“Necessity is the Mother of Invention”

The Impact of the Industrial Revolution on the World

Grade Level: 6th (Social Studies)

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Length of Unit: 2-3 weeks.

I. ABSTRACT
This unit will trace the origin of the Industrial Revolution in England to its arrival in the United States. Students will research the varied inventions that were often created out of necessity, the development of the factory system and the problems that arose, and the rise of towns and cities that furnished benefits and hardships for the social classes. Emphasis will also be placed on the “business barons” who promoted capitalism over socialism, the formation of labor unions and their leaders who bargained for fair working conditions, and the drive of the social reformers who brought the exploitation of child labor to the forefront. Students will understand how the Industrial Revolution left a lasting impact on how people worked and lived around the world.

II. OVERVIEW
A. Concept Objectives:
1. Students will understand the lasting impact of industrialization and its consequences on a society.
2. Students will appreciate how technology grows and adapts to meet the changing needs of humans.

B. Core Knowledge Content:
1. The Industrial Revolution
2. Industrialization and Urbanization in America

C. Skills to be taught:
1. map skills
2. cause/effect
3. compare and contrast
4. drawing conclusions
5. main idea/details
6. writing opinions
7. predicting
8. vocabulary development

III. BACKGROUND KNOWLEDGE
A. For Teachers

B. For Students
1. What Your 5th Grader Needs to Know—“Geography, World Civilization, and American Civilization, An Age of Industry and Invention.”
2. Discuss other types of revolutions.
3. SAT 9/State Test Connections  
a. Vocabulary and concept development  
b. Comprehension and analysis of grade-level-appropriate texts  
c. Expository critique using a variety of strategies to understand a variety of texts.  
d. Organization and focus in writing and oral speaking.

IV. RESOURCES  

V. LESSONS  
Lesson One: England, An Envied Nation
A. Objectives/Goals  
1. Lesson Content: Beginnings in Great Britain  
2. Concept Objective: Students will understand the lasting impact of industrialization and its consequences on a society.  
3. Skill Objectives:  
   a. To learn why industries first developed in England.  
   b. To develop critical thinking skills through map skills.  
   c. To develop vocabulary skills.
B. Materials  
1. Word Wall index cards and Appendix A  
2. Knowledge Journals, spiral notebooks  
3. Dictionaries  
4. The Industrial Revolution (Langley), 4-5.  
5. Map of Great Britain
C. Background Notes
D. Key Vocabulary  
1. Industry  
2. necessity  
3. revolution.
E. Procedures/Activities  
2. Discuss and figure out definitions. Place on a large index card with the word, definition, and a sentence. An illustration is optional. Place on a wall in the classroom entitled, the Industrial Revolution Word Wall, Appendix A. Follow the same steps to place words on the wall for each lesson.  
3. For about 5 minutes, ask students to write about how life was in the 1900’s. Include what industries were probably important. Discuss and list on the board.  
4. Read orally to the students page 107 to the top of 108 (Hirsch, 6th Grade) to the class. Compare to their journal writings. Discuss.
5. Have students look at the map of Great Britain and discuss why industries first developed in Great Britain. List reasons on the board and on their maps.

6. Read pages 4-5 (Langley). Discuss.

7. Have students add 5 new reasons to their maps.

8. Read other resources to add more reasons.

F. Evaluation/Assessment
1. Student discussions, maps, and writing assignments.
2. Extensions
   a. Name the major industries in the US today. For example - meat packing, fishing, computer, paper. Generate a list. Create signboards to show their importance.
   b. List 20 inventions in the world today that have made an impact on how people live. Write about the one that you couldn’t live without.
   c. Research the development of the Erie Canal and its importance. Present in step by step format.
   d. Learn to sing transportation work songs such as: “The Erie Canal,” “I’ve Been Working on the Railroad,” and “Low Bridge, Everybody Down.”

Lesson Two: The Mighty Textile Industry
A. Objectives/Goals
1. Lesson Content: Textile Industry
2. Concept Objective:
   a. Students will understand the lasting impact of industrialization and its consequences on a society.
   b. Students will appreciate how technology grows and adapts to meet the changing needs of humans.
3. Skill Objective:
   a. To understand why the textile industry developed first.
   b. To explain the importance of the early inventions.
   c. To discover the changes that were brought about as a result of industrialization.
   d. To identify causes/effects and to write opinions.

B. Materials
1. The Industrial Revolution (Langley) pages 10-13
2. What Your 6th Grader Needs to Know (Hirsch) pages 108-111
4. Cause/Effect guide (Appendix C)
5. Construction paper
6. Other texts and encyclopedias
7. Knowledge Journal/Index cards

C. Background Notes

D. Key Vocabulary
1. Textile

E. Procedures/Activities
1. Define textile. Follow Lesson 1 procedures and add to Word Wall.
2. Read pages 108-109, “Textile Industry” to students. Ask them to explain how many inventions came out of necessity.
4. Complete the cause/effect chart. Appendix C
5. Knowledge Journals—write feelings about slavery increasing because of the invention of the cotton gin. What else could have happened?
6. Start a Question Box for students to add questions from their reading for other students to answer. This is a great review for all of the lessons.

F. Evaluation/Assessment
2. Extensions
   a. Cut out a T-shirt and design following instructions on Appendix D. Use pages 10-13 and other resources. Examples to use: spinning frame, spinning jenny, spinning mules, and power looms. Hang them with clothespins across the room on the clothesline.
   b. Inventor’s Bags—With the materials in a bag, create an invention. Name it and explain its usefulness.
   c. Research the Great Exhibition in London, England in 1851 and the Centennial Exposition in Philadelphia, Pennsylvania in 1876. What inventions were popular?
   d. Create a timeline of inventors and inventions that influenced the Industrial Revolution. Include women and ethnic groups.
   e. Add questions to the review box.

Lesson Three: Industrialized America
A. Objectives/Goals
1. Lesson Content: Industrialized America
2. Concept Objective: Students will understand the lasting impact of industrialization and its consequences on a society.
3. Skill Objective:
   a. To learn how industries came to America.
   b. To compare and contrast.

B. Materials
1. The New Nation (Hakim) pages 95-101
3. Word Wall index cards, dictionaries
4. Knowledge journal
5. Compare/Contrast Diagram, Appendix E.

C. Background Notes

D. Vocabulary
1. Apprentice
2. interchangeable
3. mill
4. musket
5. photogenic.

E. Procedures/Activities
1. Discuss the vocabulary terms and add them to the Word Wall.
2. Ask students how they remember information if they can’t write it down. Do they remember everything? Do they know anyone who has a photographic memory?
3. Different groups of students can read pages 95-101 from A New Nation or pages 21-24 from The Industrial Revolution. Discuss.
4. Compare and contrast Slater and Lowell using the diagram on Appendix E.
5. In journals, students can explain why Samuel Slater and Francis Lowell were important to the development of major industries in America.
6. Add questions to the Question Box.
F. Evaluation/Assessment
   1. Discussion, diagram, and journal entry.
   2. Extensions
      a. Compare and contrast the work of women and men in the factories. List
         the inequalities.
      b. Research the women who worked in the aircraft industry known as Rosie
         the Riveters.
      c. Create silhouettes of Slater and Lowell. Mount in construction paper
         frames. Design a nameplate that explains their importance.
      d. Read Lyddie, which takes place in Lowell, Massachusetts.

Lesson Four: Urban Cities
A. Objectives/Goals
   1. Lesson Content: Urban Cities
   2. Concept Objective:
      a. Students will understand the lasting impact of industrialization and its
         consequences on a society. (To understand the rise of cities due to the
         development of factories.)
      b. Students will appreciate how technology grows and adapts to meet the
         changing needs of humans.
   3. Skill Objective:
      a. To learn about the benefits and hardships of city life.
      b. To make predictions and give supporting details.
B. Materials
   1. The Industrial Revolution (Langley) pages 30-31.
   2. Highlights in American History (Kachaturoff) pages 35-36
   3. Knowledge Journals
   4. Dictionaries, word index cards.
C. Background Notes
D. Vocabulary
   1. Corruption
   2. ghettos.
E. Procedure/Activities
   1. Discuss and follow same guidelines to add vocabulary to Word Wall.
   2. Ask students what problems large cities have now. List them on the board.
      Make predictions about what problems and corruption might have been part of
      the earlier industrial cities. Web on the board.
   3. Different groups can read pages 30-31 from The Industrial Revolution or pages
      35-36 from Highlights in American History.
   4. Discuss and relate to the information on the board.
   5. Use index cards to create an accordion book to show the benefits and hardships
      of urban living. Benefits are on the front and hardships on the back. Provide
      illustrations. (partner work)
   6. In journals, write opinions of the unfair treatment of blacks from the south and
      immigrants in the urban cities.
   7. Add questions to the Question Box.
F. Evaluation/Assessment
   1. Discussions, accordion book and journal entries
   2. Extensions
a. Research the major industries in Chicago, Illinois, Cleveland, Ohio and Pittsburgh, Pennsylvania during the late 1800’s. Why did those industries develop in each of the cities?
b. Research and perform a vaudeville act. You can supply the music of the period as well.
c. Many of the new inventions changed society during the 1800’s—the telegraph, phonograph, Morse code, gas masks, ironing board, and the railway telegraph. Research how they were demonstrated.
d. Fires in urban areas happened often. Read about the Great Fire that took place in 1871. 18,000 buildings burned. Write a news article as if you witnessed the event.
e. Urban Ballooning—You and your balloon friends have traveled to the earlier urban cities to witness the corruption, problems and benefits first hand. Write about your adventure. Tape the story on a string attached to a balloon.

Lesson Five: Boss Tweed “Give Me the ‘Benjamins.’”
A. Objective/Goal
   1. Lesson Content: Urban Corruption
   2. Concept Objective: Students will understand the lasting impact of industrialization and its consequences on a society.
   3. Skill Objective:
      a. To learn about the political corruption of dishonest politicians.
      b. To give main ideas and supporting details.
B. Materials
   1. Reconstruction and Reform (Hakim) pages 95-100.
   2. Knowledge Journals
   3. Word Wall Index Cards
C. Background Notes
D. Key Vocabulary
   1. Alderman
   2. graft
   3. scoundrel
   4. Tammany Hall
E. Procedure/Activities
   1. Ask students if they have heard of dishonest politicians. Discuss.
   2. Read on p. 95 the inset box to the students. Discuss. Have students read pages 95-100 to find out more about Boss Tweed. Discuss.
   3. Add vocabulary to Word Wall.
   4. Write a letter to the city government of New York City complaining of all the problems and how you are fed up with Boss Tweed and his political dishonesty. Give 5 examples. You want immediate action. You can also add what should happen to him or solutions to the problems.
   5. Add questions to the Question Box.
F. Evaluation/Assessment
   1. Discussions and citizen’s complaint letter.
   2. Extensions
      a. Create other political cartoons around Boss Tweed.
      b. Write an epitaph for Boss Tweed’s tombstone.
      c. Create an award for Alfred Ely Beach for his positive efforts in making the world a better place.
Lesson Six: Deplorable Factory Conditions

A. Objectives/Goals
1. Lesson Content: Condition of Labor
2. Concept Objective:
   a. Students will understand the lasting impact of industrialization and its consequences on a society. (To understand the rise of cities due to the development of factories.)
3. Skill Objective:
   a. To explore the hardships of workers in the factory system.
   b. To make judgments and draw conclusions.

B. Materials
1. The Industrial Revolution (Hazen), pages 18- the first column of p. 19.
2. The Industrial Revolution (McCormick) pages 37-41.
4. The Age of Extremes (Hakim) page 9-top of p. 10.
5. Word Wall Index Cards, paper strips
7. Paper for picket signs, sticks
8. Other resources on child labor.

C. Background Notes

D. Key Vocabulary
1. Automation
2. gilded
3. tycoon.

E. Procedure/Activities
1. Read orally to students p. 9 to the top of p. 10 from The Age of Extremes. Discuss what the Gilded Age was. How did the social classes differ?
2. Discuss vocabulary and add to the word wall.
3. Read orally the letter that is on p. 18 of Hazen's The Industrial Revolution. Discuss. On paper strips write the undesirable problems in the factory system. Keep in a plastic bag labeled, "The Evils of the Factory System".
4. Students read the bottom of p. 18 and the 1st column on p. 19 of Hazen's The Industrial Revolution, or pages 111-113 of What Your 6th Grader Needs to Know. Add other evils of the factory system to the bag.
5. Students will create protest signs about children’s working conditions. They are to tell what the children want. For example: “I want an education.” or “I want to breathe fresh air.”
6. Students will write reasons why people let the children be abused in the factory system. Include views of the parents, factory owners and the government.
7. Add questions to the Question Box.

F. Assessment/Evaluation
1. Informal teacher observation of posters and judgments
2. Extensions
   a. Research the beliefs of the Calvinist that some people were “predestined to poverty and therefore best left alone.” Apply this belief to the hands off policy on child abuse at that time.
   b. Explain what sweatshops were. How were they different from factories? Use Russell Freedman’s Immigrant Kids.
   c. Read Fire at the Triangular Factory to learn about the plight of women workers.
d. Create biographical sketches of reformers who tried to improve the conditions of factory workers, blacks and immigrants. Create an Appreciation Wall with bricks. (Mother Mary Jones, Jacob Riis, Lewis Hine, Margaret Sanger, Booker T. Washington, Jane Adams, W.E.B. DuBois, and Florence Kelly.)
e. Create a picture wall to show the multitude of jobs that were done by children. Write captions and opinions.
g. Visit local industries and find out about work conditions (safety precautions, shifts, hours, wages, insurance, etc.).

Lesson Seven: The Power of Labor Unions and Strikes
A. Objectives/Goals
1. Lesson Content: Labor Unions
2. Concept Objective:
   a. Students will understand the lasting impact of industrialization and its consequences on a society.
3. Skill Objective:
   a. Students will understand why labor unions were formed and why labor workers went on strike.
   b. To understand point of view.
B. Materials
1. What Your 5th Grader Needs To Know (Hirsch) pages 210-211.
2. An Age of Extremes (Hakim) pages 89-94.
3. Knowledge Journals
4. Index Cards, Dictionaries
5. Point of View Cards (Appendix F) and directions.
C. Background Notes
D. Vocabulary
1. Anarchists
2. bribery
3. scabs
4. socialist
5. strike
6. unions.
E. Procedures/Activities
1. Ask students in what ways do people try to improve things that they are unhappy with. Create a web on the board. Discuss which ways are the most effective.
2. Read pages 210-211 from What Your 6th Grader Needs to Know orally to the students. Compare improvement actions from the book with those on the board. Discuss the outcome of the Homestead Strike.
3. Students read pages 89-94 from The Age of Extremes and discuss.
4. Add vocabulary to Industrial Word Wall.
5. Divide students into groups and give each a pack of Point of View cards, Appendix F. For each card, list what the person on the card would say about factory work conditions and improvements needed. Design a chart to show responses.
6. Add questions to the Questions Box.
F. Evaluation/Assessment
1. Discussion and point of view responses.
2. Extensions
a. Create a sequence Bio-Map that shows the life of Sam Gompers, the founder of the American Federation of Labor. Include pictures. Use An Age of Extremes (Hakim).

b. Write a mini-play or perform Readers Theater to present the riot at the McCormick Factory and the mass meeting at Haymarket Square.

c. Interview some industrial workers and have them respond to Sam Gomper’s statement, “Show me a country in which there are no strikes and I will show you that country in which there is no liberty.”

d. Research the development of Labor Day as a national holiday. Answer the questions who, what, when, where, how and why.

e. Research the Wobblies, another union group, and explain why they disliked Sam Gomper’s group.

f. Research why Cesar Chavez was an important labor reformer.

Lessons Eight and Nine: Big Businesses, Robber Barons and Monopolies.

A. Objectives/Goals

1. Lesson Content: The Growing Influence of Big Business

2. Concept Objective: Students will understand the lasting impact of industrialization and its consequences on a society.

3. Skill Objective:
   a. To study the development of large corporations and the discontent of the working classes.
   b. To understand how monopolies were limited by enforced laws.
   c. To give main ideas and supporting details.
   d. To draw conclusions.

B. Materials


3. Word Wall Index Cards.

4. The Two Sides to Power, Appendix G.

5. Knowledge Journals.

C. Background Notes

D. Key Vocabulary

1. Capitalists

2. corporation

3. monopoly

4. philanthropists

5. robber barons

6. trusts.

E. Procedures/Activities

1. Read orally to students pages 208-210, “Industrialists, Capitalists, and Monopolies,” and the top of pg. 82, The Industrial Revolution in America, (McCormick).

2. Ask students to draw conclusions as to why they were called robber barons. Use supporting details from the read aloud.

3. Add words to the Word Wall.

4. Write the following social classes on the board: upper class, middle class and working class. List reasons why there were conflicts among the classes. Students can role play.
5. In their journals, students can write about why there were conflicts among the classes. Discuss.

6. Divide students into 3 groups to read the different readings on the robber barons listed in Age of Extremes. As students read individually, they will complete Appendix G. Discuss. Have each group draw one outline of a student to represent the robber baron. Cut it out and get information from each group member to fill in the outline. Hang the three barons from the ceiling or around the room. They can add any new information from other sources.

7. Add questions to the Question Box.

F. Evaluation/Assessment
1. Discussions, lists, journal responses, and the outline forms.
2. Extensions
   a. Write a letter to one of the robber barons advising them on how they could better use their millions to help the working class, the backbone of their businesses.
   b. Research Horatio Alger who advocated that any American could work their way up the ladder of success. He wrote “rags to riches” stories. Create a mini-book of tips on how success could happen.
   c. Explore the life of Henry Ford who believed that he could invent a car that all Americans could afford. What made him different from the robber barons? Create a timeline of his line of cars.
   d. The assembly line greatly influenced production in industries. Demonstrate this in the classroom. Have kids create something such as a pinwheel, paper planes, or paper baskets or boxes. Show the steps and a finished product. Create an assembly line with most of the students. Have some construct the project individually. Discuss who was faster? Who created more? Who would make a larger profit?
   e. Use large diagrams to show how steel is made or how iron ore is smelted step by step.

Lesson Ten: Capitalism Versus Socialism
A. Objectives/Goals
1. Lesson Content: Capitalism versus Socialism
2. Concept Objective: Students will understand the lasting impact of industrialization and its consequences on a society.
3. Skill Objective:
   a. To describe the ideas of capitalism and socialism.
   b. To identify main ideas and details.

B. Materials
1. What Your 6th Grader Needs to Know (Hirsch), pages 113-116
2. Word Wall Index Cards
3. Knowledge Journals
4. T-Diagrams made from construction paper.
5. Appendix H and Appendix I

C. Background Notes

D. Key Vocabulary
1. Bourgeoisie
2. capitalist economy
3. laissez-faire
4. manifesto
5. proletariat
6. socialism
7. tariffs.

E. Procedures/Activities
1. Read orally to the students “The Idea of Laissez-Faire” on pages 113-114. Discuss the term. Ask students why the idea would not have been good for the factory workers? Create a web in their journals. Discuss how the idea did help to advance the Industrial Revolution.
2. Students read pages 114-116 from What Your 6th Grader Needs to Know.
3. Students will complete two T-Diagrams for capitalism and socialism. Show the main ideas of each economic system. Discuss.
4. Add vocabulary to the Word Wall.
5. Add questions to the Question Box.

F. Evaluation/Assessment
1. Discussion, webs, and T-Diagrams.
2. Extensions
   a. Using World History Simulations, role-play, “A Red White Elephant Sale” where students will understand the idea of communism.
   b. Research communist countries today. Explain how this economic system works.
   c. Robert Owen implemented another form of socialism in New Harmony, Indiana in the U.S. Research and tell why it worked for only a little while. Give an outline of how it was supposed to work.
   d. Write an essay on how the Industrial Revolution left a lasting effect on the world.
   e. For a review of the entire unit, complete an acrostic. Write the words "The Industrial Revolution" vertically down the left side of a page in the journal. For each letter, write important information from each lesson.

VII. HANDOUTS
See attached Appendices A, C, D, E, F, G, H, I

VIII. BIBLIOGRAPHY
Industrial Revolution
Inventions

Child Labor

Biography

Novels and Picture Books
### APPENDIX A - INDUSTRIAL WORD WALL

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<tr>
<th>Lesson 1</th>
<th>Lesson 4</th>
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<tr>
<td><strong>Necessity</strong></td>
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<td>Definition –</td>
<td>corruption</td>
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<td>Definition –</td>
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Each card should contain the word, definition, and a sentence. Illustrations can be added and placed on the back.
APPENDIX C - CAUSE/EFFECT

List the pluses and minuses that the textile industry created.

Textile Industry

Cause

Brought
About
Changes

Effects

Pluses

Clothes were readily available

Effects

Minuses

Crowded factories
APPENDIX D – INVENTION T-SHIRTS

Draw and cut out this T-Shirt on a large sheet of construction paper. Include the following on your shirt:

1. A picture of an invention.
2. Name or picture of who invented it.
3. Year it was invented.
4. Why was the invention a necessity?
5. Were there any limitations?
6. Use the front and back.
APPENDIX E

Compare and contrast Samuel Slater and Francis Lowell using the H diagram and information from the reading.

Sam Slater

Likenesses

Francis Lowell

Differences

Differences
APPENDIX F – DIFFERENT POINTS OF VIEW

Directions: Within a group, decide how each person listed on a card would respond to the improvements needed in the factory system. Devise a chart to lists as many responses as the group can think of.

A Factory Manager

A Factory Worker
Man/Woman

A Capitalist
or
Investor

A Child Worker

Government Officials
APPENDIX G – TWO SIDES TO POWER

Directions: Use information from the readings to list the good things about the “robber barons” that they accomplished and the bad things that people couldn’t forget that made them despise powerful capitalists. On the large group outline you can draw in their features before facts are added.
APPENDIX H

Directions: Cut out the T. Write the main ideas of the economy system in the narrow part of the T.
APPENDIX I

Directions: Cut out the T. Write the main ideas of the economy system in the narrow part of the T.