Lesson 1 (days 1, 2, 3)

Title: Changes in Cities from 1850 to 1909.

Objectives: Students will:
1) Gain an understanding of what is meant by industrialization and growth
2) Become familiar with the Library of Congress website as a source of historical knowledge
3) Examine primary documents (maps, lithographs, panoramic pictures, photos, and early films) and identify the type, date, and purpose for which the document was made
4) Identify major changes in US cities in the types of transportation used, the population, and the buildings and industries observed during the period from 1850 to 1909 by examining maps, lithographs, and panoramic pictures of San Francisco, Los Angeles, Chicago, New York, and Alexandria.
5) Develop questions about how and why these changes took place.

Materials:
Overhead projector, poster paper cut in 3” wide strips, markers, map of U.S. and South America
Class computer lab with internet capability, TV with hook-up to computer of LDC projector for computer screen
City Analysis Worksheet (link)
City Report Worksheet (link)
Maud Maxson’s letter Letter from Maud Maxson to her mother, Mrs. Arthur L. Maxson.
List of city links for reproduction Library of Congress American Memory Home Page

Student Research Sites
Group I: New York City, New York
New York City 1776
1856 color lithograph of NYC
New York City 1876
New York City 1882
New York Waterfront 1909, 1903, Elevated railroad, New York, 1903, Skyscrapers of New York City, from the North River

Group II: Los Angeles, California
Map of Los Angeles, 1871
Birds eye view of Los Angeles, 1877
View of Los Angeles from the east, 1877, Brooklyn Heights in the foreground; Pacific Ocean and Santa Monica Mountains in the background.
Los Angeles, 1888
Los Angeles, Cal., population of city and environs 65,000, 1891
South Spring Street, Los Angeles, California, 190??
Building a Harbor in San Pedro, Los Angeles 1909,
Group III: Chicago, Illinois

The City of Chicago, 1892
Bird's-eye-view of Chicago as it was before the great fire, 1871.
Rascher's birds eye view of the Chicago packing houses, 1890
Bird's eye view of the World's Columbian Exposition, Chicago, 1893.
Chicago, central business section, 1916
Chicago Stock Yards, 1897 (film)

Extra credit: http://www.chicagohistory.org/mychicago/index.html

Group IV: Alexandria Virginia

George Washington's survey of the site of Belhaven (Alexandria)
Washington's Plan of Alexandria, 1749
Birds eye view of Alexandria, Va., 1863
District of Columbia and Alexandria, the seat of war, 1863
Fairfax County Soil Types, 1877
Atlas of fifteen miles around Washington, including Alexandria, 1879
Coolidge at Alexandria, 1923

Days 1 & 2

Objectives: Students will:
1. Examine primary source maps, photographs, and early films of San Francisco with their teacher and practice completing a City Analysis Worksheet for several sources.
2. Use their computer and the list of web links for their assigned city (NY, Los Angeles, Chicago or Alexandria) to describe the transportation, people and population, location, and buildings and industries for several sources.

Strategies

1. Preparation:
   a. Before the class make transparencies and copies for a class set of Maud Maxson’s letter Letter from Maud Maxson to her mother, Mrs. Arthur L. Maxson.
   b. Copy the City Analysis Worksheet (link) and the City Report Worksheet (link) for students.
   c. Sign up for the computers.
   d. Cut strips of poster paper 3” x 24” so you have 1 per student.
   e. Preview the Library of Congress American Memory, Library of Congress American Memory Home Page, website to familiarize yourself with the homepage and search protocols. Preview the San Francisco links below.
   f. Copy the city links into a folder accessible by students on their computers. (If you cannot do this, the students will have to search the Library of Congress American Memory website to locate appropriate documents. This is less efficient, but still a great learning experience for the students. Hints: Have students use the gallery view to easily identify good sources. Limit search first to maps, then to prints and photographs, then to Early Films. Be sure students check for appropriate dates.)
2. **Hook:** as students enter the classroom assign the following warm-up exercise; ask students to complete the journal entry written on the board (students have been keeping a journal since the beginning of the year and are familiar with this type of imaginative exercise). The goal of this exercise is not to display prior knowledge although some students will have a great grasp of the era and enjoy writing using it. The goal is to get the students to connect current knowledge to the situation of someone their age in the 19th century.

Journal entry: Imagine you are traveling by ship to Los Angeles with your Uncle and Aunt. Write a letter home to your parents. You might describe what you do to occupy your time, what you miss at home, what chores you have to do, and what problems you face on your journey.

3. Discuss and share what the students wrote

4. Project the letter written by Maud Maxson to her mother in 1870. **Letter from Maud Maxson to her mother, Mrs. Arthur L. Maxson** and discuss it, explaining terms as necessary. Examine the class map and trace the route around the horn Maud took. Where did she land? How old do you think Maud is? How was she traveling? Why might she have gone? Where did they land do you think? What tells you it was probably San Francisco? Why was the dress so expensive? Why was the letter written in installments? How long did the trip last? (At least 2 months each way) Could she have taken the train in 1870? (Yes)
Dear Susan,

I am going to make the garden.

Uncle Charlie is having the ship painted now. He wants it done before we leave.

We went to the game yesterday. It was very exciting. We played against the new team from the city.

I hope you are having a good time. I will write more soon.

With love,

Your friend,

[No visible text on the right page]
5. Now it is time to show the students how to use their computers using San Francisco as an example. Hand out the City Analysis Worksheets for students to record their observations. Stress the need to record the correct date for each document recorded. Show them on the overhead how they can circle the document type. Project pictures of early San Francisco from the links below.

(If the school does not have the technology to allow them to access city links directly, their observations will sort naturally if they request only maps or selections from the panorama collection first, then move on to prints and photographs and conclude with a selections from the Early films collection. Request a search for “San Francisco Harbor” through all collections at Library of Congress American Memory Home Page, I have added the dates after the titles to aid in giving the students a good idea of the chronology.)

View of San Francisco, 1846 before the discovery of gold,
San Francisco Harbor, 1850;
San Francisco Rooftops, 1851,
San Francisco in 1855;
San Francisco Bird’s-eye view, 1864;
Dupont Street San Francisco, 1870,
San Francisco Harbor, 1890, San Francisco and harbor from Nob Hill, 1902.
US Fleet in San Francisco Harbor 1908.
6. Show several of these links and discuss them with the class. Demonstrate for the students how to use the “zoom” feature on the Library of Congress map viewer. They can zoom in to reveal a great deal of detail. Show them how to zoom out and relocate their view. (You will have practiced this before the lesson of course.) Ask the students to think about the following questions as they record their observations:
   - Were all cities like this in the 1850’s to 1900’s?
   - What would account for the differences in development?
   - What is the impact of climate? Of natural resources?
   - What role did water have on the development of the city?

7. Discuss what can be deduced from maps about transportation, people, technology, etc. from each type of source, demonstrating how to record the observation on the worksheet. Record several observations about San Francisco with the students. Tell the class that for the rest of today and tomorrow they will be working in groups to identify the changes over time in several major U.S. cities in the years between 1850 and 1920 by looking at maps, old photographs, and early films. If they are not linking directly to the sources on the City List, point out the search categories for the students and show them how to select “Gallery View” to more quickly sort through sources. Remind the students that these sources are primary documentation and they will have to use very careful powers of observation and analysis to use them effectively. Have the students work in pairs. Assign each pair one of the cities to research. Assign each student in the pair 2 categories to focus on. For example, Student A might focus on recording observations about Transportation and People, while Student B in the pair would record observations about the location of the city and the buildings and industries.

Student City Research Sites

Group I: New York City, New York
- New York City 1776
- 1856 color lithograph of NYC
- New York City 1876
- New York City 1882
- New York Waterfront 1909
- 1903, Elevated railroad, New York
- 1903, Skyscrapers of New York City, from the North River

Group II: Los Angeles, California
- Map of Los Angeles, 1871
- Birds eye view of Los Angeles, 1877
- View of Los Angeles from the east, 1877, Brooklyn Heights in the foreground; Pacific Ocean and Santa Monica Mountains in the background.
- Los Angeles, 1888
- Los Angeles, Cal., population of city and environs 65,000, 1891
- South Spring Street, Los Angeles, California, 190??
- Building a Harbor in San Pedro, Los Angeles 1909
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The City of Chicago, 1892
Bird's-eye-view of Chicago as it was before the great fire, 1871.
 Rascher's birds eye view of the Chicago packing houses, 1890
Bird's eye view of the World's Columbian Exposition, Chicago, 1893.
Chicago, central business section, 1916
Chicago Stock Yards, 1897 (film)

Extra credit: http://www.chicagohistory.org/mychicago/index.html

Group IV: Alexandria Virginia

George Washington's survey of the site of Belhaven (Alexandria)
Washington's Plan of Alexandria, 1749
Birds eye view of Alexandria, Va., 1863
District of Columbia and Alexandria, the seat of war, 1863
Fairfax County Soil Types, 1877
Atlas of fifteen miles around Washington, including Alexandria, 1879
Coolidge at Alexandria, 1923

8. Supervise students as they search the sites and take notes (the sites are in chronological order)

9. Students will continue to practice using primary sources and the Library of Congress website, and be able to locate specific documents, select areas of the documents to view (zooming in as appropriate), and return to the document list page.

10. Students will continue their web searches and complete their city worksheets. Be sure they have at least one entry for each time period. This will be used to report to the class and produce a set of class questions on the factors influencing the development of cities.

Wrap-up: Ask them to write 2 questions each about what they observed about the changes in cities. For example, when did cars first appear? Who invented the car?

Day 3

Objectives: Students will:
1. Explain the changes in the cities and speculate on the reasons
2. Evaluate the changes in buildings, transportation, population and industries shown in the maps and develop questions to be answered in future lessons about how these changes took place.

Strategies:
Group Reports, questions and discussions.

1. (Journal Entry) Would you rather live in the city or the country? Why? Go over the warm-up and discuss as a class. By now the students will have realized that cities grew dramatically during the period in question. Do they think people liked living in these cities? Did some people move there from the farms? Why? What problems that students identify as being part of city life today (pollution, crime) might have been problems at the turn of the century?

2. Hand out the City Report Worksheet (link) to each student. Have them use their notes on the City Analysis Worksheet to record general changes over time for their city. Tell them each student must write 2 questions at the bottom of their sheet about how and why cities changed.

3. Have each pair of students report on their city. Fill out a copy of the worksheet on the overhead taking input as to changes from each group. Discuss differences of opinion between groups and ask students to tell the class what led them to their conclusion (for example, ships at anchor in Alexandria had masts, not funnels.) In general, findings should be that over time cities grew larger, buildings grew taller, and transportation changed from horse and buggy to steam ship, trolley, and rail. Students should supplement their report with the findings of other students as the reports are synthesized for the class on the overhead.

Wrap-up:
1. After the groups report, ask the students for the questions they want answered about how the changes they saw took place. For example, how and why did skyscrapers begin to be built? When did sails give way to steam power in shipping? How were railroads and these large (teach the word infrastructure) changes in cities financed? Who provided the labor? What was the impact on the environment? What inventions fueled this change? When did electric power replace steam power?

2. Make a list on the overhead as the students give their questions so there is little or no duplication. Put the student’s initials by the question as you record so that the students will know which question they are responsible for copying onto the poster paper strip.

3. Pass out the strips of poster paper and markers. Have each student record a different question in large print on the paper strip. Tape some of the questions from each class up in the room. Post others in the hall. The next part of the unit will use these questions to guide the class’s investigation into the connections between immigration, inventions and changes in transportation, communication, manufacturing, and construction, financing, and marketing.

Assessment: Students will be assessed according to the following rubrics.

Worksheet A: Each site visited = 25 points.
- Web address 5pts
- Document date 2pts
- Document description 3pts
- City description 15pts
The group report will be assessed according to the following rubric.

- Student contributed to the report and presented their findings: 30pts
- Student had meaningful comments about the changes in his city: 30pts
- Student developed questions for further study based on their research: 30pts
- Did they have time to research other sources for their city?: 10pts.

**Differentiation:** City groups should be organized in mixed ability groups. Transportation and buildings are the easiest topics and should be given to students with academic difficulties. Students with greater ability should be encouraged to visit the websites given and then pursue research for other interesting informative photos.

**Lesson 2 (1 day)**

**Title:** Immigration

**Objective:** The student will explain the reasons for increased immigration and how immigration helped cities and industries grow.

**Materials:**
- **Supplies**
  - Sample passport,
  - Computers for class or method of projecting web site for class viewing (TV or LCD projector)
  - Paper for cartoons,
- **Student Resources**
  - Immigration picture book (see bibliography for list of books),
  - Cartoon Assignment (link)
  - Differentiated Cartoon Assignment (link)
  - Class set of Immigration Notes Graphic Organizer (link)
  - Class set of cartoon worksheet (link)
- **Websites**
  - Immigrants Arriving at Ellis Island
  - Chinatown, 1903, Chinese railworkers, Immigration Examination Room, Angel Island
  - Library of Congress Learning Page on Immigration

**Warm-up** (Journal Entry) Show the students a passport (or picture of one). Ask them to tell you what it is and why it is important. What would make them willing to leave family, friends and home comforts?

**Strategies:**
1. (Hook) Read class a short storybook about immigration such as Grandfather’s Journey by Allen Say or When Jesse Came Across the Sea by Amy Hest.


3. Have students draw a graphic organizer and complete it as a class, using their text and the web sites below as a resource.

### Immigration

<table>
<thead>
<tr>
<th>Who</th>
<th>When</th>
<th>How</th>
<th>To</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irish</td>
<td></td>
<td></td>
<td></td>
<td>Wealth</td>
</tr>
<tr>
<td>Italian</td>
<td></td>
<td></td>
<td></td>
<td>Gold</td>
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<tr>
<td>China</td>
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<td></td>
<td></td>
<td>Land</td>
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<td>Adventure</td>
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<td>Freedom from</td>
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<td></td>
<td>oppression</td>
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<td>Governments</td>
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<td></td>
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<td></td>
<td>Freedom of</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>religion</td>
</tr>
</tbody>
</table>

4. Discuss what immigrants did once they arrived. What conditions and prejudices might they have faced? Many found work in the sweat shops and factories of the new industrial cities. Others homesteaded. Others went West to search for gold. Reinforce this part of the answer to the unit’s central question by having the students copy it at the bottom of their notes.

**Immigrants provided the labor force (people) necessary for the cities and industry to grow**

5. Some great resources to teach this lesson are: Edison’s early film Immigrants Arriving at Ellis Island. You may supplement this film clip with photos of the Angel Island Processing Center in California: Chinatown, 1903, Chinese railworkers, Immigration Examination Room, Angel Island (There are many other interesting photos in this collection of the Hart Hyatt North papers too.) If the class has more time to spend on immigration, access the Library of Congress Learning Page website on immigration Library of Congress Learning Page on Immigration which traces the immigration of many different ethnic groups. Have students research different groups and report to the class. They could put their report notes in a Passport for someone from a chosen (or assigned) ethnic group.

**Assessment (independent practice):** Have students draw a cartoon which represents
immigration.

1. Draw a simple map outline of the United States in the center. Draw 4 people’s heads around the map. Label each head a different reason people came (opportunity, adventure, freedom from oppressive governments, freedom of religion)
2. Draw arrows from the people to the major cities they came to (New York, Chicago, San Francisco, LA)
3. Draw a bubble and write a statement for each person in the cartoon bubble which explains why they came. For example: I came to work on the railroads.
4. Draw facial features and clothing which indicates the country of origin.

Grading:  
D – Cartoon incomplete steps 1 and 2 or less completed  
C – Cartoon incomplete steps 1, 2, and 3 completed  
B – Cartoon complete steps 1,2,3, and 4  
A – Cartoon complete

Wrap-up: Ask the class what questions that had been posed the day before have been answered by today’s work. Have the students write the questions and answers at the bottom of their notes.

Differentiation: Print out graphic organizers for immigration notes. Copy and print cartoon
map and heads. Make a sample cartoon and instructions and pass out to students needing it or display on the overhead.

Lesson 3 (1 day)

Title: Inventions

Objective: Students will examine how new inventions, advertising and methods of productions led to the growth of industry and cities

Materials:
Computers for students and teacher capable of accessing and displaying video from web sources.
Overhead projector.
Class set of terms worksheets (optional) (link).
Class set of graphic organizers for invention notes (link).
Scrap paper
Invention Notes (link)
Patent statistics: US Patent office report of patents issued 1790 to present (link for pdf file of these same statistics.)
Patent Data Worksheet (link)
Ad for a glass telephone mouthpiece
Children’s books on inventions and how things work
New York Skyscrapers
  Brooklyn Bridge
  New York Elevated Railway
  Girls taking time checks, Westinghouse factory
  Panoramic View Aisle B Westinghouse Factory
  Coil Winding Machines

Strategies

1. Warm-up: Define the following terms: Invention, Patent, Technology, Mass Production

Note: I like to have my students use the following format whenever we define terms:

<table>
<thead>
<tr>
<th>Illustration</th>
<th>Term</th>
<th>Definition</th>
<th>When</th>
<th>So What</th>
</tr>
</thead>
<tbody>
<tr>
<td>(students draw a small picture here to help them visualize the term)</td>
<td>Mass Production</td>
<td>Process of making large quantities of a product quickly and cheaply</td>
<td>1880’s to Present</td>
<td>Industry was able to grow quickly at the turn of the century</td>
</tr>
</tbody>
</table>

2. Hook: Display the following Ad. Ad for a glass telephone mouthpiece
3. Discuss it as a class. How is this ad different from today’s ads? How is it the same? Go over the definitions for the warm-up and tell the class that today they will be looking at how new inventions, new methods of production and advertising led to the growth of industries and cities in the US.

4. Examine the following links. How are the buildings so tall? What are the bridges made of? What powers the train? Who are the employees? Why are they employing women? Why were they taking films of the factory? What are they making? What are most of the big machines? What are they made of? Look at other films from the Westinghouse collection if you have time.

   - New York Skyscrapers
   - Brooklyn Bridge
   - New York Elevated Railway
   - Girls taking time checks, Westinghouse factory
   - Panoramic View Aisle B Westinghouse Factory
   - Coil Winding Machines

5. As you discuss the scenes in the films, explain and connect the terms they defined with the new inventions and technologies of this time period. Inventions to cover: Electricity Thomas Edison and George Westinghouse, The telephone – Alexander Bell, Bessemer Steel Process.

6. Have the students make a graphic organizer and write notes on these inventions. You can of course add your own favorites to these notes and some of the students’ ideas.

7. Introduce the culminating project for the unit: a timeline of inventions and their significance and point out the books you have placed on display. Encourage the students to examine these when they have time.
<table>
<thead>
<tr>
<th>Invention</th>
<th>Inventor</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>Thomas Edison</td>
<td>Electric Light – Longer work hours, safer lighting</td>
</tr>
<tr>
<td>Power Plant</td>
<td>Thomas Edison and George Westinghouse</td>
<td>Electric Power – Cheaper, safer power power transmission</td>
</tr>
<tr>
<td>Telephone</td>
<td>Alexander Bell</td>
<td>Fast long distance communication</td>
</tr>
<tr>
<td>Steel</td>
<td>Henry Bessemer</td>
<td>Cheap, readily available steel, skyscrapers, bridges, railroads, trolleys, subways</td>
</tr>
</tbody>
</table>

**Wrap-up:** Make a list of the things in the classroom that use electricity. How would the room look different if we did not have electric power? What questions from lesson 3 have been answered today? Have the students write these questions and the answers in their journals.

**Assessment:** Exit ticket quiz. Put the following questions on the overhead. Have students write their answers on a small piece of paper. Then ask each student one of the questions as they leave the room. They should answer and hand you their paper. If they are wrong, have them repeat the query and the prompt three times orally.

1. What inventor and invention made communication faster and cheaper? (Bell/telephone)
2. What inventor and invention made skyscrapers possible? (Bessemer/steel)
3. What inventor and invention made electricity possible? (Edison/electricity)

**Homework:** Have students make a line graph of patents issued between 1875 and 1910 at 5 year intervals (link).

**Differentiation:** Provide graphic organizer for notes. Can be pre-printed to fill in blanks for students with dysgraphia. Provide a worksheet for patent information where the date is abstracted from the Patent Office Data.

**Lesson 4 (1 day)**

**Title:** Railroads

**Objectives:** Students will understand how railroads brought raw materials to factories and industries and then carried the finished goods to market creating national markets and a rapidly growing economy.

**Materials:**

Supplies
Boxed baking materials, 
Tray, yarn, play or monopoly money, 
Index cards for Simulation Role Cards for each student, Industrialization 
VCR

Student Resources
Timeline Project Instructions (link) 
Rubric for Timeline Projects (link) 
Children’s books of inventions and how they work placed on display around the room 
Sample Timeline (link) 
Instructions for optional assignment (Newspaper Project as an alternative to the timeline) for more advanced students (link) 
Rubric for Newspaper Project (link)

Strategies

Warm-up: Students should define the following terms: natural resource, raw material, gauge, dining car, air-brake

1. Hook – Have a tray with a bag of flour, a pound of butter, a bag of sugar, some eggs, baking powder and vanilla at the front of the room. Discuss with the class what these raw materials might be good for. Where did they come from? How did they get to the classroom? How would they have been produced and collected for the room in 1765? What was different after the completion of the railroad networks and transcontinental railroad in 1869?

2. Show a film and/or read about the completion of the railroads in your class text. Go over the vocabulary. Tell the students they are now going to “act out” the railroads.

3. Have students “construct” a railroad network in the classroom.
   a. Give each student $2000 in monopoly money.
   b. Some desks are mills, (give these students 5 index cards for each product they make which lists what they make and 5 index cards for each of the 2 or 3 raw materials they need (see chart below). Have students write the product and price on the card. (These cards will be exchanged to the purchaser at the time of payment and sale to represent the goods. Each car load of raw material costs $10.)
   c. Some students are factories (give these students a list of the factory goods they make and sell and 5 index cards on which to write each car load of products as they produce it and sell it (they cannot produce their product until they have purchased the raw materials from the mills and a railroad has been built to their factory.) Each car load of finished goods costs $400.
   d. Some students are the trains, everywhere they need to go, there must be a piece of yarn railroad. They will charge $50 per car load. Give these students 10 index cards on which to write their trips.
   e. Some students are railroad builders, they build the yarn railroads and collect monopoly money fees of $50 per line (from one desk to another) of “railroad” built.
   f. One student is the store. Give this student $10,000. Builders, factory owners, and railroads will soon have all the money and the experiment is over.
2. Discuss the exercise with the class. Who paid to build the railroads? Why? Where would the stores get more money? What would have happened if the railroads were different widths (2 colors of yarn)? Did railway builders cooperate or compete? (Our exercise had no consumers. Where would consumers get their money?) Below is a sample chart of factories and goods.

<table>
<thead>
<tr>
<th>Raw Material</th>
<th>Factory</th>
<th>General Store</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel Mill</td>
<td>Shoes</td>
<td></td>
</tr>
<tr>
<td>Iron ore $10</td>
<td>Leather $50</td>
<td>Shoes $400</td>
</tr>
<tr>
<td>Coal $10</td>
<td>Thread $50</td>
<td>Shoes $400</td>
</tr>
<tr>
<td></td>
<td>Nails $50</td>
<td>Shoes $800</td>
</tr>
<tr>
<td></td>
<td>Screws $50</td>
<td></td>
</tr>
<tr>
<td>Lumber Mill</td>
<td>Coats</td>
<td></td>
</tr>
<tr>
<td>Oak, Cherry, Pine</td>
<td>Wool $50</td>
<td>Coats $400</td>
</tr>
<tr>
<td>Coal $10</td>
<td>Buttons $50</td>
<td>Coats $800</td>
</tr>
<tr>
<td></td>
<td>Gun Stocks $50,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Furniture Woods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$50</td>
<td></td>
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<tr>
<td>Woolen Mill</td>
<td>Guns</td>
<td></td>
</tr>
<tr>
<td>Wool $10</td>
<td>Steel $50</td>
<td>Rifles $400</td>
</tr>
<tr>
<td>Coal $10</td>
<td>Gun Stock $50</td>
<td>Rifles $800</td>
</tr>
<tr>
<td></td>
<td>Fabric $50</td>
<td></td>
</tr>
<tr>
<td>Tannery</td>
<td>Furniture</td>
<td></td>
</tr>
<tr>
<td>Hides $10</td>
<td>Leather $50</td>
<td>Chairs $400</td>
</tr>
<tr>
<td>Coal $10</td>
<td>Leather $20</td>
<td>Chairs $800</td>
</tr>
<tr>
<td></td>
<td>Fabric $50</td>
<td></td>
</tr>
</tbody>
</table>
Nails $50
Wood $50

<table>
<thead>
<tr>
<th>Raw Material</th>
<th>Railroad Builder</th>
<th>Railroad Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal Mine Worker $1</td>
<td>Coal $10</td>
<td>$50 per car load</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$50 per connection</td>
</tr>
</tbody>
</table>

**Wrap-up:** Discuss and collect patent homework for grading. Ask class what questions from lesson 3 were answered today. Have the students enter these questions and answers in their journals.

**Homework:** Begin culminating project (an Invention Timeline). Hand out instructions and rubric (link). Point out the books which you have placed around the class illustrating various inventions and giving information about inventors. Ask students to come to class with their ten inventions and inventors list (link).

**Assessment:** A – Listened to instructions, fulfilled role tasks, solved supply and demand problems constructively, negotiated with other students, perceptive feedback
B – Listened to instructions, sought help with problems from other students or teacher, appropriate feedback
C – Able to follow instructions with teacher’s guidance, appropriate feedback
D – Needed re-directs to stay on task.

**Differentiation:** Weaker students should monitor raw materials desks. Strong (mature) students should build railroads!

**Lesson 5**

**Title:** Captains of Industry

**Objectives:** Students will examine how national markets (created by the railroads discussed in the previous lesson) became controlled by a few very rich “Captains of Industry” using new methods of financing.

**Materials:**
Newsprint or poster paper, markers, magazines, scissors, glue
Fake Happy Meals sign
Financial Statements,
Copies of pictures of Vanderbilt, Rockefeller and Carnegie (link)
[McDonald's Happy Meal](link)
[Entrepreneurs and American Economic Growth](link)
Strategies

1. **Warm-up:** (Journal Response) The newspaper just announced that MacDonalds has bought out Wendy’s, Burger King and Jack in the Box in a surprise move. Is this a good news or bad? Why?

2. **Hook:** Fake sign for MacDonalds Happy Meal priced at $10) McDonald's Happy Meal

Discuss the warm-up and introduce the days lesson.

3. Have students look up and define the following terms: monopoly, trust, and corporation. Go over the terms and discuss them with the class.

4. While the students are doing their definitions, check their invention lists (homework from lesson 6) for compliance with the Timeline Instructions.
5. Demonstrate monopoly and trust with students by giving them a business financial statement for a fast food chain which demonstrates the reduction in profits, but the retention of significant capital assets, which would make them ripe for hostile takeover (link).
6. Have students read an account in a class textbook about the growth of big business and monopolies, and help students connect this to current situations. Ask students to take notes
on the rise of big business showing how their size and capital wealth enabled the US to build the infrastructure needed for industrial growth on the one hand, but led to control of the nation’s wealth in the hands of a very few very rich and powerful men too.

Dr. Poole’s (UC San Diego) website on economics has excellent material and biographical information on Rockefeller, Carnegie and Vanderbilt with many graphs showing the growth of Standard Oil Assets and profits. Entrepreneurs and American Economic Growth

8. Notes: 3 Ingredients for Industrial Growth Controlled by 3 Very Powerful Men

I. What did Vanderbilt Build?

- Vanderbilt Transportation
  - Steamships
  - Railroads
- Most famous for Railroads
  - New York Central and Hudson River
- Controls access to National Markets
  - New York to Chicago
- Ruthless business tactics to establish control
- Dies 1877

II. What did Carnegie “Steal?”

- Carnegie financed and used the new “Bessemer” Process of turning iron ore into much harder steel
- Steel would be the construction material for the new railroads, machines, bridges and skyscrapers of Industrial America

III. Why was Rockefeller an “Oily” fellow?

- Invested and developed oil refining – Standard Oil of America
- Controls 90% of oil refining through ruthless business practices
- Expands corporation by controlling many corporations together in a single “Trust”
- Controls the most common form of energy for a growing American Industrial economy.
Note: the following link contains many excellent photos including early modes of oil transport by horse and wagon and train if you have time to extend this lesson. Photos of Early oil refining in Eastern US

Wrap-up: Have students work in groups to make a collage showing the “Three Captains of Industry” (Vanderbilt, Rockefeller, Carnegie) monopolizing the major American industries of Transportation (railroads) Construction (steel) and Energy (oil refining). Have them cut pictures out of magazines that illustrate each of these areas and paste them under the picture of the appropriate tycoon. They should title their collage “Captains of Industry Control American Economic Growth.” They should label the picture of each man with the area of industry he controlled. Pictures of the three men may be downloaded from the web or reproduced from those below.

Rockefeller Drawing  PBS American Experience-Carnegie
9. Share the collages. Discuss what the students listed under each man. Ask the students what questions from lesson 3 were answered today. Have them enter these questions in their journals.

**Homework:** Students should continue to work on their timelines, researching and choosing inventions and making their illustrations of each.

**Assessment:** Collage completion
- A – All required elements (Title, labels, appropriate pictures under each industry) plus color, neat graphics, creative use of pictures
- B – All required elements
- C – Labels incomplete
- D – Some elements mislabeled

**Differentiation:** Prepared graphic organizer for notes (link). Review work sheet for terms. Collage example and beginning pictures already cut out.

**Lesson 6**

**Title:** Review for Test

**Objective:** Students will review their notes and make a study guide for their test over the growth of cities.

**Materials**
- 1911 Cartoon on Capitalism
- Growth of Cities Review Notes: Key (link)
- Growth of Cities Review Notes: Graphic Organizer (link)
**Strategies**

1. **Warm-up:** (Journal) The United States has been criticized for being a nation of consumers where all we think about is money and what we can buy with it. What does this mean? Do you think it is true? Why? Why not?

2. **Hook** Show students the cartoon below. What does this say about the economic system that developed in the early 20th century? 1911 Cartoon on Capitalism from the “Industrial Worker” Spokane, WA.

3. **Have student get out their notes and drawings from the previous lessons. Hand out copies of the summary review notes organizer (link). Go over notes and fill in the blanks, reviewing the major concepts for the period. Discuss to clarify as necessary, emphasizing how all of these factors interacted to create the “Taiwan” of the early 20th century – cheap labor which was producing quality goods at rock bottom prices for the US market as well as expanding international markets.

4. **Let students work on their Timelines for the rest of the period.**

**Wrap-up:** Quick Quiz: Put the following questions on the overhead. Have students write their answers on a small piece of paper. Then ask each student one of the questions as they leave the room. They should answer and hand you their paper. If they are wrong, have them repeat the query and the prompt three times orally.
1. Who was the “Captain of Industry” responsible for the creation of trusts? (Rockefeller, Oil)
2. Who was responsible for the creation of the steel industry? (Carnegie, Steel)
3. Who was responsible for creating a monopoly of the railroads? (Vanderbilt)

Assessment: Quick quiz:
A = 4/5
B = 4/5
C = 3/5

Lesson 7

Title: Timelines

Objectives: Students will:
1. Practice skills necessary to understanding timelines and demonstrate mastery by making a timeline of their own showing inventions between 1850 and 1920.
2. Review major inventions of the late 1800’s and their impact on the Growth of Industry.

Materials:
Index cards, scissors, computers, markers, black pens, textbook references, glue, poster paper or news print, computers, texts, reference books regarding inventions
Sample time-lines
Sets of dates for student practice (link)
Magnetized dates to demonstrate order and spacing on the board
Pre-printed pictures of inventions as needed.

Strategies
1. Warm-up: Put the following list of dates on the board. Ask students to put these dates in order. 3500 B.C., 200 A.D., 20 A.D., 1945 A.D, 0, 750 A.D., 10,000 B.C., 450 B.C., 2005 A.D., 2005 B.C.
2. Hook: Ask students to line up “non-verbally” by birth date. Explain to them that the line they have formed is a sort of time line and that they are going to practice making these today so their final projects will be correct.
3. Draw a long straight horizontal line with evenly spaced separators on the board.
4. Hand out the magnetized dates and ask several students to arrange them on the time line you have drawn there. Usually students try to space the dates evenly across the line. Correct them and discuss the elements of a timeline, order, spacing, labels, and title. Go over the difference between A.D. and B.C.
5. Have students practice with time line sets for several different sets of dates.
6. Go over the class project timeline instructions (link) handed out in lesson six. By now many students should all have selected their optional inventions and have drafted their sentences for the significance of each invention. Help those who have not completed this part of the project. Use class computers, texts, and reference books to locate information about their optional inventions and answer questions about mandatory inventions as needed. Depending on the time and the ability of the students it can help to have pre-preprinted pictures of the major and most popular inventions. Help students correct and edit their labels.
and statements. Try to encourage them to connect each invention with the growth of industry.

7. Have students write their labels and explanations for each timeline entry. Require that students complete their labels and illustrations on the half size index cards which can be glued to the poster board or newsprint after arranging them in order and adjusting the spacing to reflect the gap in years between each invention. (This is the hardest part for 7th graders and being able to adjust the spacing manually really helps them.)

Wrap-up: Give out envelopes to students to take their labels and illustrations home to work on their timeline. Remind them that presentations will count towards the grade too.

Homework: Finish up time lines

Assessment: A = On task, all definitions, illustrations and explanations complete  
              B = On task, all definitions complete
              C = On task, almost complete
              D = Needs to stay after to finish on time

Differentiation: Have students practice in mixed ability pairs. Provide pictures for time-line entries. Provide pre-divided time line.

Lesson 8

Title: Presentations of Timelines

Objectives: Students will demonstrate knowledge of reasons for the growth of cities in the United States during the period from 1850 to 1910.

Materials

    Student Resources
    Growth of Cities Quiz (link)
    Student Timelines

Strategies:

1. Warm-up: Assign presentation order
2. Students will present their timelines while others take notes

Wrap-up: Growth of Cities Quiz (link)

Assessment:

50% Timeline Grade

  5 points title, centered and neat
  5 points 10 inventions
  5 points correct order
  5 points correct dates
  5 points spacing reflects dates
5 points labels are correct
10 points explanations reflect understanding of change in industry
10 points illustrations and graphics

50% Presentation
10 points notes on other students presentations
10 points participation
10 points knows what is on the timeline
10 points can tell students why the inventions impacted cities
10 points poise, fluency, additional information about inventions

Differentiation: Let students present in pairs or groups. Students who have difficulty have already been accommodated by allowing them to use pre-selected inventions and pre-printed photos.