



American Industrialization: 1870-1900

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Historical Narrative

Introduction

in·dus·try

Pronunciation: \ˈɪn-(ɪ)dəs-trē\

Function: *noun*

Etymology: from Latin *industria*, from *industrius* diligent, from Old Latin *indostruus*, perhaps from *indu* in + *-struus* (akin to Latin *struere* to build)

1: diligence in an employment or pursuit ; *especially* : steady or habitual effort

2 a: systematic labor especially for some useful purpose or the creation of something of value

b: a department or branch of a craft, art, business, or manufacture ; *especially* : one that employs a large personnel and capital especially in manufacturing

c: a distinct group of productive or profit-making enterprises <the banking *industry*>

d: manufacturing activity as a whole <the nation's *industry*>

from: <http://www.merriam-webster.com/dictionary/industry>

Thinking about the word “industry,” many different connotations may come to mind. One might visualize a factory or an assembly line, a general category of big business, or a quality synonymous with hard work and determination. In the context of the American Industrial Revolution, all of these different meanings of the word “industry” are definitely applicable; however, the development of industry was completely contingent on the *industrious* nature of the American people who lived and shaped it as an historical era.

Through anecdotes of these *industrious* Americans we can examine the mindset from which this era was built. For instance, Thomas Edison is said to have experimented with over a thousand different variations of filament before he succeeded in his attempts at producing a commercial incandescent light bulb. Thousands of American workers, including children, persevered through seemingly never-ending work days at the factories, mines, and textile mills under dangerous conditions and with meager pay. It was also the result of the unbreakable spirits of reformists like Old Mother Jones who worked tirelessly to reverse some of the negative social effects that accompanied industrialization.

Undeniably, the Industrial Revolution and the time period 1870 to 1900 was an extremely formative period in transforming the economy and social structure of America. This time period is important for elementary students to study because many concepts and inventions developed then are still in use today, and still affecting the country’s physical, social, and economic landscape—as well as its global status. The lessons, activities, and artifacts of this culture kit bring to life some of the basic concepts which resonate from this period. For instance, students will engage in experiences that take them through the manufacturing process from a natural resource to finished product on a store shelf which highlights concepts about resources, consumers, producers, trade, mass production, and division of labor. Other activities, like the labor union protest song and the provocative photographs of child labor recreate for students the social issues of the period. This kit is designed to align with Social Studies standards on a state and national level through the Virginia Standards of Learning and the content standards set forth by the National Council for the Social Studies. A complete list of relevant standards has been provided in Appendix A.

Key Ideas and Events

The period we have studied (1870-1900) is commonly referred to as “The Second Industrial Revolution”—the second wave of technological advancements that indelibly changed the lives of American citizens and the economic and political landscape of the country. This period of innovation was preceded and heavily influenced by the industrial revolutions present in

European countries. By studying this time period, K-6 students will learn about many of the inventions and industrial principles still currently in use; an understanding of this period is essential to an understanding of today's economy. Three principles, in general, contributed to the modernization and rise of the industrial factory system present in the United States in the late nineteenth and early twentieth centuries: specialization, mechanization, and urbanization (Backer).

Industrialization, the process of converting from an agrarian to an industrial socioeconomic order, occurred for many reasons. Several innovations during the period led to increased productivity, which in turn led to a greater number and variety of goods that could be produced. Mechanization, the process in which machinery was introduced to assist human laborers with physical tasks, allowed for technological advancements in the field of communication and transportation. Railroads and locomotives (which utilized coal and steam power) were being built more rapidly using machines than human labor alone. Ideas, also, were reaching new speeds of transfer; Alexander Graham Bell's invention of the telephone in July of 1875 was a major step in modernizing the diffusion of information ("Industrial Revolution").

Specialization was a principle most prevalent in the new factory systems of the late nineteenth century. As mechanization allowed for the quick production of interchangeable parts, production of goods within certain industries became standardized. Tasks involved in the manufacture of products were divided and one worker would be responsible for the completion of one specific task. While increasing productivity and consistency of quality, the division of labor had negative effects on the lives of workers. The work was monotonous and unchallenging, lower-skilled laborers who replaced craftsmen were exploited for their work, and growing dependency on the specialization process meant that one small disruption to the process could have catastrophic results ("The Industrialization of America"). The assembly line practice, though, is an important principle still in use today.

The great changes occurring during this relatively short period in American history had significant effects on population distribution. As more factories were being constructed in central urban locations, many workers and their families migrated to cities in search of job opportunities. This process of in-migration to existing urban areas—or *urbanization*—reduced commute times and provided new opportunities for labor, but had detrimental effects on the environment and the standards of living for segments of the labor population. With the massive influx of people, cities soon became overcrowded and polluted. Urbanization also had the effect of segregating citizens by class and recruiting young children into the workforce (Daniels).

This is just a small sample of ideas and events that were responsible for America's Second Industrialization. American engineers, economists, scientists, and businesspeople utilized the resources created by foreign international movements in furthering and extending the United States' presence as a world power. One prominent example is Henry Ford, who implemented the assembly line system and combustion engine technology to lead the booming automobile industry. Just as it was brought on by foreign industrialization, America's industrialization had international implications. A study of this time period would lead to a study of the United States on the world stage, and an expansion of students' geo-spatial awareness and citizenship skills ("The Industrialization of America").

Men, Women, Youth, and Children

Industrialization indelibly changed the lives of American citizens. People migrated in massive quantities to cities, where they could find work in newly-built factories and—

occasionally—a better way of life. Production of goods increased nearly ten times between 1870 and the early 1900s; a major cause of this was the continuous inventing of new machinery. The widespread use of machinery called for hundreds of workers within a single factory at times (“Industrial Revolution”). Previously, labor was completed mainly by adult male citizens. With the onset of industrialization, though, many of these positions were filled by women, children, and the more than 11 million immigrants who entered the United States seeking employment. The influx of new citizens contributed significantly to areas being overpopulated and poverty-stricken.

By 1910, the “new immigration” movement had radically changed the social makeup of metropolitan areas. An estimated 11.7 million people entered the United States; the majority of these transplants were from Western European countries like Germany, Ireland, and Italy (Daniels). Only a small percentage of people were extremely wealthy during this time period; typically, they were business and factory owners. The majority of the population were unskilled laborers who worked, on average, 60 hour work weeks and earned 20 cents per hour (“Industrial Revolution”). Unpredictable work opportunities and poor sanitation in overcrowded cities contributed to extremely low standards of living in urban areas that were concentrated around factories. Diseases spread rampantly in these environments, and medical services were not available to the largely immigrant population. In 1901 the Tenement House Act was eventually enacted; it banned the construction of dim, poorly-ventilated tenement buildings in the state of New York and was the first public law that dealt specifically with housing reform (Dolkart).

Due to extreme poverty and increased cost of living, entire families were forced to work; even young children entered the workforce and go without an education. At the time, there were no child labor laws and children often worked themselves into severe exhaustion or fatal illness. Activists and philanthropists, like Mother Jones and Jane Addams, dedicated their lives to alleviating the exploitation and maltreatment of children and female workers. Addams’ Hull House, established in Chicago in 1889, provided several social services for the urban poor, such as safe housing, adult education classes, and clubs for children (Brown). It was not until 1938 that federal prohibition of child labor was achieved in the Fair Labor Standards Act. This piece of legislation called for a national minimum age requirement for all minors before they could work and also limited the number of hours a child could work within a week. During the time period where the factory system predominated, children were actually the preferred laborers; unlike adults, factory owners and managers viewed children as less expensive, more easily trainable, and less likely to strike (Sherer).

The massive influx of workers to the United States stimulated competition among people for unchallenging job positions. Despite the rapid openings of factories, there was a higher demand for employment than there were job openings, which left many people unemployed. Owners of factories were able to pay workers unfairly low wages since many people were simply happy to be employed. Due to the oversupply of workers, employees were thought of as easily dispensable and there was little job retention. The pressure to increase rates of production and implement new time-saving equipment led to a lack of sufficient employee training and alarmingly high numbers of injuries and deaths in the workplace (Backer).

During this time period, women began to comprise a significant portion of the workforce. If not part of a wealthy family, many women took jobs out of necessity—most of which involved domestic work typically assigned to women in the household. They sewed or dyed fabrics in textile mills, they worked as governesses for rich families, or they worked in dangerous factories. Women were judged as unskilled and less intelligent and were paid considerably less than their

male counterparts (who were believed to be innately superior in all fields) in the factory setting. At home, women were also responsible for producing and raising children. Large families were expected; more children meant more potential laborers and sources of income that were necessary to a family's survival. This often resulted in the women bringing their children to work at increasingly younger ages (Stearns). Overall, the period of industrialization was a time of hardship and suffering for most. People struggled to make ends meet, women struggled for equality, men fought to keep their jobs, and children fought for their education and childhood.

In contrast to the horrible conditions faced by men, women, and children in the urban-factory setting, the upper classes increased their wealth through industrial expansion. Polarization between upper and lower classes made the middle class virtually extinct. Women and children, in particular, enjoyed a much more stable and secure existence. Wealthy citizens were able to partake firsthand in the advancements and improvements to daily life made during the Industrial Revolution. Their lives of leisure are reflected in the arts. Members of the American Impressionist movement, including Mary Cassatt, captured the idealized version of life that was lost on disillusioned laborers. Travel was expedited by the railroad system and its comfortable cars, as was the importing of international goods ready for consumption. For these citizens, the years of 1870-1900 were truly the "Gilded Age"—a term coined by Mark Twain to satirize the greed and political corruption rampant in America at this time ("Gilded Age").

Legacy

America's Second Industrial Revolution set a precedent for ingenuity balanced with social reform. Many of the advancements and improvements made in the areas of technology and industry serve as the foundation for current manufacturing processes. Students are undoubtedly familiar with technological innovations, such as the telephone, the modern automobile, and the factory system. Studying these inventions and the context in which they were created provides a lens through which to view the current state of the country. Unfortunately, many of the detrimental effects brought on by the technological advancements (factories, mining, and coal power among them) continue to shape and damage the natural and urban environments.

The legacy of the Industrial Revolution can be seen throughout American infrastructure as much as it can be seen in American society. The trend of women in the workforce that began during this period has expanded today. The various injustices enacted as a consequence of these practices incited many laborers and activists to civil disobedience. The actions of these citizens made progress in reducing the exploitative labor tactics employed in factories and other businesses. Child labor, once popular and customary, was outlawed through legislation; the unfair treatment of minorities and women in the workplace unfortunately still remains. The issues initiated during the decades studied persist today, and are little closer to resolution. Most significantly, an in-depth study of America's industrialization (both its beneficial and harmful effects) teaches students valuable lessons about American history that they need to be well-informed citizens. Without a firm understanding of the numerous transformations which began in the years 1870-1900, students cannot fully understand the workings of today's industry or economy.

Lesson #1

Topic: Map Skills, American Industrialization

Theme/Concept: A Pencil Factory

Grade Level: 1

Lesson Length: 1 hour

Number of Students: 20 students

Space: whole group, student pairs

Plan Preparers: Rachel Granata, Ariel Jones, Therese Killion

Standards

Virginia History and Social Science SOLs:

1.4 The student will develop basic map skills by a) recognizing basic map symbols, b) using cardinal directions on maps, 1.5 The student will construct a simple map of a familiar area, using basic map symbols in the map legend.

National Social Studies Standards:

NSS-G.K-12.1 The World in Spatial Terms: (a) Understand how to use maps and other geographic representations; NSS-G.K-12.5 Environment & Society: (c) Understand the changes that occur in the meaning, use, distribution, and importance of resources

Objectives

This lesson will introduce students to the concepts of map symbols and legends in the context of American industrialization. Building upon previous knowledge of cardinal directions, the students will apply new knowledge of map skills to tracing the sequence and routes of the manufacturing process (i.e.: a natural resource is transported to a factory, the finished good is transported to stores, consumers transport purchased goods from store to home). Using a map handout and a recording worksheet, the student will be able to describe the direction of each segment of the route with 80% accuracy.

Procedure

Introduction: At the beginning of the lesson, show students an orange and an orange juice carton that they buy at the store. Discuss how the orange is changed into juice and how the juice is transported to the grocery store where it is sold. As a class, use the flow chart to trace the production of the good step-by-step using students' comments. (see slide #1)

Next, tell students that they are going to explore the production of a very special classroom product (pencils) that we use every day. Allow them to ask you yes or no questions about the product and guess what it is; use hints if necessary.

Content Focus: After students arrive at pencils as the item, discuss the manufacturing process of pencils using the same flow chart graphic organizer. (see slide #2) As each step is described, place its symbol on the flow chart and discuss what a symbol is (a picture or object that represents something else).

Focus discussion on the role of the factory. Input: "Natural resources (i.e. trees) can be changed into finished goods (pencils) that people use. One place where this can happen is a factory. Factories were a new invention introduced during America's industrialization period. Because they were new, there were no laws to govern them. Children worked in dangerous factories instead of going to school." (photos slides #3-5) Discuss how this is different from today and what some of the children in the photographs might be doing or thinking.

Continue discussing the sequence of the manufacturing process, "At a pencil factory, trees that were cut from the forest are cut into slats, graphite is inserted, they are sanded and painted, and erasers are added. Then the finished pencils are sent to stores where people can buy them." (photos slides # 6-8)

Modeling: Next, project the map (see slide #9) in front of the class and explicitly model the activity. Starting at the forest, ask students where the lumber will go next as discussed in the flow chart. While modeling, ask students to tell you a next possible step. Point at the destinations, and write the changes in direction along the route on the board. After modeling the route, distribute a map, worksheet, and game piece to pairs of students. Point out the legend and pose questions to students about the symbols, checking for their understanding. (see slides #10-12) Explain that a map key is the list of all the symbols and their meanings that are used in the map. Identify the symbols and their locations on the map.

Guided Practice: Working in pairs, one student will be responsible for moving the game piece along the map route, and the other will write responses in the worksheet. They will alternate. Before working on their own, discuss the worksheet and work through question 1. Read the sentence out loud as a class, and then ask how we can fill in the blanks using symbols and cardinal directions. **Check for Understanding:** Students should locate the forest and factory symbols and trace the path. Then ask them what they are going to write in the blank on the worksheet. Then have the class read the instructions for the other part of the worksheet out loud. Practice with the question on slide #11. Ask if everyone understands the directions; if yes, they can continue through the worksheet. If some students don't understand, review and model again with them.

Independent Practice: Student pairs will perform the rest of the activity and complete the rest of the worksheet independently as you circulate around the classroom and monitor their progress. Students should be able to follow the route as modeled at the beginning of the lesson, write the appropriate direction, and circle the correct symbols on the worksheet.

Closure: After the class has had time working with the maps and filling in the worksheet, the teacher will review key terms and concepts (symbols, legend, map, route, directions). For an extension/homework activity, students will be asked to make a map of their choice (for example: their neighborhood, the school, etc.) using symbols and a map key. A follow-up lesson could also involve a more in-depth look at what happens inside a pencil factory, using Harcourt Horizons: About My World pages 244-249.

Evaluation

Formative: The teacher will circulate and monitor individual student's understanding during the lesson and their guided and independent practice. Students should be able to answer questions about cardinal directions and the manufacturing sequence as it is represented with symbols.

Summative: Students will complete a worksheet that accompanies their maps.

Materials and Resources: flow chart graphic organizers for orange juice and pencils (attached), maps for student pairs (attached), student worksheets (attached), game pieces

Background Information: One of the defining characteristics of America's Second Industrial Revolution was the mass production and distribution of consumer goods. Factories are places where many people work together using machinery to quickly produce many items at once in a shorter amount of time than previously possible. The increase of factories, mechanized labor, and the specialization of labor meant there were more goods available to the consumer at a faster rate. The demand for goods also increased, and more workers were needed to keep up with demand. At the time, children were expected to work long hours under dangerous conditions at factories. By the late 1800s and early 1900s, though, several laws were enacted that outlawed child labor.

Names _____

How Are Pencils Made?

Instructions: Trace the route on your map and write down the direction you traveled.

1. To go from the forest to the factory, go _____ and then _____.

2. To go from the store to your house, go _____, cross the bridge, and then go _____.

3. To go from the factory to the train station, go _____.

Instructions: Read the questions. Use your map legend to find the right symbol.

1. Which of these is the symbol for the train station?

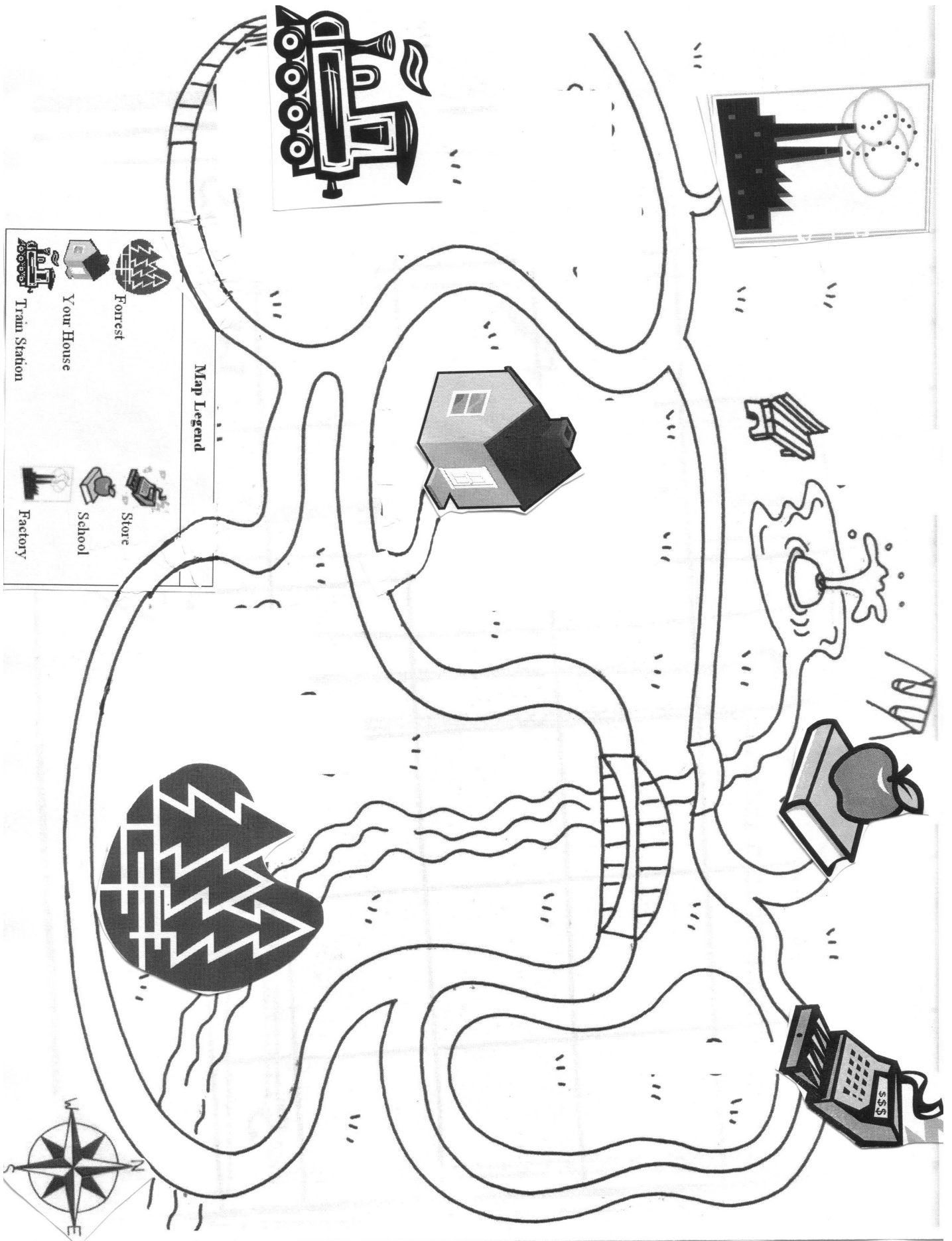


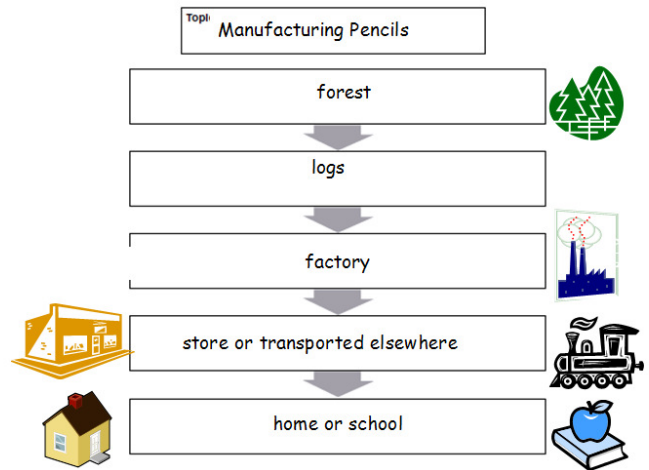
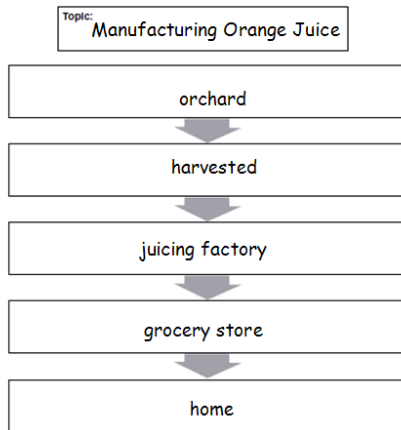
2. Which of these is the symbol for the place where people buy finished products?



3. Which of these is the symbol for a forest?







Child Labor in Textile Factory



<http://www.historyplace.com/unitedstates/childlabor/>

Indiana Glass Works



<http://www.historyplace.com/unitedstates/childlabor/>

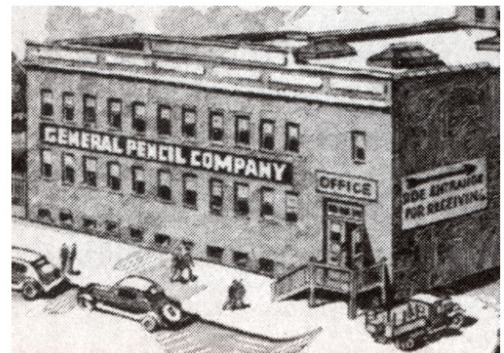
Packing Room



<http://www.historyplace.com/unitedstates/childlabor/>

General Pencil Company Factory

sketch from the early 1900's



• <http://www.njn.net/artsculture/starts/pressroom/2406/PencilFactoryB.JPG>

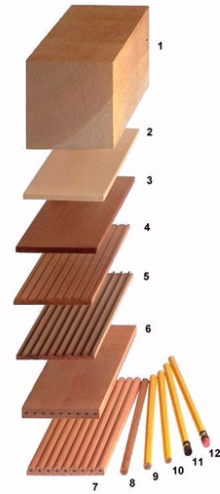
General Pencil Company Factory

Today!

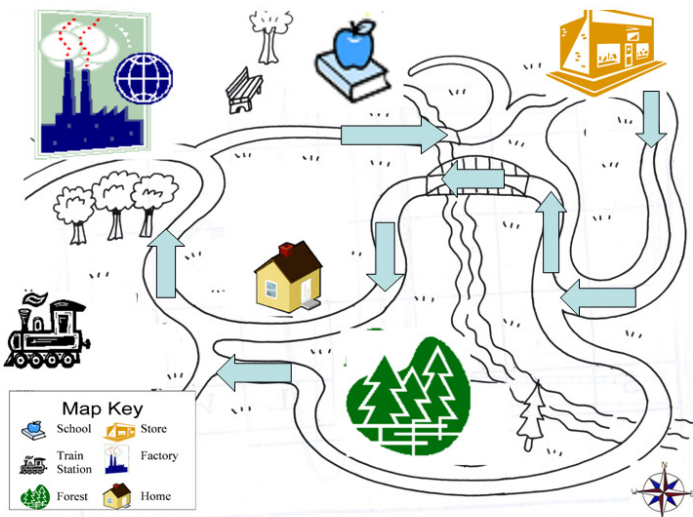


- http://www.fadingad.com/blog/new_jersey/jersey_city_pencil01.jpg

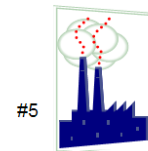
Pencil Making Steps



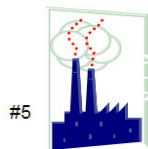
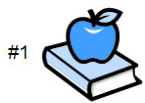
- <http://www.pencilpages.com/articles/making2.jpg>



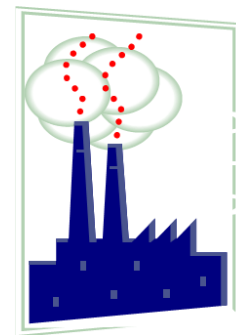
Map Symbols



Which of these is the symbol for factory?



#5 Factory



Lesson #2

Topic: Art Criticism, American Industrialization

Grade Level: 2

Number of Students: 20 students

Plan Preparers: Ariel Jones

Theme/Concept: Am. Impressionism

Lesson Length: 1 hour

Space: whole group

Standards

Virginia History and Social Science SOLs: 2.3 The student will identify and compare changes in community life over time in terms of buildings, jobs, transportation, and population.

Virginia Visual Arts SOLs: 2.6 The student will create a work of art from observation. 2.9 The student will identify and use a variety of sources for art ideas, including nature, people, images, and imagination, and resource materials. 2.16 The student will express opinions with supporting statements regarding works of art. 2.17 The student will categorize works of art by subject matter, including portrait, landscape, and still life. 2.19 The student will interpret ideas and feelings expressed in personal and others' works of art. 2.21 The student will describe the meanings and feelings evoked by works of art. 2.22 The student will discuss the ways that the art of a culture reflects its people's attitudes and beliefs.

Objectives

1. Given works of art, the student will be able to identify seascape, landscape, cityscape, and portrait paintings. 2. Given models, the student will distinguish and discuss human-made paintings and photographs. 3. Given observation time outside, the student will reproduce the Impressionists' style by practicing painting *en plein air*.

Procedure

Introduction: Place a group of pictures on each table. Before students look at the pictures, use the powerpoint slideshow to briefly review industrialization (slides 1-3). Introduce the concept of American Impressionism (a style of painting characterized by loose brushwork and leisure scenes that was practiced in the late 19th and early 20th centuries) and different categories of art (landscape, portrait, etc.) (slides 4-8). After a brief discussion, tell students that they will now examine the pictures they have on their table.

Content Focus: Ask questions about the similarities and differences between the pictures. Using your copies of the pictures, hang them on the board into different categories suggested by the students with the terms they learned earlier in the lesson (i.e.: a landscape photograph, a painting portrait). Continue discussing the pictures and their relation to the industrialization period.

Objective Questions: What is the main difference between all of the pictures? Who are the people in the paintings and what are they doing? In the photos? Where do you think the places in the landscapes and cityscapes are? Reflective Questions: How would you feel if you were one of the people in the paintings? In the photos? Have you seen or been anywhere similar to the subjects of the painting? Of the photos? When have you worked hard and how did you feel? Do you relate more to the people in the photos or the paintings? Interpretive Questions: Why do you think the artist decided to paint this? Do you think the people in the photos are working hard? Do you think they enjoy what they are doing? How are the landscapes in the paintings different from the landscapes in the photos? How are the seascapes in the paintings different from in the photos? Decisional Questions: Were these paintings and photographs produced by the same

people? How do you think the artists were different? Did the painter work in or live near a factory? Did the photographer and people in the photos live near the places like the paintings show? Did the impressionistic painters paint scenes and people who represented the majority of American citizens or just a small portion of Americans? Which art form shows more evidence of industrialization?

Demonstration and Activity: Discuss with students how a photograph is different from a painting; the photographs show an actual real-life situation, but the painting is an artists' creation and interpretation. Demonstrate the style of the Impressionists: short brush strokes, soft colors, capturing the effects of light. Ask students about a pattern in the subject matter of Impressionists' that they might have noticed. They typically painted portraits and outdoor scenes. Introduce the term *en plein air*, a French phrase meaning "in the open air." Distribute paints and materials to students and walk outside to a location where they can observe nature. Let students paint.

Closure: After the allotted time for painting, reconvene inside. Ask for volunteers who want to show their paintings to the class. Students can tell the class about what they painted; ask questions to class about the tone of the painting, the subject, and a positive feature of the painting. As a whole class, summarize the characteristics of the American Impressionists.

Evaluation

Formative: The teacher will monitor student understanding during small group and whole group discussion. Students should be able to answer questions about the American Impressionists' style and be able to demonstrate some of the characteristics through their paintings.

Summative: attached

Materials and Resources

- <http://www.nga.gov/collection/gallery/gg70/gg70-main1.html>
- American Impressionism powerpoint slideshow (attached)
- copies of pictures (attached), all images from <http://www.shorpy.com>, <http://www.wikipedia.org>, and <http://www.nga.gov/collection/gallery/gg70/gg70-main1.html>
- materials for student paintings

Background Information

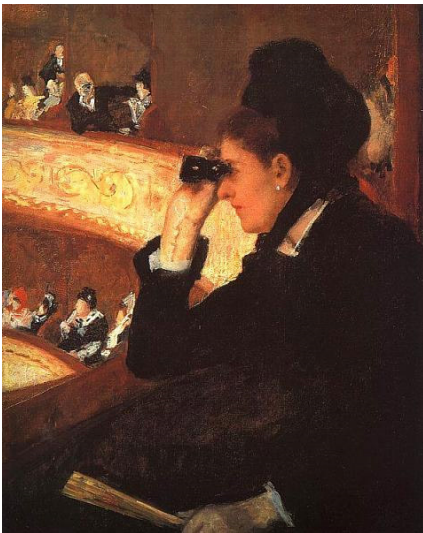
Impressionism emerged as an artistic style in France in the 1860s. The style was introduced to large American cities in the 1880s. Notable North American impressionists include Mary Cassatt, Joseph Decamp, Childe Hassam, Edmund James Tarbell, and Theodore Robinson; they tended to congregate in the Northeast. The style is characterized by loose brushwork and vivid colors and most artists worked with oil paints. Like their French counterparts, the American Impressionists captured the effects of sunlight while painting *en plein air*. The movement coincided with the industrialization of America, although the Impressionists tended to paint landscapes and scenes of leisure featuring upper-class citizens.

Key Terms:

- landscape: a work of art that features views of rural scenery
- seascape: a work of art that features views of water (sea, ocean, river, pond, etc.)
- cityscape: a work of art that features a view of a city or town (i.e. buildings and roads)
- portrait: a work of art that features a depiction of a person or group of people
- *en plein air*: "in the open air," creating a work of art outdoors

Summative Evaluation: Multiple Choice Question

Which of the following pictures was probably created *en plein air*?

**A****B****C****D**

Cityscape Samples



Childe Hassam, Rainy Day Columbus Avenue, 1885



Childe Hassam, September Sunlight, 1888



Theodore Robinson, A Bird's-Eye View, 1889

Landscape Samples

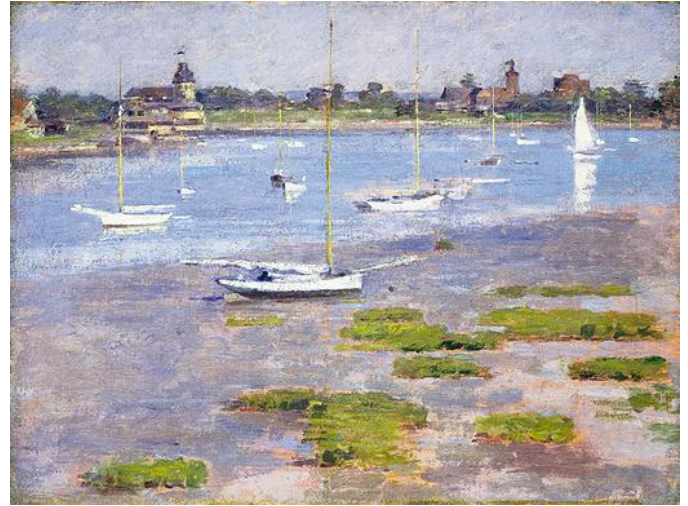


Hanson Puthuff, Untitled, 1894



Childe Hassam, Celia Thaxter's Garden, 1890

Seascape Samples

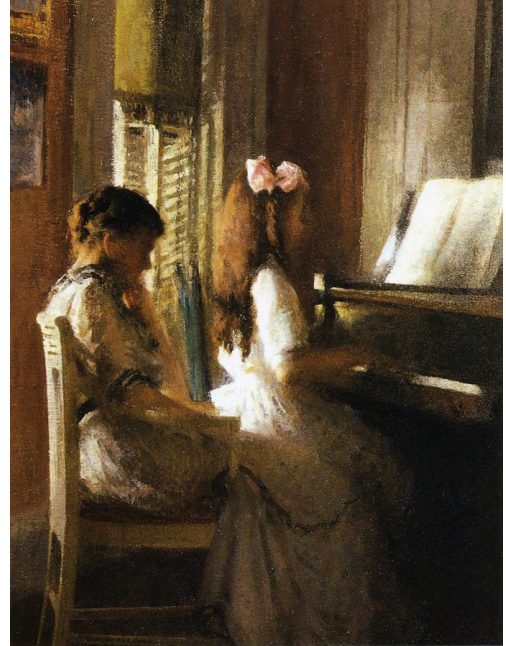


John Bunyan Bristol, Picnic by the Lake, 1885



George Browne, Preparing for Sail, 1895

Portrait Samples



Edmund Charles Tarbell, The Piano Lesson, 1898



Frank Weston Benson, Hilltop, 1901



Mary Cassatt, Little Girl in a Blue Armchair, 1878

American Industrialization

1870-1900

Factories

- Factories were a new invention in the late 19th century.
- Many people worked in factories to make goods that people could buy. Often, people worked with dangerous machinery.



Transportation

- Trains that used coal-burning energy were a new form of transportation.
- Trains allowed people and goods to move at a faster rate. They let people move farther westward across the country.



American Impressionism

- Impressionism is a style of art that began in France, but was adopted by American artists.
- The American style featured loose brush strokes and vivid colors. Artists usually painted outdoors or *en plein air*.
- Some famous American Impressionists include: Mary Cassatt, Theodore Robinson, and Edmund Charles Tarbell.

Landscape

- A work of art that features a view of nature and rural scenery



Seascape

- A work of art that features a view of water (sea, ocean, river, pond, etc.)



Cityscape

- A work of art that features a view of a city or town (usually including buildings and roads)



Portrait

- A work of art that features a depiction of a person or group of people



Lesson #3

Topic: Industrialization, Biography, Civic Engagement

Grade Level: 5

Number of Students: 20 students

Plan Preparers: Therese Killion

Theme/Concept: Mother Jones

Lesson Length: 1 hour

Space: whole group

Standards

Virginia History and Social Science SOLs: USII.3 The student will demonstrate knowledge of how life changed after the Civil War by (b) explaining the reasons for the increase in immigration, growth of cities, new inventions, and challenges arising from this expansion, (d) explaining the rise of big business, the growth of industry, and life on American farms, (e) describing the impact of the Progressive Movement on child labor, working conditions, the rise of organized labor, women's suffrage, and the temperance movement.

English SOLs: 5.8 The student will write for a variety of purposes: to describe, to inform, to entertain, and to explain: (a) Choose planning strategies for various writing purposes (b) organize information (c) demonstrate awareness of intended audience.

Objectives

1. Given a biography on Mother Jones, the students will be able to recall noble aspects of her life. 2. The students will be able to understand and discuss some poor working conditions during industrialization. 3. The students will be able to effectively defend a topic they feel strongly about in writing.

Procedure

Introduction: Use the power point to briefly review industrialization (slides 1-3) and the poor working conditions that occurred during the time period. Introduce the concept of civic responsibility and standing up for another person. Discuss how strikes and marches were one way of voicing an opinion during the time (slides 3-5). Introduce Mother Jones, give her biography, and state what she did for her community. Pass around the pictures of her and her kind acts. Play the song *The Death of Mother Jones* while the students follow along with the lyrics.

Content Focus: Ask questions about Mother Jones' life and how it impacted the workers during industrialization using previously learned concepts. Focus on how she volunteered herself and suffered through punishments to fight for what she believed in. Discuss the pictures and song and how this represents her life. Objective Questions: Where was Mother Jones marching in these pictures? What types of people was she fighting for? What were some of the consequences she faced because she was standing up for people and issues she believed in? Reflective Questions: How would you feel if you were Mother Jones and being punished? How would you feel if you were a worker and had Mother Jones standing up for you? Have you ever stood up for someone who was being treated unfairly? How do you feel when you are treated unfairly? Do you relate more to the workers or Mother Jones in this situation? Interpretive Questions: Why do you think Mother Jones did what she did for people she had never met? How are times different today for workers? How are they different for people voicing their opinions? How do you think Mother Jones felt when she was arrested? What would you do if you wanted to make a change in the world today? Decisional Questions: Do you believe what Mother Jones did was

effective? Did the song accurately portray what she was fighting for and her life? Do you believe the workers appreciated what she was doing for them?

Demonstration and Activity: Discuss with students effective and various ways people state their views today. Ask them to think of one issue they feel strongly about, it can be on a personal or global level. Explain that newspapers are effective ways to voice their opinions and get involved in their opinions. Using the overhead, show them the newspaper template. Using the example of child labor, demonstrate where the newspaper article title would go, where the informative section would go, where a picture would be published (drawn), and where a brief interview would go. The students will each have the template and will write in a few sentences why they feel the way they do about their issue, then they will draw a picture. Next, they will be given five minutes to get with an assigned partner and ask questions about how their partner feels on the topic. Briefly, they should summarize who they interviewed and how he/she felt in the interview column.

Closure: Ask for a few volunteers to share their newspaper articles. Ask questions about why they feel strongly about this, and if they would stand up for it in the community. Assemble all of the newspaper articles into one large book of newspaper articles that they feel strongly about as a class. As a whole, summarize once again how much Mother Jones did for the people suffering during industrialization because that is what she felt strongly about.

Evaluation

Formative: The teacher will monitor student understanding during discussions and also from their newspaper articles. Students should be able to answer questions on who Mother Jones was, what she did, why she did it, and also write about an issue they would fight for.

Summative: Please see attached.

Materials and Resources:

- Mother Jones Information: <http://www.kentlaw.edu/ilhs/majones.htm>
- Mother Jones and Industrialization power point (attached)
- Song purchased from iTunes
- Lyrics of song: <http://members.aol.com/drovics/jonesl.htm>

Background Information

Mother Jones was born in the 1830s and joined the Knights of Labor in the 1870s. She started her reputation organizing and educating about strikes involved with the United Mine Workers and the Socialist Party of America. She became famous for her involvement with the wives and children of striking workers. In 1903, she organized the “Children's Crusade”, a march from Kensington, Pennsylvania to Oyster Bay, New York where President Theodore Roosevelt's home was. This march was especially known for banners that read things such as “We want to go to school!” In 1913, Mother Jones was arrested and eventually released after a huge uproar from the community. She continued to educate and organize strikes along the east coast until she died in 1930.

Key Terms

- strike: a group's refusal to work under a certain condition.
- civic responsibility: the responsibility of a citizen reflected in the actions and attitudes associated with the government and social participation.
- march: a walk which demonstrates people's protest against an issue.

The Death of Mother Jones

Author: Unknown

Performed by:

The world today is mourning
The death of Mother Jones
Grief and sorrow hover
Around the miners' homes
That grand old champion of labor
Has gone to a better land
But the hard-working miners
Miss her guiding hand

Through the hills and over the valleys
In every mining town
Mother Jones was ready to help them
She never let them down
In front with the striking miners
She always could be found
She fought for right and justice
She made a noble stand

With a spirit strong and fearless
She hated that which was wrong
And she never gave up fighting
Until her breath was gone
May the workers all get together
And carry out her plan
And bring back better conditions
For every laboring woman and man

October 2008

(Newspaper Title)



_____ (Author's Name)

(Lead Story Headline)

(Write article here)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Draw picture here:

(Interview Title)

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____



Name: _____

Mother Jones/Industrialization

- During the 1870s, Mother Jones joined the _____
_____ labor movement.
(Answer: Knights of Labor)
- What two types of people did Mother Jones become famous for working with?
(Answer: women and children)
- True or **False**? Mother Jones was arrested and never released from prison?
- Mother Jones marched from Kensington, Pennsylvania to _____
in protest of child labor laws:
 - A) Washington, D.C.
 - B) Boston, Massachusetts
 - **C) Oyster Bay, New York**
 - D) Richmond, VA

Lesson #4

Topic: Inquiry, American Industrialization

Grade Level: 6

Number of Students: 25 students

Plan Preparers Rachel Granata

Theme/Concept: Industr. & Environ.

Lesson Length: multiple days

Space: whole group

Standards: NCSS Global Connections: d. [The student will] explore the *causes, consequences, and possible solutions to persistent, contemporary, and emerging global issues, such as health, security, resource allocation, economic development and environmental quality.*

VA SOL WHII.8 The student will demonstrate knowledge of the effects of the Industrial Revolution during the nineteenth century by

- a) citing scientific, technological, and industrial developments and explaining how they brought about urbanization and social and *environmental changes*;
- d) explaining the *rise of industrial economies* and their link to imperialism and nationalism;

Intended Audience: Heterogeneous sixth grade classroom – approximately 25 students. Students will have previous knowledge of the American Industrial Revolution, but limited exposure to global environmental consequences.

Behavioral Objectives:

1. Provided a video catalyst from National Geographic on the degradation of air quality and the far-reaching effects of industrial pollution, students will discuss in groups their initial reactions and thoughts about the effect of pollution on the environment, with 100% participation.
2. Provided a website with many research and reference sources, students will demonstrate through an “Inquiry Record” their process of formulating and investigating a question of their choice relating to the consequences of industrialization on the environment, with 100% participation.

Materials, Time, and Space:

Materials:

1. This lesson is accompanied by a WikiSpace page, created to provide students with access to the catalyst and additional resources to encourage their individual areas of inquiry. The page is accessible at the following link <http://inquirylesson.wikispaces.com/>.
2. “Inquiry Record” for each student
3. Computers with access to the internet.

Time: Two class sessions of one hour each

Space: Day 1: Students in whole-group for catalyst, small break-out groups for discussion, and at individual seats for developing research questions.

Background Information:

While industrialization has brought many improvements to the quality of life and availability to goods in some parts of the world, it has had extremely detrimental impacts on the environment. Industrialization has brought with it many environmental consequences, such as urbanization, deforestation, pollution, and ozone depletion. Recently developed technology and

detection methods have made us more aware of the breadth and extent of human impact. As “going green” becomes a new fad in the commercial world, students are hearing about the urgent need to reverse some of the damage already done. The resources provided for student-use contain up-to-date issues, discoveries, and implications of industrialization and the environment. Key terms for this lesson include industrialization, pollution, urbanization, environmental degradation.

This lesson presents students with an integrated social studies and environmental science approach to the far-reaching impacts of industrialization on a global-scale. This lesson’s purpose is to encourage students to recognize the environment as a precious and fragile entity that is dramatically impacted by the activities and exploitation of human beings. After provoking students to think about the major issues and concerns that industrialization has caused and providing an opportunity for further research, students experience being an active citizen by writing a letter to their Senator or Representative.

Instructional Strategies:

Day 1:

As a whole-group discussion, the teacher will introduce the lesson by asking students questions such as: How has the environment changed since the onset of industrialization? What has specifically effected the environment in regards to Industrialization? At this rate, how might the environment look in the future? How have humans and their activities affected the environment? What health consequences, for both humans and animals, have occurred? (10 minutes)

As a whole-group, the class will watch the catalyst video Video from: National Geographic “Air: State of the Earth”. (5 minutes)

In small break-out groups, students will discuss their initial reactions to the video and share their ideas for further exploration. (10 minutes)

Independently, students will record a question (relating to the topic and the catalyst video) they will explore based on their interests. (10 minutes)

The teacher will have students write their questions on the board, and then group according to area of interest. (15) These groups will carry over into Day 2.

Predicted Outcomes:

The catalyst video introduces basic concepts about industrial air pollution, the movement of pollution across the planet, the health consequences of pollution, and possible efforts being made towards progress. Based on these general topics, the webpage and resources have been broken down as follows:

Types of Questions Answered	Web Pages
“what”	Air Pollution
	China’s Pollution Problem
“why”	Who’s to Blame?
“impact”	Health Consequences
“how”	Movement of Pollution

“resolution”	Solutions
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Day 2:

In their interest-area groups, students will use a lap-top or a computer in the lap with internet access to conduct their research. Students will use the resources provided on the lesson web page to “jump-start” their pursuit of answering their own questions. Students will continue to fill out their “Inquiry Record” as they conduct their research(40 minutes)

Students will be instructed to “wrap-up” their research portion and ensure their “Inquiry Record” is as complete as possible.

Closure: Have students share what their findings group by group. Have students share the resources consulted. Have students share their new questions generated by the research.

Evaluation

Formative: Were students active participants in their break-out groups? Were students able to generate questions? Were students able to conduct research to answer to their question?

Summative: Students will be assessed through an “Inquiry Record” (modeled after the McEachron model) that will record their initial inquiry and gathered research. Students will respond the following essay question for a homework assignment: Imagine you are writing a letter to your local congressmen about the problem of industrial pollution. Include background information, your concerns, and your suggestions for improving the situation. Be persuasive and site your sources where necessary. Letter format and point allocation attached to be distributed to students. (11 pts total)

Summary of Three Main Sources

Journal Article:

- Weinhold, Bob. “The Global Sweep of Pollution: Satellite Snapshots Capture Long-[Distance Movement.](#)” Environmental Health Perspectives, Vol. 118, No. 8 August 2008.
- Discusses the new science of tracking the pollution of movement and contains the satellite images.

Newspaper Article:

- Kahn, Joseph; Yardley, Jim. “As China Roars, Pollution Reaches Deadly Extremes” The New York Times. August 26, 2007.
- Discusses the China’s recent industrial growth spurt and the consequences involved.

Website:

- “American Lung Association: State of the Air 2008.” American Lung Association. <http://www.lungusa.org/site/c.dvLUK9O0E/b.4091131/>.
- Learn more about the conditions of the air in *your* area by entering your zipcode. Discusses health implications of air pollution.

Wikispace accessible at: <http://inquirylesson.wikispaces.com/>

Page 1: Home

***Lesson #4 - Inquiry
The Effects of Global Industrialization on
Environmental Degradation***

*Group: The Industrial Revolution
Granata, Rachel
Jones, Ariel
Killian, Therese*



Page 2: Catalyst

Catalyst

- "Air: State of the Earth"
 - Video from: National Geographic
 - Url Link [Air: State of the Earth](#)



Page 3: Air Pollution

Air Pollution

- Informational Handout
["Fact Sheet: Types of Air Pollution"](#)
 American Lung Association,
 State of the Air 2008

Internet Link
[Air Pollution Overview](#)
 American Lung Association

Learn more about the conditions of the air in *your* area. Click the link below and type in your zip code.
[American Lung Association: State of the Air](#)



Page 4: Who's to Blame?

Who's to Blame?

- Quote from Catalyst Video Clip: "What this tells us, is that each of us on the planet is polluting the other person's backyard, and we are all connected."

Article: Rich World Seen Behind Global Pollution
 Gardner, Timothy
 October 21, 2008
 Reuters.com

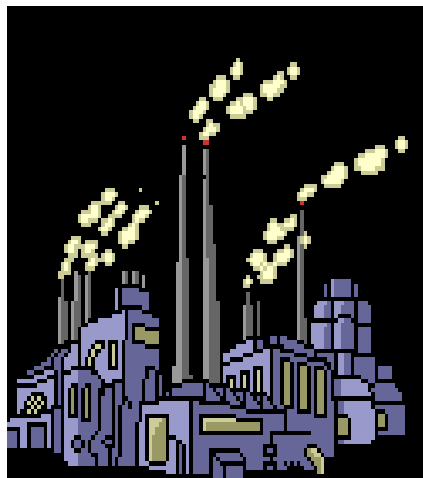
Article "Industry at Any Cost"
 Journal: Down to Earth
 April 15, 2000



Page 4: China's Pollution

China's Pollution

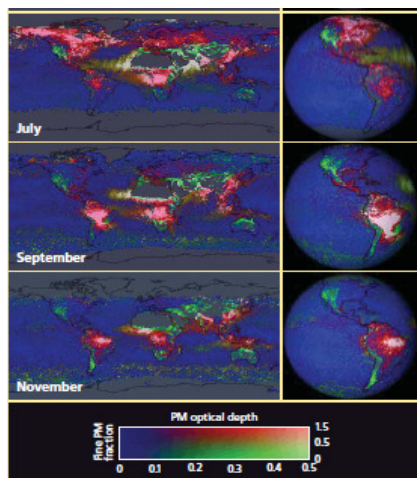
- Online Article,
MotherJones.com
[The Last Empire - China's Pollution Problem Goes Global](#)
Can the world survive China's headlong rush to emulate the American way of life?"
Leslie, Jacques
December 10, 2007
- Article, The New York Times
[As China Roars, Pollution Reaches Deadly Extremes](#)
Kahn,, Joseph; Yardley, Jim
August 26, 2007



Page 5: Pollution Movement on Global Scale

Pollution Movement on Global Scale

- Quote from Catalyst Video
Clip:: "No nation escapes.
North America's pollution
makes it to Europe in just a
few days."
- Journal Article
["The Global Sweep of Pollution: Satellite Snapshots Capture Long-Distance Movement."](#)
Environmental Health
Perspectives, Vol. 118, No. 8
August 2008



Health Consequences

- Quote from Catalyst Video Clip: "...in Mumbai, India, just breathing is the equivalent of smoking two and a half packs of cigarettes a day."

Online Article,
LiveScience
["Pollution May Cause 40% of Global Deaths"](#)
 Thompson, Andrea
 September 10, 2007



Solutions

- Quote from Catalyst Video Clip: "...large-scale change *is* possible."
- United Nations: "The Montreal Protocol on Substances that Deplete the Ozone Layer" The Montreal Protocol was mentioned in the video as an example of progress.
<http://www.unep.org/OZONE/pdfs/Montreal-Protocol2000.pdf>
- National Resources Defense Council: Preventing Industrial Pollution at its Source
<http://www.nrdc.org/water/pollution/msri/msriinx.asp>
- Article: "Information science in sustainable development and de-industrialization" Spink, Amanda (1999) "Information science in sustainable development and de-industrialization." *Information Research*, Vol. 5 No. 1, October 1999
 Available at: <http://informationr.net/ir/5-1/paper65.html>



Name: _____

Global Industrialization and Environmental Degradation
Inquiry Record (McEachron Model)

- I. Record an initial reaction or thought you experienced after watching the video clip “Air: State of the Earth.”
- II. After meeting with your break-out group and discussing the video, record two questions for further exploration.
 - a.
 - b.
- III. Using the resources provided on the website <http://inquirylesson.wikispaces.com/>, research your questions. Record you findings pertinent to each question below.

Question (a)

Source 1:

Source 2:

Source 3:

Question (b)

Source 1:

Source 2:

Source 3:

- IV. What additional questions have formulated based on your research?
 - a.
 - b.
 - c.
- V. Record the time you spent on completing your inquiry quest.

TEMPLATE FOR YOUR LETTER TO YOUR SENATE REPRESENTATIVE:

Heading (1 pt)

Your name

Your address

Date, year

Address (1 pt)

To find out who your senators and representative are, visit
<http://www.congress.org/congressorg/directory/congdir.tt>

To Your Senator:

The Honorable (full name)
(Room #) (Name) Senate Office Building
United States Senate
Washington, DC 20510

To Your Representative:

The Honorable (full name)
(Room #) (Name) House Office Building
United States House of Representatives
Washington, DC 20515

Dear Representative/Senator (last name):

Introduction (2 pts)

- Introduce yourself (who you are, where you are from) (1pt)
- Reveal purpose (1 pt)
 - *This letter is to urge you to...*
 - *I am writing to request that you...*
 - *That reason for this letter is to encourage you to...*

Support (3 pts)

- Give evidence and support for your position (2 pts)
 - *I understand that...*
 - *My information is that...*
 - *It is expected that...*
 - note your sources (1 pt)

Importance (2 pts)

- Share your feelings and concerns on the topic- be persuasive! (2 pts)
 - *I am personally concerned that...*
 - *I strongly feel that...*
 - *It is time that we...*

Closing (1 pt)

- Show your appreciation and respect
 - *I genuinely appreciate the role you play in shaping our country.*
 - *Thank you for all you do as our representative in Washington.*
 - *Thank you for your efforts to make _____ a reality in our lifetime.*

Sign-off (1 pt)

Respectfully or Sincerely,

SIGN HERE

print your name legibly under your signature

Modified from:

<http://usgovinfo.about.com/library/weekly/aa020199.htm>, www.afdop.org/senateLtr_1.doc

Model Student Activity Sheet

Industrialization-Inquiry Lesson #4 Student Model

Global Industrialization and Environmental Degradation Inquiry Record (McEachron Model)

- I. Record an initial reaction or thought you experienced after watching the video clip "Air: State of the Earth."
I am shocked that pollution can travel around the world!
- II. After meeting with your break-out group and discussing the video, record two questions for further exploration.
 - a. How do scientists track pollution movement?
 - b. How much (%) of the world's pollution does China produce?
- III. Using the resources provided on the website <http://inquirylesson.wikispaces.com/>, research your questions. Record your findings pertinent to each question below.

Question (a)

- Source 1: "The Global Sweep of Pollution: Satellite Snapshots Capture Long-Distance Movement."
- Source 2: "The Last Empire - China's Pollution Problem Goes Global"
- Source 3: "National Resources Defense Council: Preventing Industrial Pollution at its Source"

Question (b)

- Source 1: "The Last Empire - China's Pollution Problem Goes Global"
- Source 2: "As China Roars, Pollution Reaches Deadly Extremes"
- Source 3: "Industry at any Cost"

- IV. What additional questions have formulated based on your research?
 - a. What efforts, if any, are being made by the Chinese government to alleviate these pollution issues?
 - b. How can the United Nations hold countries accountable for the pollution they produce?
 - c. What can individuals do to reduce their daily impact?
- V. Record the time you spent on completing your inquiry quest.

One hour

Artifact #1

Industrial Revolution: Artifact #1 – Labor Protest Song Primary Activity

Background Information: “Workingmen, Unite” was first published in the Industrial Workers of the World press in the Industrial Union Bulletin (Oct. 24, 1908) under the headline “Songs Sung by the Industrial Union Singing Club on Their Trip Across Country to Convention.” This song was written by E.S. Nelson, a Swede who was active in the Northwest during the eight-hour day campaign. Labor unions were protesting unfair treatment, wages, hours, and a number of injustices.

Whole Group Activity: The teacher will give a brief lesson on the history of industrialization and labor unions of the time period, comparing and contrasting with present day industrial work. The teacher will give information about and play the sound clip of “Workingmen Unite,” and the students will read along with the lyrics. Teacher can explain what the lyrics of the song are referring to in the context of unfair child labor laws and working conditions.

Individual Activity: Reading through a copy of the lyrics, the student will highlight unfamiliar words, words that stand out to them as very meaningful, or any of their favorite words. They can also look at the pictures of striking laborers to understand the context of the song. They will think about what they like about these words and brainstorm how the people singing this song originally must have felt (i.e.: were they happy or sad). The student should be prepared to discuss and share with other classmates.

Small Group Activity: In groups of 4-5, students will listen to and practice singing the first stanza of the song. They will identify important and effective lines and brainstorm what kinds of issues they would feel that strongly about. They should discuss how the song makes them feel and how they believe the workers of the time felt. Once finished, each group will take a turn and sing the first stanza of the song with music.

References:

-Lyrics attached

-“Red Wing” tune music file: <http://www.users.csbsju.edu/~eknuth/mandotab/redwing.html>

-images of IWW from <http://www.workerseducation.org/crutch/others/dosch.html>

Artifact #1 Assessment – Primary Activities

Which class had more people?

- a. working class
- b. ruling class
- c. upper class

What kind of people were singing this song?

- a. factory workers
- b. factory owners
- c. office workers

What kinds of rights were labor unions fighting for?

Industrial Revolution: Artifact #1 – Labor Protest Song
Intermediate Activity

Background Information: “Workingmen, Unite” was first published in the Industrial Workers of the World press in the Industrial Union Bulletin (Oct. 24, 1908) under the headline “Songs Sung by the Industrial Union Singing Club on Their Trip Across Country to Convention.” This song was written by E.S. Nelson, a Swede who was active in the Northwest during the eight-hour day campaign. Labor unions were protesting unfair treatment, wages, hours, and a number of injustices.

Whole Group Activity: The teacher will give a brief lesson on the history of industrialization and labor unions of the time period, comparing and contrasting with present day industrial work. The teacher will give information about and play the sound clip of “Workingmen Unite,” and the students will read along with the lyrics. After the song, the class will discuss what the song means and how it reflected the feelings of workers in labor unions. They can also connect previous knowledge of industrialization and the song lyrics about the economic conditions to today’s conditions.

Individual Activity: Reading through a copy of the lyrics, the students will highlight which words and/or phrases stand out to them the most. They will think about why these phrases are so meaningful and brainstorm how people singing this song originally must have felt. They can also look at the pictures of striking laborers to understand the context of the song. Students should be prepared to discuss and share with other students. They should relate their thoughts back to their background knowledge about the time period and reflect on why people sung this song.

Small Activity: In groups of 4-5, students will listen to and practice singing the first stanza and chorus of the song. They will identify important and effective lines and brainstorm what kinds of issues they would feel that strongly about. They should discuss how the song makes them feel and how they believe the workers of the time felt. Once finished, each group will take a turn and sing the first stanza and chorus of the song with music.

References:

-Lyrics attached

-“Red Wing” tune music file: <http://www.users.csbsju.edu/~eknuth/mandotab/redwing.html>

-images of IWW from <http://www.workerseducation.org/crutch/others/dosch.html>

Artifact #1 Assessment – Intermediate Activities

Which of the following was not a cause that workers were fighting for?

- a. 10-hour workday
- b. higher wages
- c. fair treatment
- d. freedom from the ruling upper class

Who do you think would sing this song? When and why would they sing it?

What words are used to describe the upper class? Is it a positive or negative description? What evidence in the song supports your idea?

WORKINGMEN, UNITE!*

By E. S. NELSON

(Tune: "Red Wing")

Conditions they are bad,
And some of you are sad;
You cannot see your enemy,
The class that lives in luxury.
You workingmen are poor,—
Will be forevermore,—
As long as you permit the few
To guide your destiny.

Chorus:

Shall we still be slaves and work for wages?
It is outrageous—has been for ages;
This earth by right belongs to toilers,
And not to spoilers of liberty.

The master class is small,
But they have lots of "gall."
When we unite to gain our right,
If they resist we'll use our might;
There is no middle ground,
This fight must be one round,
To victory, for liberty,
Our class is marching on!

Workingmen, unite!
We must put up a fight,
To make us free from slavery
And capitalistic tyranny;
This fight is not in vain,
We've got a world to gain.
Will you be a fool, a capitalist tool?
And serve your enemy?

Members of the I.W.W. rally in New Jersey and Massachusetts



Children strikers march in Massachusetts



Artifact #2

Industrial Revolution: Artifact #2 – Photograph & Excerpt from The Bitter Cry of the Children Primary Activity

Background Information: The book The Bitter Cry of the Children was written in 1906 by John Spargo. Spargo was a type of journalist referred to as a "muckraker" who exposed societal issues in factories and the poor conditions of the workers and child laborers around the turn of the century. The photograph "Juvenile Textile Workers on Strike in Philadelphia" is from a 1903 strike in Pennsylvania of child laborers. The strike was organized by Mother Jones, a prominent figure in the fight to end child labor.

Whole Group Activity: The teacher will give a brief lesson on industrialization and factory life during that period. She will show the picture of the children protesting and read the brief excerpt from the book. The teacher can give an example of a time when she stood up for something she believed in and discuss what it means to protest and potential consequences. The class will discuss the lives of the children in the photographs using questioning similar to Nelson's levels.

Small Group Activity: In groups of 4-5, students will examine and investigate the photograph and discuss their own personal experiences. They can give examples of issues they feel strongly about and make personal connections to the experiences of children in the photo.

Individual Activity: The student will be given materials to make a "picket sign" about an issue they feel strongly about. These boards should represent a mock strike as if they were the children of the time. These posters will be modeled around the room as a representation of how times have changed. The student can write a few words or draw a representative picture.

References:

- Photograph "Juvenile Textile Workers on Strike in Philadelphia" attached
- Autobiography of Mother Jones http://womenshistory.about.com/library/etext/mj/bl_mj01.htm
- Spargo, John. The Bitter Cry of the Children. 1906

Artifact #2 Assessment – Primary Activities

Where did the children in the photograph work?

- a. hospital
- b. textile factory
- c. steel mill

What does it mean to protest?

- a. to not go to school
- b. to oppose something that is unfair
- c. to form a labor union

How would you protest something you thought was unfair?

**Industrial Revolution: Artifact #2 – Photograph & Excerpt from The Bitter Cry of the Children
Intermediate Activity**

Background Information: The book The Bitter Cry of the Children was written in 1906 by John Spargo. Spargo was a type of journalist referred to as a "muckraker" who exposed societal issues in factories and the poor conditions of the workers and child laborers around the turn of the century. The photograph "Juvenile Textile Workers on Strike in Philadelphia" is from a 1903 strike in Pennsylvania of child laborers. The strike was organized by Mother Jones, a prominent figure in the fight to end child labor.

Whole Group Activity: The teacher will give a brief lesson on industrialization and factory life during that period. She will show the picture of the children protesting and read the brief excerpt from the book. The teacher can give other examples of protests and discuss the potential consequences of protests. The class will discuss the photograph in a way similar to Nelson's questioning and decide on an issue they feel strongly about as a class and brainstorm ideas for protesting. They will write up a proposal for the protest (i.e.: where it could be held, who would play a part, etc.).

Small Group Activity: In groups of 4-5 students will examine and investigate the photograph and discuss their own personal experiences. They can make personal connections to the experiences of children in the photo and discuss examples from their lives (such as how they made a difference and how old they were at the time). Have them compare what they know about the time period and make predictions about whether or not they feel the children's efforts were successful; they can write down some comparisons between the factory workers and their own lives.

Individual Activity: The students will each be given materials to make a "picket sign" as if they were children during this time period. These signs should represent a mock strike as if they were the children of the time. These posters will be modeled around the room as a representation of how times have changed. The student can also make a picket sign about an issue relevant to their lives. Each student should be able to explain what their poster means to them.

References:

- Photograph "Juvenile Textile Workers on Strike in Philadelphia" attached
- Autobiography of Mother Jones http://womenshistory.about.com/library/etext/mj/bl_mj01.htm
- Spargo, John. The Bitter Cry of the Children. 1906

Artifact #2 Assessment – Intermediate Activities

Which of the following were causes that the children in the photograph were fighting for?

- a. safe working conditions
- b. shorter workdays
- c. fewer labor unions

Are there any similar causes people were fighting for then that they are fighting for today? How do you think people protest today?

Why do the children in the photograph want to go to school? What could they do with an education that they couldn't do without an education? How would education effect their jobs and living conditions?

Juvenile Textile Workers on Strike in Philadelphia



JUVENILE TEXTILE WORKERS ON STRIKE IN PHILADELPHIA

The Bitter Cry of the Children – pg 147
Spargo, John 1906

From The Bitter Cry of the Children – pg 151
Spargo, John 1906

have ever seen in the South. During the Philadelphia textile workers' strike in 1903, I saw at least a score of children ranging from eight to ten years of age who had been working in the mills prior to the strike. One little girl of nine I saw in the Kensington Labor Lyceum. She had been working for almost a year before the strike began, she said, and careful inquiry proved her story to be true. When "Mother" Mary Jones started with her little "army" of child toilers to march to Oyster Bay, in order that the President of the United States might see for himself some of the little ones who had actually been employed in the mills of Philadelphia, I happened to be engaged in assisting the strikers. For two days I accompanied the little "army" on its march, and thus had an excellent opportunity of studying the children. Amongst them were several from eight to eleven years of age, and I remember one little girl who was not quite eleven telling me with pride that she had "worked two years and never missed a day."

Artifact #3

Industrial Revolution: Artifact #3 – Williamsburg Knitting Mill Company (Williamsburg, Va.) Primary Activity

Background Information: The Williamsburg Knitting Mill Company operated in Williamsburg, Virginia. This payroll book contains the payroll history from 1912-1916. The document is well preserved and shows the actual written records kept by the company, including the names of employees, the tasks they were responsible for, the length of their workday/week, and the amount they were paid for their work. The records show that the Mill employed the new practice of division of labor, which increased productivity.

Whole Group Activity: The teacher will teach a brief lesson on the history of industrialization and the popularity of factories during that time. The lesson will focus on the various jobs that were performed in the factories and the concept that men and women were responsible for performing different jobs. The teacher will show the students the copy of the payroll book and demonstrate how records of workers, jobs, and salaries were kept. The teacher should emphasize the usefulness of factories and the division of labor pertaining to the speed of production.

Small Group Activity: The students will be divided into groups of four and seated in a line representing an assembly line within a factory. Each group will be given a bag full of enough shirt pieces for four completed shirts (cut from the attached template). In the assembly line, one student will glue together the fronts and backs of a paper shirt and hand it to the next student who will glue on the sleeves, the next will glue on the buttons, and the next the pockets. Once finished, the group will have four completed shirts. The students should discuss the different jobs they had and connect that to work in a factory.

Individual Activity: Each student will have one completed shirt from his/her group and will be responsible for decorating and coloring it. The teacher will explain specialization and division of labor and how that pertains to producing a lot of products very quickly. Because a large number of products have to be made, all items have to be the same and there would be little opportunity for unique shirts like the student has created. The students can hang their completed shirts around the room.

References:

-Williamsburg Knitting Mill Company Payroll Book, Manuscripts and Rare Books Department, Swem Library, College of William and Mary

Artifact #3 Assessment – Primary Activities

Which is an example of an assembly line?

- a. one worker making all the parts of a pencil
- b. different workers each making one part of a pencil
- c. machines making all the parts of a pencil

What kinds of jobs did the people in factories have?

**Industrial Revolution: Artifact #3 – Williamsburg Knitting Mill Company (Williamsburg, Va.)
Intermediate Activity**

Background Information: The Williamsburg Knitting Mill Company operated in Williamsburg, Virginia. This payroll book contains the payroll history from 1912-1916. The document is well preserved and shows the actual written records kept by the company, including the names of employees, the tasks they were responsible for, the length of their workday/week, and the amount they were paid for their work. The records show that the Mill employed the new practice of division of labor, which increased productivity.

Whole Group Activity: The teacher will teach a brief lesson on the history of industrialization and the popularity of factories during that time. The lesson will focus on the division of labor that occurred inside factories, as well as the different jobs that male and female workers performed. Using images from the payroll book and sample information charts, the teacher will demonstrate how records of workers, jobs, and salaries were kept. The teacher should discuss the usefulness of division of labor pertaining to production speed and how men and women were paid differently based on production of items.

Individual Activity: The students will each be given a copy of the chart from the payroll book to examine. They will then complete the worksheet (attached). After completion, the teacher will review the questions with the student. Answers should focus on the gender differences pertaining to payroll and jobs in the factory.

Small Group Activity: The students will be divided into groups of four. Half of the groups will form an assembly line and be seated in a line representing an assembly line in a factory. The other groups will have members that work individually. Each group will be given a bag full of pieces, enough to make four shirts. In the assembly line groups, one student will glue together the fronts and backs of a paper shirt and hand it to the next student who will glue on the sleeves, the next will glue on the buttons, and the next the pockets. Students are racing to complete the shirts. When all shirts are finished, the teacher will judge the quality of the products made with each method. The groups will discuss the difference between the two methods of production.

References:

-Williamsburg Knitting Mill Company Payroll Book, Manuscripts and Rare Books Department, Swem Library, College of William and Mary

Artifact #3 Assessment and Worksheet – Intermediate Activities

Name: _____

What is the term for giving specific jobs different workers in a factory?

- a. division of labor
- b. productivity
- c. organization
- d. capitalism

Using the Williamsburg Knitting Mill Company payroll chart, answer the following questions.

- What generalizations can you make between group A and group B?

- Do you notice any differences between the jobs these two groups are performing? List some of the jobs these people held.

- Do you notice any differences in how these people are paid?

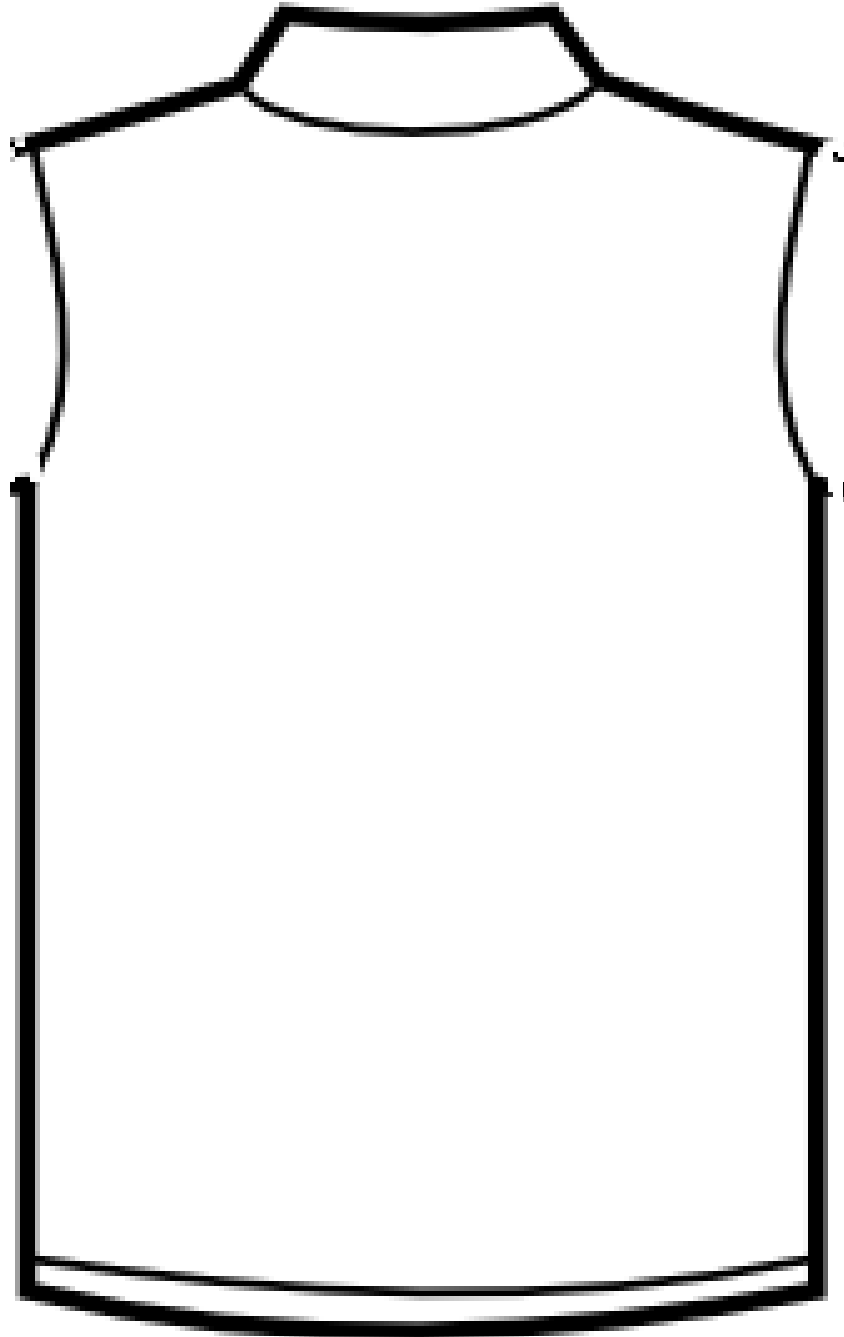
- What do you think the main difference is between the two groups? Why would these people be paid differently?

- Do you believe factories still operate in a similar manner today? Does this system seem fair?

Shirt Template – Front (Primary Activity)



Shirt Template – Back (Primary Activity)



Sample Information from Payroll Book (Intermediate Activity)

Group A.

Name	Job	pieces completed	rate/dozen
Clara	trimming	261	\$0.90
	ornamental	260	\$1.00
	button-stay	555	\$0.40
Edna	stitching	421	\$0.75
Mrs. Taylor	finishing	153	\$0.06

Group B.

Name	Job	Rate per day
C.O. Gray	Carpenter	\$1.50
William	General	\$1.75
Theo	Laborer	\$1.25
W. M. Martin	Folding	\$1.25
Andrew	Boss	\$3.50

WILLIAMSBURG KNITTING MILL CO., WILLIAMSBURG, VA.

No.	NAME	TIME LABOR																FIXED LABOR	DATE PER DAY PER COT.	CURRENT EARNED		EARNING	NET AMT. THIS OPERATION		REMARKS	CUMULATIVE AMOUNT TO DATE	REMARKS	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			Basic Labor	Basic Labor		Basic Labor	Basic Labor				Basic Labor
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			Basic Labor	Basic Labor		Basic Labor	Basic Labor				Basic Labor
✓	Clara J. Gandy																	Knitting	2.61	100			2.61			Knitted and finished		
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"	"																	Knitting	5.55	100			5.55			Knitted and finished		
Edna H. Hatcher																		Knitting	3.31	75						Knitted and finished		
Emma H. Hatcher																		Knitting	5.00	100			5.00			Knitted and finished		
"	"																	Knitting	1.45	75			1.45			Knitted and finished		
"	"																	Knitting	1.44	100			1.44			Knitted and finished		
"	"																	Knitting	1.40	100			1.40			Knitted and finished		
Est. Hatcher																		Knitting	5.40	100			5.40			Knitted and finished		
"	"																	Knitting	1.15	100			1.15			Knitted and finished		
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"	"																	Knitting	1.40	100			1.40			Knitted and finished		
Miss Taylor																		Knitting	1.53	75						Knitted and finished		
Hester J. Gandy																		Knitting	5.35	100			5.35			Knitted and finished		
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Artifact #4

Note: During the creation of this culture kit, we made many attempts to set up and interview with members of the Weissenborn family who are still directly involved in the operations of the General Pencil Factory—including the owner Jim Weissenborn. They reacted very positively to our inquiries and were happy to help provide us with information. As a working company, though, the members of the company we had brief contact with were occupied with the business, mainly traveling to different parts of the country to check on resources used in the manufacturing process. The executives of the company and the company itself are committed to using all-American products and resources, and obviously, we would not want to hinder their operations. We have sent a list of questions to Amy Weissenborn, who we initially contacted via e-mail and are awaiting responses. The artifact activities and questions included here pertain to the questions posed in that e-mail. Also provided is an internet link to and transcript of an interview conducted with Mr. Weissenborn for a segment of the NPR program “Morning Edition,” in which he discusses the difficulties of maintaining their high standards of quality in a globally-competitive market.

NPR Interview

audio: <http://www.npr.org/templates/story/story.php?storyId=4724377>

Profile: General Pencil survives low-cost competition by adapting and changing focus

June 30, 2005 from Morning Edition

RENEE MONTAGNE, host: Time now for business news.

(Soundbite of theme music)

MONTAGNE: There is a great deal of fear about the future of American manufacturing because of lower cost competitors from abroad, which brings up the question: What kind of American manufacturer is doing well these days? NPR's Adam Davidson found one company that's found a way to compete.

ADAM DAVIDSON reporting:

At first glance, it makes no sense at all that **General Pencil** is still in business. They make pencils, a cheap commodity, just the sort of thing the Chinese companies can make for a lot less money. In fact, most US pencil-makers have gone out of business. But **General Pencil** is doing fine. That's what Jim Weissenborn, the company's owner, says as he shows off some old photos at the entrance to his factory in Jersey City, New Jersey.

Mr. JIM WEISSENBORN (Owner, **General Pencil**): We are looking at the great-great grandfather and started the first lead pencil company in Jersey City Heights back in 1864.

DAVIDSON: They're still making pencils much the same way they did a hundred years ago, in the basement of the factory.

(Soundbite of machinery)

Mr. WEISSENBORN: Hang on, we're going down.

DAVIDSON: The basement is just amazing. It's like stepping into the 19th century. This is where they make what most people think is lead, the black graphite sticks in the center of a pencil. It starts with several massive, black, greasy machines. Weissenborn's grandfather bought them in 1910. Each is about the size of a minivan and they spin around.

Mr. WEISSENBORN: These are called ball mills. There's stones in there off the Belgian coast. We put graphite and clay and pulverize them for 24 hours. This is what makes the produce much better. It's not mass-produced.

DAVIDSON: The workers down here use old Weissenborn family recipes, different ratios of clay and graphite for different kinds of pencils. After being pulverized, water is added and the mixture is kneaded like dough in something that looks like an old wine press. The wet graphite paste then goes into a sort of an industrial pasta-maker, which extrudes long, thin pencil leads. They're cut to size, then baked hard in a kiln. The leads are then taken upstairs where they go into wood which is shaped, painted and turned into what we'd recognize as a pencil.

Almost all of the machinery is nearly a hundred years old and the whole process is fascinating, but it also seems a bit crazy to still make pencils this way. It's so inefficient. In China, or in other US companies, new machines make pencils much faster and much cheaper.

By the mid-1990s, the Weissenborns knew they had a problem. Katie Vanoncini is Jim Weissenborn's daughter. She's expected to take over the company.

Ms. KATIE VANONCINI (**General Pencil**): At that point, it was very scary. It would just come up: You know, what kind of future does **General Pencil** have?

DAVIDSON: General's main business was those yellow #2 pencils. They sold them by the tens of thousands to schools and stationery stores. But 10 years ago they started losing market share quickly. A finished Chinese pencil cost less than the Weissenborn's raw materials. Vanoncini was confident their products were better but nobody seemed to care.

Ms. VANONCINI: A lot of the yellow pencils were just a throwaway item, and so it didn't really matter how well they worked. As long as they made some marks for a couple hours for a meeting or something, people would just throw away their yellow pencils.

DAVIDSON: General couldn't keep up. Weissenborn had to fire more than half the staff. There was little hope that the business could survive. Nobody remembers who came up with the idea, but by 1997, the Weissenborns decided to drop their biggest line. They almost completely stopped making those yellow #2 pencils.

(Soundbite of machinery)

DAVIDSON: They realized their century-old techniques produced higher-quality pencils. They just needed to market their products to people who actually cared about quality. They started focusing the business on producing pencils for artists and art students. Now their pencils sell for a dollar each rather than a dollar a dozen. They invested in a machine known as a shaker which sorts pencils to create sets that fit almost any market. A little over a week ago, one customer, an art supply store, told General they were having a hard time selling large pencil sets.

Mr. WEISSENBORN: They wanted a smaller set of the same thing. They wanted some of the graphics changed. They wanted added value put to it. So we put the added value, we changed the packaging, presented it to them, all within a couple of days. And they said, 'Great,' and now it's a finished product. We're packing them right now. We'll take you out on the floor and you'll see this product being finished today.

DAVIDSON: General went from vague idea to finished and shipped product in a week. Weissenborn says that at any one time, he has 30 new products in development.

The **General Pencil** story is a familiar one to US manufacturers faced with stiff competition from abroad. Many American companies facing a crisis find they can survive by transforming a cheap commodity into a custom-made, higher-end good. Some make expensive, fancier soda bottles. Some make a better pencil. They typically ship fewer goods but make a lot more money on the ones they do sell.

Adam Davidson, NPR News.

**Industrial Revolution: Artifact #4 – Interview: General Pencil Factory
Primary Activity**

Background Information: The General Pencil Company opened its factory in New Jersey in 1889, when Oscar Weissenborn began making pencils with the aid of new machinery. The early factory employed many new technologies pioneered during America's Second Industrialization era. The business has remained in operation throughout all of America's major wars, despite being cut off from imported resources in WWI and WWII. The first factory still continues to handcraft its pencils in Jersey City, but the business has expanded to California. Throughout its history, the General Pencil Company never employed child labor and pledges to use only environmentally safe materials in its products.

Small Group Activity: In groups of three to five, students will listen to short excerpts of the interview pertaining to the natural resources that are used in the manufacture of pencils. They will then read through the "How a Pencil is Made" cards (attached) and put them in the correct order. Students can check their answers.

Whole Group Activity: The teacher will give a brief lesson about industrialization and the manufacturing of goods from natural resources. The students will listen to excerpts of the interview and discuss how a pencil is made, what materials it is made from, and what kind of jobs are done in the factory. Students will write and/or draw about the jobs they think people in a pencil factory might do.

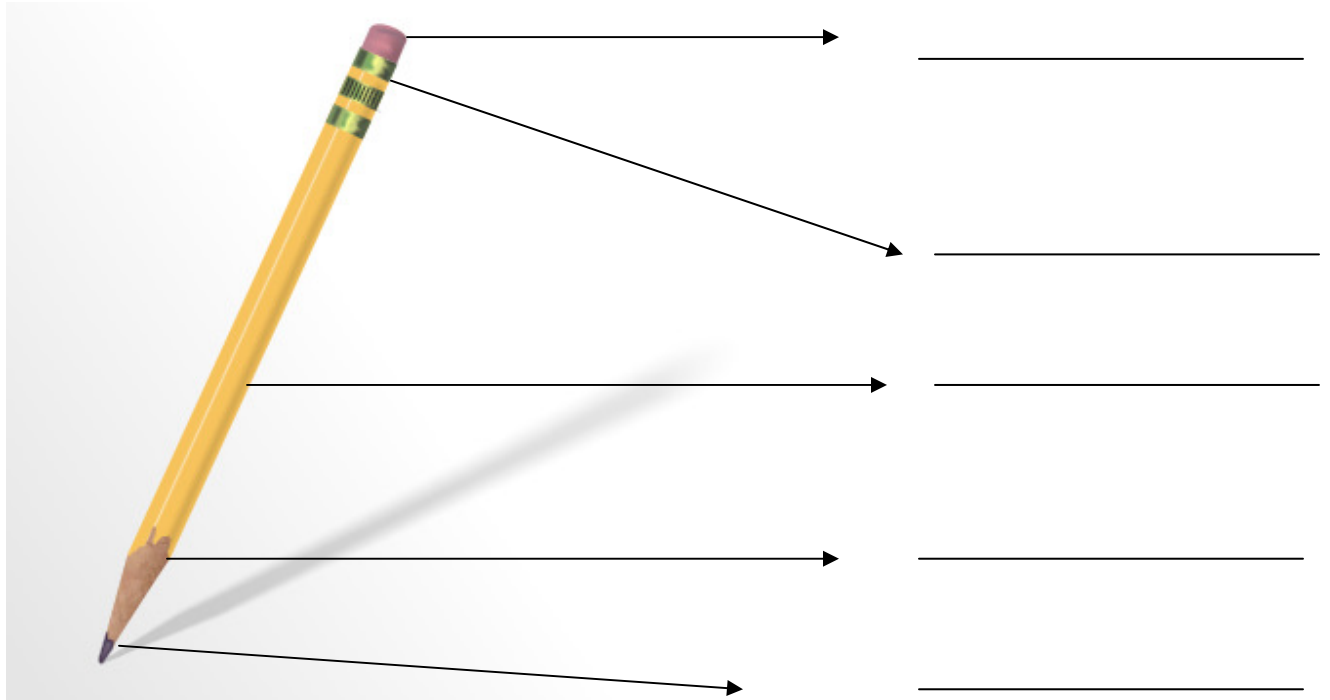
Individual Activity: The student will listen to excerpts of the interview pertaining to the factory, its machinery, and the jobs within it. Students will fill out the "How a Pencil is Made" worksheet and check their answers.

References:

-The General Pencil Company website: <http://www.generalpencil.com/>

Artifact #4 Assessment and Worksheet – Primary Activities

Fill in the parts of the pencil.



<http://site.xara.com/news/october06/img/pencil37.png>

Industrial Revolution: Artifact #4 – Interview: General Pencil Factory
Intermediate Activity

Background Information: The General Pencil Company opened its factory in New Jersey in 1889, when Oscar Weissenborn began making pencils with the aid of new machinery. The early factory employed many new technologies pioneered during America's Second Industrialization era. The business has remained in operation throughout all of America's major wars, despite being cut off from imported resources in WWI and WWII. The first factory still continues to handcraft its pencils in Jersey City, but the business has expanded to California. Throughout its history, the General Pencil Company never employed child labor and pledges to use only environmentally safe materials in its products.

Small Group Activity: In groups of three to five, students will read excerpts of the interview pertaining to the processing of natural resources to manufacture pencils. They will then read through the "How a Pencil is Made" cards (attached) and put them in the correct order. Students can check their answers.

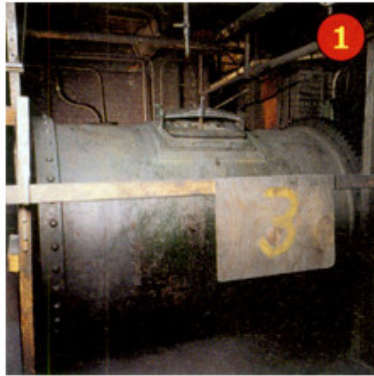
Whole Group Activity: The teacher will teach a brief lesson about industrialization and the importance of factories during that time. The lesson will focus on the different types of jobs and people who worked in the factory, like the class differences between laborers and managers or owners. Together, the class will read through excerpts of the interview and discuss the difference between the manufacturing processes then and now.

Individual Activity: The student will read through excerpts of the interview and answer questions about the manufacturing of a pencil. The student will complete the worksheet "How a Pencil is Made" and hypothesize what, if anything, has changed in the process today.

References:

-The General Pencil Company website: <http://www.generalpencil.com/>

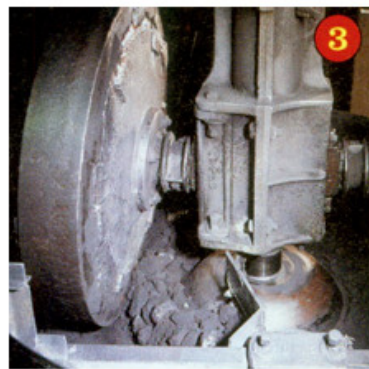
How A Pencil Is Made



Chunks of graphite (a soft, dark mineral) and clay are placed inside a huge rotating drum. Large rocks inside the drum crush the graphite and clay into a fine powder. Then water is added, and the mixture is blended in the drum for up to three days.



A machine squeezes all the water out of the mixture, leaving behind a grey sludge. Here, a worker puts the sludge in a cabinet where it air dries and hardens for four days.



Huge wheels grind the dried sludge into another fine powder, and water is blended in again to make a soft paste.



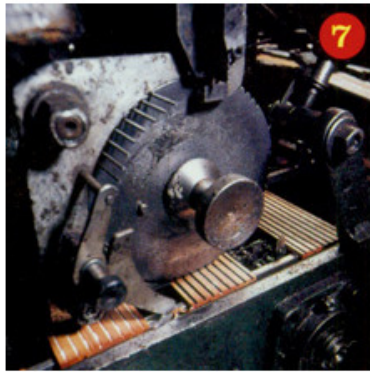
The paste is pushed through a metal tube and comes out in the shape of thin rods. The rods are cut into pencil-length pieces, called leads and sent along a conveyor belt to dry.



After drying, the pencil leads are put into an oven heated to 1,800°F. The intense heat makes the leads smooth and hard, which makes for good writing points.



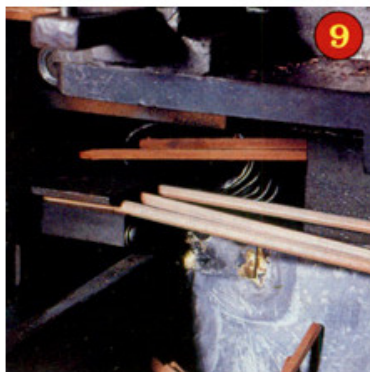
In another part of the factory, the wood is prepared. Machines cut blocks of genuine Incense Cedar wood, a renewable resource, into wide slats. Eight shallow grooves are sawed lengthwise into each slat.



A thin coat of glue is applied to the slats, and one pencil lead is placed into each of the eight grooves. Within seconds, another wide grooved slat is glued on top, sandwiching the leads.



When the glue dries, the slats are fed through a cutting machine. Fast revolving steel blades trim the wood into round or hexagonal, one side at a time.



The same machine cuts apart each slat into eight separate pencils.



The pencils are sanded, and each one receives from five to eight coats of paint.



A heated metal stamp presses the name of the company and a number - such as the number 2 - on the pencil in foil or paint. The number indicates how hard the pencil lead is.



A metal band, called a ferrule, is wrapped tightly around one end of the pencil. It holds the eraser, which is being added here. The pencils are then ready to be sharpened, packaged, and used.

Artifact #4 Assessment – Intermediate Activities

- What do you think are the main differences between the pencil factory today and in the past?
Are the jobs and machinery used the same or have they changed?

- What resources are used in the manufacture of a pencil?

A. wood, rubber, water

B. wood, graphite, metal

C. paint, cotton, graphite

D. metal, paint, dirt



Edward Weissenborn,
Founder American Pencil
Company



The American Pencil
Factory
Original Factory, 1889
Jersey City Heights, NJ

Primary Assessment

How Are Pencils Made?

Instructions: Trace the route on your map and write down the direction you traveled.

1. To go from the forest to the factory, go _____ and then _____.
2. To go from the store to your house, go _____, cross the bridge, and then go _____.
3. To go from the factory to the train station, go _____.

Instructions: Read the questions. Use your map legend to find the right symbol.

1. Which of these is the symbol for the train station?



2. Which of these is the symbol for the place where people buy finished products?



3. Which of these is the symbol for a forest?



Which class had more people?

- d. working class
- e. ruling class
- f. upper class

What kind of people were singing this song?

- d. factory workers
- e. factory owners
- f. office workers

What kinds of rights were labor unions fighting for?

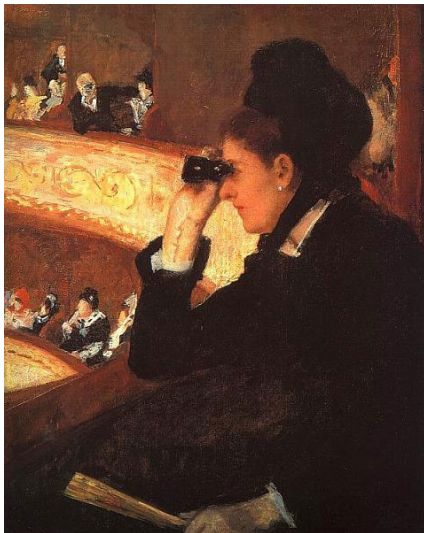
Which of the following pictures was probably created *en plein air*?



B



B



C



D

Which is an example of an assembly line?

- d. one worker making all the parts of a pencil
- e. different workers each making one part of a pencil
- f. machines making all the parts of a pencil

What kinds of jobs did the people in factories have?

Which of the following were causes that the children in the photograph were fighting for?

- d. safe working conditions
- e. shorter workdays
- f. fewer labor unions

Are there any similar causes people were fighting for then that they are fighting for today? How do you think people protest today?

Why do the children in the photograph want to go to school? What could they do with an education that they couldn't do without an education? How would education effect their jobs and living conditions?

Intermediate Assessment

Which of the following was not a cause that workers were fighting for?

- e. 10-hour workday
- f. higher wages
- g. fair treatment
- h. freedom from the ruling upper class

Who do you think would sing this song? When and why would they sing it?

What words are used to describe the upper class? Is it a positive or negative description? What evidence in the song supports your idea?

Mother Jones/Industrialization

- During the 1870s, Mother Jones joined the _____
_____ labor movement.
(Answer: Knights of Labor)
- What two types of people did Mother Jones become famous for working with?
(Answer: women and children)
- True or **False**? Mother Jones was arrested and never released from prison?
- Mother Jones marched from Kensington, Pennsylvania to _____
in protest of child labor laws:
A) Washington, D.C.
B) Boston, Massachusetts
C) Oyster Bay, New York
D) Richmond, VA

Name: _____

Global Industrialization and Environmental Degradation
Inquiry Record (McEachron Model)

- VI. Record an initial reaction or thought you experienced after watching the video clip “Air: State of the Earth.”
- VII. After meeting with your break-out group and discussing the video, record two questions for further exploration.
- a.
- b.
- VIII. Using the resources provided on the website <http://inquirylesson.wikispaces.com/>, research your questions. Record your findings pertinent to each question below.

Question (a)

Source 1:

Source 2:

Source 3:

Question (b)

Source 1:

Source 2:

Source 3:

- IX. What additional questions have formulated based on your research?
- a.
- b.
- c.
- X. Record the time you spent on completing your inquiry quest.

Name: _____

What is the term for giving specific jobs different workers in a factory?

- e. division of labor
- f. productivity
- g. organization
- h. capitalism

Using the Williamsburg Knitting Mill Company payroll chart, answer the following questions.

- What generalizations can you make between group A and group B?

- Do you notice any differences between the jobs these two groups are performing? List some of the jobs these people held.

- Do you notice any differences in how these people are paid?

- What do you think the main difference is between the two groups? Why would these people be paid differently?

Do you believe factories still operate in a similar manner today? Does this system seem fair?

- What do you think are the main differences between the pencil factory today and in the past?
Are the jobs and machinery used the same or have they changed?

- What resources are used in the manufacture of a pencil?

A. wood, rubber, water

B. wood, graphite, metal

C. paint, cotton, graphite

D. metal, paint, dirt

Appendix A: State and National Standards

Virginia Standards of Learning: Social Studies Standards

- 1.1 The student will interpret information presented in picture time lines to show sequence of events and will distinguish between past and present.
- 1.4 The student will develop map skills by
 - a) recognizing basic map symbols, including references to land, water, cities, and roads;
 - b) using cardinal directions on maps;
 - c) identifying the physical shape of the United States and Virginia on maps and globes;
 - d) locating Washington, D.C., the capital of the United States, and Richmond, the capital of Virginia, on a United States map.
- 1.7 The student will explain the difference between goods and services and will describe how people are both buyers and sellers of goods and services.
- 2.3 The student will identify and compare changes in community life over time in terms of buildings, jobs, transportation, and population.
- 2.7 The student will describe the differences between natural resources (water, soil, wood, and coal), human resources (people at work), and capital resources (machines, tools, and buildings).
- 3.6 The student will interpret geographic information from maps, tables, graphs, and charts.
- 3.7 The student will explain how producers use natural resources (water, soil, wood, and coal), human resources (people at work), and capital resources (machines, tools, and buildings) to produce goods and services for consumers.
- VS.1 The student will develop skills for historical and geographical analysis including the ability to
 - a) identify and interpret artifacts and primary and secondary source documents to understand events in history;
 - b) determine cause and effect relationships;
 - c) compare and contrast historical events;
 - d) draw conclusions and make generalizations;
 - e) make connections between past and present;
 - f) interpret ideas and events from different historical perspectives;
 - g) evaluate and discuss issues orally and in writing;
 - h) analyze and interpret maps to explain relationships among landforms, water features, climatic characteristics, and historical events.
- VS.9 The student will demonstrate knowledge of twentieth century Virginia by
 - a) describing the economic and social transition from a rural, agricultural society to a more urban, industrialized society, including the reasons people came to Virginia from other states and countries
- USII.1 The student will develop skills for historical and geographical analysis, including the ability to
 - a) analyze and interpret primary and secondary source documents to increase understanding of events and life in United States history from 1877 to the present;
 - b) make connections between the past and the present;

- c) interpret ideas and events from different historical perspectives;
 - d) evaluate and discuss issues orally and in writing;
 - e) analyze and interpret maps to explain relationships among landforms, water features, climatic characteristics, and historical events;
 - f) interpret patriotic slogans and excerpts from notable speeches and documents.
- USII.2 The student will use maps, globes, photographs, pictures, and tables for
- a) explaining how physical features and climate influenced the movement of people westward;
 - b) explaining relationships among natural resources, transportation, and industrial development after 1877
- USII.3 The student will demonstrate knowledge of how life changed after the Civil War by
- a) explaining the reasons for the increase in immigration, growth of cities, new inventions, and challenges arising from this expansion;
 - b) explaining the rise of big business, the growth of industry, and life on American farms;
 - c) describing the impact of the Progressive Movement on child labor, working conditions, the rise of organized labor, women's suffrage, and the temperance movement.
- USII.5 The student will demonstrate knowledge of the social, economic, and technological changes of the early twentieth century by
- a) explaining how developments in transportation (including the use of the automobile), communication, and rural electrification changed American life;
- CE.1 The student will develop the social studies skills citizenship requires, including the ability to
- a) examine and interpret primary and secondary source documents;
 - b) create and explain maps, diagrams, tables, charts, graphs, and spreadsheets;
 - c) analyze political cartoons, political advertisements, pictures, and other graphic media;
 - d) distinguish between relevant and irrelevant information;
 - e) review information for accuracy, separating fact from opinion;
 - f) identify a problem and recommend solutions;
 - g) select and defend positions in writing, discussion, and debate.
- VUS.8 The student will demonstrate knowledge of how the nation grew and changed from the end of Reconstruction through the early twentieth century by
- a) explaining the relationship among territorial expansion, westward movement of the population, new immigration, growth of cities, and the admission of new states to the Union;
 - b) describing the transformation of the American economy from a primarily agrarian to a modern industrial economy and identifying major inventions that improved life in the United States;
 - c) identifying the impact of the Progressive Movement, including child labor and antitrust laws, the rise of labor unions, and the success of the women's suffrage movement.

National Council for the Social Studies

- II. Time, Continuity, and Change: Social studies programs should include experiences that provide for the study of the ways human beings view themselves in and over time.
- III. People, Places, and Environments: Social studies programs should include experiences that provide for the study of people, places, and environments.
- IV. Individual Development and Identity: Social studies programs should include experiences that provide for the study of individual development and identity.
- V. Individual, Groups, and Institutions: Social studies programs should include experiences that provide for the study of interactions among individuals, groups, and institutions.
- VII. Production, Distribution, and Consumption: Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services.
- VIII. Science, Technology, and Society: Social studies programs should include experiences that provide for the study of interactions among individuals, groups, and institutions.
- X. Civic Ideals and Practices: Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic.

National Visual Arts Standards (K-4)

- 1. Understanding and applying media, techniques, and processes
- 2. Using knowledge of structures and functions
- 3. Choosing and evaluating a range of subject matter, symbols, and ideas
- 4. Understanding the visual arts in relation to history and cultures
- 5. Reflecting upon and assessing the characteristics and merits of their work and the work of others

Appendix B: Sources Consulted

Historical Narrative

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- (2008). "Gilded Age (1878-1889)." *The Library of Congress: America's Story*. 2008. The Library of Congress. Retrieved November 10, 2008 from <http://www.americaslibrary.gov/cgi-bin/page.cgi/jb/gilded>.
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- Dolkart, Andrew (2007). "The Tenement House Act." *Lower East Side Tenement Museum*. Retrieved November 11, 2008 from http://www.tenement.org/features_dolkart.html.
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- Stearns, Peter (1992). "Women in the Industrial Revolution." *Women in the Industrial Revolution*. Retrieved November 11, 2008 from <http://history-world.org/Women%20In%20The%20Industrial%20Revolution.htm>.

Lesson #1

- Boehm, R., Hoone, C., McGowan, T., & et-al. (2003). *Harcourt Horizons: About My World* (Teacher's ed.) Harcourt School Publisher.

Lesson #2

- <http://www.nga.gov/collection/gallery/gg70/gg70-main1.html>
- all images from <http://www.shorpy.com>, <http://www.wikipedia.org>, and <http://www.nga.gov/collection/gallery/gg70/gg70-main1.html>

Lesson #3

- Mother Jones Information: <http://www.kentlaw.edu/ilhs/majones.htm>
- Lyrics of song: <http://members.aol.com/drovics/jonesl.htm>

Lesson #4

- Weinhold, Bob. "The Global Sweep of Pollution: Satellite Snapshots Capture Long-[Distance Movement](#)." *Environmental Health Perspectives*, Vol. 118, No. 8 August 2008.

- Kahn, Joseph; Yardley, Jim. “As China Roars, Pollution Reaches Deadly Extremes” The New York Times. August 26, 2007.
- “American Lung Association: State of the Air 2008.” American Lung Association.
<http://www.lungusa.org/site/c.dvLUK9O0E/b.4091131/>.
- <http://inquirylesson.wikispaces.com/>.

Artifact #1

- “Red Wing” song music file: <http://www.users.csbsju.edu/~eknuth/mandotab/redwing.html>.
- images of IWW from <http://www.workerseducation.org/crutch/others/dosch.html>.

Artifact #2

- Spago, John. *The Bitter Cry of Children*. 1906.
- autobiography of Mother Jones from
http://womenshistory.about.com/library/etext/mj/bl_mj01.htm.

Artifact #3

- Williamsburg Knitting Mill Company Payroll Book, Manuscripts and Rare Books Department, Swem Library, College of William and Mary

Artifact #4

- NPR “Morning Edition” interview from:
<http://www.npr.org/templates/story/story.php?storyId=4724377>
- The General Pencil Factory information and “How a Pencil is Made” cards from
<http://www.generalpencil.com/index.htm>
- parts of a pencil worksheet from <http://site.xara.com/news/october06/img/pencil37.png>