notes, 1877](#)
- [Circular, February 19, 1879](#)
- [Gramophone: specification forming part of Letters Patent No. 372,786, dated 1887 November 8](#)
- [Scrap book \[excerpts\]](#)
- [Sylvan’s dreams](#)
- [Evolution of the Ford car, 1896-1955](#)
- [The passing of the horse](#)
- [Amphibious steam powered carriage and paddle boat designed by Oliver Evans](#)
- [The queen of industry, or the new south](#)
- [National Child Labor Committee Collection](#)
- [Rivers of Steel](#)
- [Blog: Andrew Carnegie – Man of Steel](#)
- [The Homestead Strike of 1892](#)
- [The Workers’ Anvil](#)
- [The great railway strikes - scenes in and about Chicago](#)
- [Lloyd's American railroad map.](#)
- [Casualty Company of America](#)
- [Blog: Robber Barons: Gould and Fisk](#)

PROCEDURE

<u>Day One</u>	This opening activity is meant to introduce students to the topics they will be researching by giving multiple primary sources to analyze together. It works as a warm up activity to get them familiar with both the subject matter and how they will work together as a team.
Step 1	Introduce students to American Industry after Reconstruction using the article " America at the Turn of the Century ." This article can be assigned as reading in advance of class.
Step 2	Students should be divided up into research teams, one team for each of the following optional categories: Telephone, Gramophone, Steel, Textile, Automobile, and Railroad. Students may either volunteer or be randomly selected to be a part of each team.
Step 3	Give each group the linked primary sources (see page 6) for analysis as well as the primary source analysis tool . Each group should have one sheet per source. Students should fill out the sheet completely, recording what they know, the questions they have, and ideas about how to answer those questions.
Step 4	Each group should select one member to give a brief presentation of one of their primary sources, selected together by the group. Students from other groups should be encouraged to ask questions about the primary sources on display.
<u>Day Two</u>	
Step 5	Provide students with instructions for both the essay and presentation. Optional: Use this presentation rubric from the Buck Institute to provide students with a guide for their expectations.
Step 6	Explain to students that the activity they completed the day before is similar to what they will be doing but on a much larger scale. Give students the investigative question and have them decide what form their final presentation will take. Explain to students the various roles that each team member will need to fill to successfully complete the project. The teacher may create their own roles or use those suggested here by Stanford University.
Step 7	Students should then discuss what role they would like to take. Each student should read and sign the project team contract , to be kept with the team secretary. Each student will also be keeping a work journal to record the team's progress. This could be taken up after each class period or at the end of the project.



[The great railway strikes - scenes in and about Chicago](#) [1894]

PROCEDURE (cont.)

Step 8	Demonstrate the research methods used to gather primary sources for the first day's activity. Guide students through the Library of Congress's Web site as well as Sweet Search . Show them how to filter among different sources and which key words to use when searching. The Library has a guide to correctly citing different types of sources that students should be aware of. <i>Optional:</i> Students may be made to use only a limited number of online sources and required to use books from the school's library. Additionally, the teacher could limit sources such as Google or Wikipedia.
Step 9	Allow students time to research their topic and gather sources individually.
Step 10	Allow students time to come back together as a group and share their findings. They should be putting together a list of sources and annotating them, preparing them for use in their projects. Students should create an agenda, or timeline, for which they will complete their assignment and turn this in for formative assessment. Students are now responsible for continuing work outside the classroom. <i>Optional:</i> Students can use this form to help them keep track of who is responsible for completing certain tasks.
Step 11	Assign students to complete a draft of their project including a draft of both the essay and presentation to be turned in the next class period, or at the teacher's designated time.
<u>Day Three</u>	*Note: From this point forward in the lesson, class days need not be consecutive.
Step 12	Return students' drafts with teacher comments and allow students time to review and ask questions.
Step 13	Allow students time to make revisions and do further work on their projects.
Step 14	Show students some examples of other student projects.
Step 15	Assign students a due date for a second draft and check student journals.
<u>Day Four</u>	This is the student's final day to work on the project in class. Advise them to use their time wisely.
Step 16	Return second draft's with final comments and suggestions. Give students time to review and ask questions.
Step 17	Ask students what they will need when presenting their projects on the final day (day 5). Make sure the classroom or library is prepared for their presentations.
Step 18	Allow students time to work on their presentations and papers and check student journals.



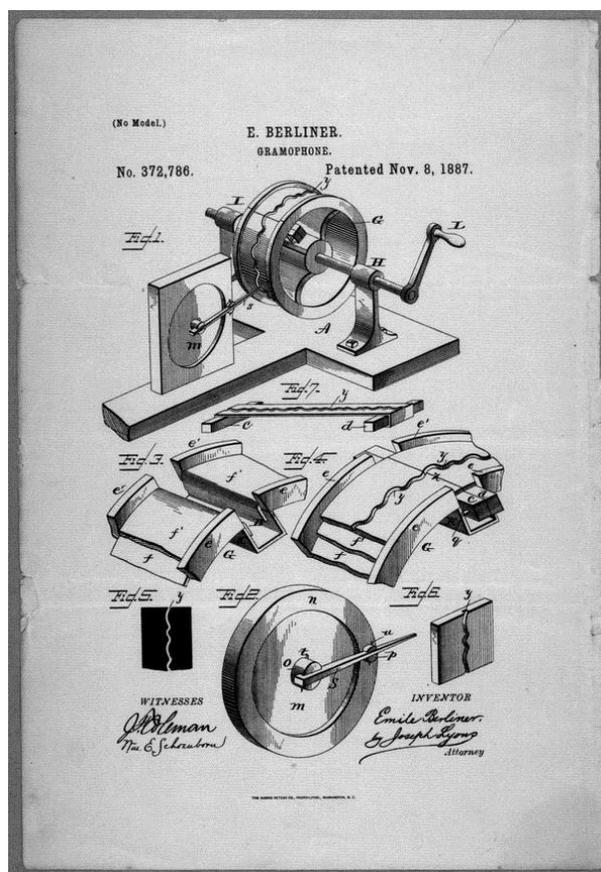
[The queen of industry, or the new south \[1882\]](#)

PROCEDURE (cont.)

<u>Day Five</u>	
Step 19	Have each group present their project to the class, with each member explaining their role in the project. Allow them to take questions from the rest of the class.
Step 20	Once each group has finished their presentation, lead students in a discussion about each of the group's findings.
Step 21	Students should fill out this sheet as a last assignment. They can reflect on their work on the project and provide feedback about what the skills and content they learned.

EVALUATION

- Journals—**20 pts**— 3 entries (one for each class period), other journal entries (at least 2 for each group meeting outside class)
- Agenda and Timeline for project—**10 pts**
- Essay—**35 pts**—One 3 page paper to be turned in as a group. The paper is a proper essay discussing primary and secondary sources and should attempt to answer the directive question.
- Presentation—**35 pts**—A final presentation. This could be in the form a PowerPoint file (or other web based presentation tool) or a physical presentation (poster board, etc.).
- Reflection— Students should write freely about what they liked or didn't like about the activities, group work and processes in this lesson plan.



[Gramophone: specification forming part of Letters Patent No. 372,786, dated 1887 November 8](#)

Group 1: Telephone

Observe A.G. Bell's [telephone patent notes](#) and make predictions about the subject and year they were produced. What device are these notes referring to? Who might these notes be going to? What is the purpose of writing this information down? What year was this made?

This [circular](#) from 1879 details the controversy surrounding the true inventor of the telephone. Read and discuss the following questions at your table:

- Who was the true inventor of the telephone?
- Why did it matter who was granted the patent?
- What was at stake if one man lost the patent?
- How were telephones used in everyday life?

Group 2: Birth of the Recording Industry: Berliner's Gramophone

This [chart](#) by Emile Berliner details the parts of his Gramophone. Browse his [scrapbook](#) to see how an inventor pieced together his work. [Here](#) you can listen to one of the earliest sound recordings available at the Library of Congress. What type of jobs might have been created with the introduction of sound machines? How were gramophones used in everyday life?

Group 3: Automobile

[Here](#) you can browse through pictures highlighting how the Ford car evolved over the years. This [cartoon](#) of a horse crying while riding in a car suggests the end of horses as the primary means of travel. Analyze the cartoon. This [drawing](#) shows that the idea of the 'car' goes back to the early 19th century. Why did the models of Ford's cars change over the years? Who was most affected by the change from horses to cars? What type of person worked for the automobile industry? How were cars used in everyday life?

Group 4: Textiles

Analyze this cover of [Harper's Weekly](#) showing a woman working in a factory. What is meant by the title? What might 'New South' mean? Does that give us any clue to when this might have been made? Analyze the working conditions and the child labor of the 19th and 20th centuries [here](#). What were the dangers of working in a textile factory? How were textile products used in everyday life?

Group 5: Steel

Read this [brief detail](#) of steel in Pittsburgh. Andrew Carnegie built his wealth with his steel company and [here](#) students can read a brief biography of the magnate. This timeline of [The Homestead Strike of 1892](#) displays the unrest and unfair treatment in the Pittsburgh steel companies. This [sheet music](#) shows what the common man thought of working conditions in the factories. [The Pullman Strike](#) of 1894 was carried out by railway workers protesting lower wages and unfair working conditions. President Cleveland supported the Pullman Company and sent in federal troops to break up the strikes. What were conditions in a steel factory like? How was steel used in everyday life?

Instructions for Essay

3 pages, typed, double-spaced. 12 point, Times Roman font. Footnotes. [Proper citations](#).

The purpose of this essay is to attempt to answer the investigative question: Why was this industry the most beneficial to Americans? You will need to introduce your topic in the context of the aftermath of Reconstruction. What was the state of the nation at this time period? What necessities led to the invention they are discussing? Who were the major players who introduced the new technologies? What major events surrounded the creation of those inventions?

Be sure to include quotes from interviews, books, or articles in their essays. Also be sure to refer to primary and secondary sources, quoting or describing them in support of your argument.

Read Write Think provides a basic essay rubric [here](#).

Instructions for Presentation

Presentations may include but are not limited to the use of PowerPoint, Prezi, poster boards, videos, audio recordings or other methods approved by the instructor.

Each team member should participate in the presentation and explain the team's research methods and work procedures. The presentation should attempt to answer the investigative question. Each group should take questions at the end of their presentations.

The Buck Institute provides a basic presentation rubric [here](#).