

*The  
American  
Industrial  
Revolution*



*Teacher's Guide*

# *The American Industrial Revolution*

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Teacher's Guide by ...  
**Richard Hawksworth**

Edited by ...  
**Beth Ida Stern**

*Published & Distributed by...*



**AGC/UNITED LEARNING**

1560 Sherman Avenue  
Suite 100

Evanston, IL 60201

**1-800-323-9084**

24-Hour Fax No. 847-328-6706

Website: <http://www.agcunitedlearning.com>

E-Mail: [info@agcunited.com](mailto:info@agcunited.com)

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# THE AMERICAN INDUSTRIAL REVOLUTION

## Table of Contents

|                                    |    |
|------------------------------------|----|
| INTRODUCTION .....                 | 1  |
| INSTRUCTIONAL NOTES .....          | 2  |
| INTRODUCING THE PROGRAM .....      | 3  |
| STUDENT OBJECTIVES .....           | 3  |
| DISCUSSION QUESTIONS.....          | 4  |
| FOLLOW-UP ACTIVITIES .....         | 9  |
| EXTENDED LEARNING ACTIVITIES ..... | 10 |
| ANSWER KEY .....                   | 12 |
| BIBLIOGRAPHY .....                 | 13 |
| RESOURCE CREDITS .....             | 14 |
| INTERNET RESOURCES .....           | 16 |
| SCRIPT OF VIDEO NARRATION .....    | 17 |

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# **The American Industrial Revolution**

**Grades 7-12**

**Viewing Time: 27:00**

## **INTRODUCTION**

This program uses archival footage, character narration, original graphics, and period photographs to provide 7th through 12th grade students with information about the American Industrial Revolution as it occurred in the last three decades of the nineteenth century.

The program will focus on the activities that transformed the American people from a rural way of life, based upon agrarian principles, into a society increasingly dependent upon big business, mechanized farming, and heavy industry.

We examine the establishment of the transcontinental railroad and the influence it had on linking the country geographically and how this contributed to industrial growth. We also see how the railroads sparked the remarkable growth of the steel industry and how Andrew Carnegie parlayed this opportunity into a great fortune.

Oil was a cottage industry shortly before John D. Rockefeller appeared on the scene. We look at his influence on the oil business and industrialization as well as the influence of the great inventors of the day: George Eastman, Alexander Graham Bell, and Thomas Edison.

We analyze westward expansion: The Homestead Act of 1862, the problems in farming the new west, the search for precious minerals, and the cattlemen.

Fueling the rise of industry was a tidal wave of migration, both domestic and transcontinental. We look at America's

move to towns and the new immigration that occurred after 1870. We examine how new social patterns, conflicts, and ideas of national unity developed amid growth in cultural diversity. Coupled with this, we examine child labor, unfair working conditions, and the subsequent rise of the American labor movement.

Finally, we look at the environmental fallout from the gregarious pursuit of industrialization and the early days of the American environmental movement.

### **INSTRUCTIONAL NOTES**

Before presenting this lesson to your students, we suggest that you preview the video and review this guide and the accompanying blackline master activities in order to familiarize yourself with their content. Duplicate those blackline masters you intend to use.

As you review the materials presented in this guide, you may find it necessary to make some changes, additions, or deletions to meet the specific needs of your class. We encourage you to do so, for only by tailoring this program to your class will they obtain the maximum instructional benefits afforded by the materials.

It is also suggested that the video presentation take place before the entire group under your supervision. The lesson activities grow out of the context of the video; therefore, the presentation should be a common experience for all students.

## **INTRODUCING THE PROGRAM**

Introduce *The American Industrial Revolution* by describing the climate in America following the Civil War. Explain the effect the war and the subsequent reconstruction had on the nation. Also, describe the country as it was in the mid-nineteenth century: rural, pluralistic, and agrarian.

**Present the video.** The viewing time is 27:00

### **STUDENT OBJECTIVES**

After viewing this video and participating in the lesson activities, the students will be able to...

- Identify the connections between industrialization, the rise of big business, and the advent of the modern corporation, and how these institutions affected living standards and opportunity at different social levels.
- Describe how agriculture, mining, and ranching were transformed by the industrial revolution and how this change impacted the environment and initiated the modern environmental movement.
- Describe the massive immigration in America after 1870 and how new social patterns and conflicts developed amid growing ethnic and cultural factions.
- Describe and discuss Social Darwinism.
- Describe the effect of geography on the makeup of different cities in different parts of the country.
- Describe the beginnings of the American labor movement.

- Describe how urban political machines gained power and how immigrants, middle-class reformers, and political bosses viewed them in the early twentieth century.
- Describe the gender and ethnic diversity of farmers, miners, and ranchers in the west, and how this diversity contributed to growing cultural unrest in the growing cities.
- Identify the major historical figures of the American Industrial Revolution.
- Identify the major historical events of the American Industrial Revolution.
- Define some of the vocabulary terms associated with the American Industrial Revolution.

### DISCUSSION QUESTIONS

The following are several topics you may choose to discuss. These questions appear on **Blackline Master 1, Discussion Questions**, which you may want to distribute to the class prior to the discussion.

**1. What were the connections between industrialization, the rise of big business, and the advent of the modern corporation?**

*Answer: Industrialization made large-scale production easier and more cost effective, which in turn made mass-produced goods more available to large numbers of people. Production and profitability soared, giving rise to businesses of greater scale and breadth than ever before. As business size grew, regulations were needed to govern their organization, structure, and transactions; thus, the advent of the modern corporation.*

**2. How did industrialization, the rise of big business, and the advent of the modern corporation affect living standards**

**and opportunity for the upper strata of society?**

*Answer: Industrialization brought enormous economic opportunities for those with money to invest. The old adage “You’ve got to have money to make money” is especially applicable to this point in American history. Between 1860 and 1900, 2% of the population controlled 1/3 of the nation’s wealth. As greater fortunes were amassed on the back of industrialization, the living standards of the upper classes reached new heights of opulence. Many of America’s most visible citizens (i.e. Carnegie, Rockefeller, and J.P. Morgan) made their fortunes during this time.*

**3. How did industrialization, the rise of big business, and the advent of the modern corporation affect living standards and opportunity for the lower strata of society?**

*Answer: American citizens with the least monetary wealth provided the labor for the American industrial revolution. Migrants whose agricultural or mining concerns had failed, immigrants new to the country, and city dwellers with limited skills and resources helped to fill the enormous demand for labor in the new factories. Living standards plummeted as cities became overcrowded, with inadequate sanitation systems and housing. Opportunity for advancement was rare, as the lower classes were underpaid and overworked; standardized education was not available, and children worked long, hard hours, limiting their exposure to skills that would help them advance beyond the factory floor.*

**4. What was Social Darwinism? How was it used during the American industrial revolution?**

*Answer: Social Darwinism is the theory of Charles Darwin applied to social organization. Based on his biological studies of the evolution, Darwin surmised that the fittest members of a species survive and that their genes stay in the evolutionary pool and contribute to adaptation. Applying this theory to social organization results in the elitist view that the strongest, smartest, and “fittest” members of society survive and thrive, while the weakest, least fit, and worst adapted members fall to the bottom*

*of the bottom of the societal pile. This theory allowed the barons of big business to exploit the working classes with meager wages, deplorable working conditions, and no opportunities for advancement because the barons figured that they were superior to the working classes.*

**5. What effect did geography have on the makeup of different cities in different parts of the country?**

*Answer: Cities that were on major transportation routes thrived and grew. Transportation routes were developed based on geographical factors: bodies of water provided access for boats and barges, access to railroad lines provided access to the raw materials and finished goods delivered by rail car, the roads and trails of westward expansion provided access for horse-drawn transportation, and the impact of the mining crazes of the mid-eighteenth century provided access to territories previously unexplored. Cities such as New York, Boston, Chicago, and San Francisco were located on major bodies of water. Cities grew up along major railroad stops. Denver and her surrounding cities grew out of the mining industry.*

**6. How did urban political machines gain power and how did immigrants, middle-class reformers, and political bosses view them?**

*Answer: As local governments dawned in the growing American cities, they became a resource for addressing the increasing everyday problems of urban living: transit, paving, water, sanitation, street lighting and cleaning, policing and fire protection. In exchange for these favors, politicians began to expect graft, or bribes, in return. These men were generally well-viewed by citizens. They were, after all, the only available solution to the many problems confronting new immigrants and others. The political machines also gained clout as they curried favor upon the industrialists and the wealthy; by playing “both sides of the fence,” they became some of the most powerful and influential figures of the early century.*

**7. Describe the beginnings of the American labor movement. What factors contributed to its rise and growth? What are the roles of the labor movement in today's business environment?**

*Answer: The American labor movement grew out of unfair working conditions that sprung from the industrial revolution. The individual worker had little or no clout in determining his/her working hours, wages, and conditions, and generally was greatly exploited by his bosses. Children worked alongside adults for endless workdays and very little pay. Work-related injuries and even deaths were commonplace. Benefits, such as insurance, time off, and bonuses, were non-existent. As these breeches of humanity increased, and workers became more and more angry about conditions of employment, people began to organize. There was power in numbers; if one person did not show up for work, he or she was replaced, but if an entire work force went on strike, it had tremendous impact on the profitability of the business. The organization of work forces by industry was called unionization. Unions became responsible for negotiating wages, benefits, conditions, and terms of employment. Collective bargaining was born, as were the Child Labor Laws. Unions are still active today; groups such as the Teamsters, the AFL-CIO, and the UAW help the trucking, manufacturing, and automobile industries determine working conditions, wages, and benefits on an ongoing basis. Labor strikes still occur when unions are unable to reach collective bargaining agreements with industries.*

**8. What was the gender and ethnic diversity of farmers, miners, railroad workers, and ranchers in the West? How did this diversity contribute to growing cultural unrest in the growing cities?**

*Answer: Millions of Anglo-Americans, African-Americans, Mexicans, and European and Chinese immigrants transformed the new West. Women played a crucial role in this process, as they were assigned most of the domestic labor involved in establishing homesteads, farms, and ranches. Men were often gone from dawn until dusk, leaving the women to tend to the children,*

housekeeping, food preparation, clothing, and other daunting tasks. The financial opportunities presented by The Homestead Act of 1862, the construction of railroads, the discovery of precious ore, and the herding of cattle drew members of many ethnic populations to the area. (Note: The construction of the transcontinental railroad was notorious for its use and exploitation of Chinese workers. African-American cowboys were proliferate. And the border between Mexico and the United States was crossed often before immigration legislation instituted strict regulations.) These industries dwindled considerably in the early twentieth century, leaving many of these erstwhile farmers, workers, miners, and cowboys to migrate to America's burgeoning cities to look for financial opportunity. As the tides of immigration swelled, and the immigrants settled in the cities as well, cultural diversity in these concentrated population grew exponentially. Cultural diversity led to misunderstanding, ethnocentrism, and hatred, which resulted in the cities becoming increasingly dangerous and violent.

**9. Describe how agriculture, mining, and ranching were transformed by the industrial revolution. What role did oil play in this process?**

*Answer: Automation of farming and mining equipment made those industries far more productive, resulting in greater yields over shorter periods of time, with less labor investment, and greater economies of scale. Ranching was transformed as the railroads replaced cattle drives as the preferred method of transport for livestock. Oil was discovered to be refinable into gasoline, which was an effective fuel for machinery. The oil industry was born during the industrial revolution.*

## FOLLOW-UP ACTIVITIES

1. Distribute **Blackline Master 2, The American Industrial Revolution Timeline**. Review the events as they relate to the video and as they relate to the students' lives today. Which events had greater impact on the American Industrial Revolution? Which events had greater impact on modern life? Add events, such as the Civil War, to the timeline to put the American industrial revolution into a broader temporal context.

2. Distribute **Blackline Master 3, The American Industrial Revolution Vocabulary**. Review the vocabulary words and phrases as they relate to the video. Were any of the words or phrases introduced into the language as a result of the industrial revolution? What are some examples of modern-day terminology that was born out of changing times? Examples might include computer terminology (i.e. modem, website, compact disk, Internet), aerospace (lunar module, space shuttle, Mars probe, astronaut), medicine (vaccine, Chronic Fatigue Syndrome, cholesterol count, electrocardiogram), and fashion (hip-huggers, bell bottoms, sneakers, tee shirt).

3. Distribute **Blackline Master 4, The Homestead Act of 1862**. Take turns reading this important document aloud. What was the significance of this legislation to westward expansion? Could an act like this be passed today in the United States? Why or why not? Are there other commodities, such as bandwidth on the Internet or television channels, that the government could give away in today's economy? What would be the results?

4. Distribute **Blackline Master 5, The Statue of Liberty**. The Statue of Liberty was presented to the United States by France in 1886, during the transformation of America from an agrarian to an industrial society. What was the

significance of the statue's positioning in New York Harbor, especially as the tides of immigration began to swell? What is the significance of Emma Lazarus's poem, "The New Colossus," at the statue's base? Has anyone in the class ever visited Liberty Island? If so, what impression did the statue and her message leave? Does anyone in the class have relatives who immigrated to the United States during the late nineteenth and early twentieth century? What were the ideals these immigrants were pursuing in America? How might the position and presence of the Statue of Liberty have contributed to their experiences?

5 Distribute **Blackline Master 6, Biographies**. Have students match the biographical information with the historical figure by indicating the letter by his or her name. Review and correct the answers as a group. An answer key for this exercise appears on page 12.

6. For those students and/or classrooms with Internet access, distribute **Blackline Master 7, Internet Resources**. Have students visit these sites and share their findings. Using search engines, have them find three additional sites involving the American Industrial Revolution and share their findings. These sites may be useful in completing the Extended Learning Activities below.

7. Distribute **Blackline Masters 8 and 9, American Industrial Revolution Quiz**. This will assess student comprehension of the Student Objectives. Review the Objectives as indicated by the results of the quiz.

### **EXTENDED LEARNING ACTIVITIES**

1. Utilize a variety of historical sources, including primary documents, to complete a case study of how a business leader gained dominance in a particular industry in the late nineteenth century. How did business leaders seek to

maximize profits and limit competition? Did the business leader pursue horizontal or vertical integration? Why? To what extent did managerial organization, technological innovation, and individual decision making contribute to the success of the business?

2. Conduct a trial of John D. Rockefeller on the following charge: “The plaintiff had knowingly and willfully participated in unethical and amoral business practices designed to undermine traditions of fair and open competition for personal and private aggrandizement in direct violation of the common welfare.”

3. Construct a data sheet listing diverse and common factors of five major cities in different regions of the country in the late nineteenth century. What geographic factors influenced their growth and population? How did they differ in terms of ethnic makeup? What were the economic factors that influenced the growth of these cities?

4. Explain how immigration changed after 1870. Use maps and pictorial resources to show where people came from and where they settled. Which immigrant groups came to your community in the late nineteenth century? How were immigrants welcomed—the English, Scots, Irish, German, and other earlier settlers?

5. Draw upon such sources as copies of immigrants’ letters written home and excerpts from ethnic newspapers to compare the experiences of the new immigrants in the period 1870-1900 with the message of Emma Lazarus’s poem, “The New Colossus” (see Blackline Master 4). What were the expectations of the new immigrants? Were they able to attain their goals? How did parochial and other religious schools serve the interests of the newer immigrants? Why were the last four lines of “The New Colossus” placed on the Statue of Liberty? How do they

compare with the rest of the poem? Do the terms “melting pot” or “salad bowl” best describe the acculturation experience of the newer immigrants? Are both terms inadequate? What kind of communal association and institutions did immigrant groups organize to ease their transition in the United States and to preserve their cultural and ethnic identities? Why did many native-born citizens favor restricting immigration through the imposition of a literacy test rather than through a quota system?

### ANSWER KEY

#### Blackline Master 6, Biographies

- |     |   |     |   |
|-----|---|-----|---|
| 1.  | F | 12. | K |
| 2.  | O | 13. | H |
| 3.  | E | 14. | R |
| 4.  | A | 15. | C |
| 5.  | J | 16. | M |
| 6.  | T | 17. | P |
| 7.  | G | 18. | D |
| 8.  | Q | 19. | S |
| 9.  | L | 20. | I |
| 10. | B | 21. | N |
| 11. | U |     |   |

#### Blackline Master 8, American Industrial Revolution Quiz

- |     |   |     |                          |
|-----|---|-----|--------------------------|
| 1.  | F | 11. | corporation              |
| 2.  | T | 12. | unions                   |
| 3.  | F | 13. | agriculture              |
| 4.  | F | 14. | immigration              |
| 5.  | T | 15. | cultural diversity       |
| 6.  | a | 16. | Forest Reserve Act       |
| 7.  | b | 17. | Grenville Dodge          |
| 8.  | d | 18. | cowboys                  |
| 9.  | c | 19. | monopoly                 |
| 10. | e | 20. | urban political machines |

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### **RESOURCE CREDITS**

**AFL-CIO**

**American Telephone and Telegraph**

**Carnegie - Mellon University**

**Catholic University Library**

**California State Library**

**Denver Public Library, Western Collection**

**Library of Congress, Prints and Photographs Division**

**Los Angeles County Museum of Natural History**

**Fred MacDonald and Associates**

**Museum of the City of New York**

**Museum of History and Technology,**

**Smithsonian Institution**

**National Archives**

**Nebraska State Historical Society**

**New York Historical Society**

**New York Public Library, Prints Division**

**New York Public Library,**

**History and Genealogy Division**

**Pittsburgh University**

**Pullman Historical Society**

**Putnam County Historical Society**

**Rockefeller Archive Center**

**Southern Pacific Railroad  
Stanford University Library,  
Department of Special Collections  
Union Pacific Railroad  
United States Department of the Interior,  
Edison National Historic Sight  
Utah State Historical Society  
Washington State Historical Society  
Western Heritage Center  
Wyoming State Historical Society**

## INTERNET RESOURCES

The following Internet resources offer insight into some of the facets of the American industrial revolution:

**<http://www.ellisland.org>**  
The Ellis Island Homepage

**<http://sunp.nyit.edu/visions/liberty.html>**  
Historical and other interesting facts about the Statue of Liberty

**<http://www.nps.gov/stli/mainmenu.html>**  
The National Park Service Website

**[http://cmp.ucr.edu/exhibitions/immigration\\_id.html](http://cmp.ucr.edu/exhibitions/immigration_id.html)**  
The University of California and California Museum of Photography Website

**<http://www.kbs.citri.edu.au/~ming/result1/mp2.html>**  
Immigration Facts

**<http://www.adventure.com/encyclopedia/america/ellis.html>**  
Gateway to America

**<http://www.icgnet.com/users/phil/rvins/ellis/index.html>**  
Ellis Island Photographs

**<http://www.usda.gov:8000/history2/text3.html>**  
United States Department of Agriculture Homepage  
Includes timeline of Agriculture throughout American history

**SCRIPT OF VIDEO NARRATION**  
***The American Industrial Revolution***

The Civil War marked a great turning point in America's history. In the last three decades of the nineteenth century, the country was transformed from a rural republic to an urban state. Frontiers vanished in the face of westward expansion. Factories and steel mills appeared on the scene, fueled by immigrant labor streaming through Ellis Island. Great transcontinental railroad lines linked the country together like never before.

But, with these advances, came the evils of poverty and overcrowding. Poor working conditions and labor unrest marred the workplace. And the growing output of factories, for the first time, threatened the environment.

It was in this setting that America came of age, poised on the brink of a revolution—The American Industrial Revolution.

**Railroads**

In 1870 America was a geographically isolated country. During the last three decades of the nineteenth century, Americans occupied a much larger portion of the country's land than during the three previous centuries. The saturation of railways was key to this important geographic change.

Prior to 1865, railways did not reach west of the Mississippi River. Although Congress had approved the building of a transcontinental railroad in 1850, The North and South delayed construction with disputes concerning route access.

After the southern states seceded from the Union in 1861, the North gained control of the project, securing a central route. Shortly thereafter, Congress authorized the Central

Pacific and the Union Pacific Railroads to build lines meeting each other in Sacramento and Omaha.

The Union Pacific work force included Irish immigrants, Civil War soldiers and southern African-Americans. From the west, Chinese laborers of the Central Pacific Railway set out to meet them from California.

In May of 1869, the two railways met at Promontory Point, Utah, where leaflets and banners invited Americans to ride all the way to San Francisco. When chief engineers Samuel Montague and Grenville Dodge shook hands, the moment marked the opening of the way to the West.

The economic consequence of the railroads was immeasurable. When engine power moved from wood to coal, the demand for coal tripled. When rails moved beyond iron to steel, the modern steel industry evolved.

Many other industries emerged as well. Notably, the refrigerated freight car developed in partnership with Gustavus Swift, gave birth to the meat packing industry. And the grain, lumber and steel industries virtually exploded as new railways transported huge resources to towns, cities, and ports across the country.

The growth of the railroad was astounding. In 1870 there were 57,000 miles of railroad track in the continental U.S. By 1890, this figure had grown to nearly 167,000 miles.

Innovations in the railroad network, such as the air brake and sleeping cars, made rail travel smoother, safer, and more comfortable. But the most dramatic change in the railroads was spurred on by something new: steel.

### The Steel Industry

For decades, steel had combined the strength of wrought

iron with the durability of cast iron, but the costly process of extracting carbon from iron made it a luxury.

Then in 1859, Kentuckian William Kelly and Englishman Henry Bessemer, working independently, discovered a way to inject air into the molten metal, burning off enough carbon to render steel. Once this process was refined, steel became affordable and easy to produce. The steel race had begun.

In 1870, 77,000 tons were produced each year. By 1900, that amount had skyrocketed to 11.4 million tons annually.

Andrew Carnegie was the predominant steel baron of his time. Emigrating from Scotland at age 12, he went to work as a bobbin boy at a Pittsburgh textile mill.

His wisdom in surrounding himself with highly talented lieutenants helped to put his competitors out of business. Carnegie once remarked that his epitaph should read: "Here lies the man who was able to surround himself with men far cleverer than himself."

Carnegie realized the enormous potential for steel during a trip to Europe in 1872, and soon established a massive factory near Pittsburgh, the most modern of its day. Fed by iron ore from Lake Superior and coal and limestone mined in the east, Pittsburgh soon became the steel capital of the world.

Carnegie sold his steel company to banker J.P. Morgan in 1901 for 480 million dollars. He retired with a guaranteed income of one million dollars per month. Morgan congratulated him on being the "richest man in the world." The company later combined with others to become the United States Steel Corporation - U.S Steel.

## The Oil Industry

Another business that fueled the industrial expansion was oil.

When Edwin L. Drake struck oil in Titusville, Pennsylvania in 1859, no one could foresee the impact that it would have on the nation. Initially, it was not of much use—greasing wagon wheels and nostrums were all it seemed good for; until a Yale professor discovered that it could be refined into three important products: gasoline, kerosene, and a distillate used to form new substances.

From 1860 to 1900, dozens of developers applied for patents as motor applications increased with demand. Some industrialists were wildly successful in exploiting this new market. Among them was a young man named John D. Rockefeller. Born to a New York peddler in 1839, Rockefeller went on to become the first oil billionaire.

At age 16, John D. Rockefeller began working as a clerk in a produce company. While there, he formed a partnership in a grain commission. Rockefeller used those profits to enter into the oil business at 23 years of age.

Rockefeller set out to make the fledgling oil industry efficient. His goal was to establish a centralized control system to curtail wild price variations and waste. Fifteen years later, the goal was reached when his Standard Oil Company of Ohio controlled the flow of oil products from producer to consumer. Rockefeller's companies had acquired crude oil fields, long-distance pipelines, and operated retail outlets.

By 1880, Standard Oil owned the chief refineries in New York City, Philadelphia, Pittsburgh, and Cleveland. Ultimately, Rockefeller controlled 90% of the world's oil trade, under the Standard Oil Trust, which comprised forty-

one companies. The trust was dissolved in 1892 by the Supreme Court, for antitrust violations.

Although railroads, steel, and oil were among the most influential industries of the late nineteenth century, they were not alone in their prosperity.

Prior to the Civil War, the U.S. patent office issued less than 1,000 patents annually. By 1890, inventions were being registered at the rate of 25,000 each year.

The invention of the typewriter, the adding machine and the cash register sped the growth of business. George Eastman's brownie camera, the elevator and Alexander Graham Bell's telephone all marked this new season of ingenuity. By 1900, Bell's phone had found its way into a million homes.

But supreme among all inventors was Thomas Alva Edison. Among his many inventions, Edison was responsible for the phonograph, the mimeograph, the dictaphone, improved film projectors, storage batteries, and of course the light bulb. Thomas Edison didn't actually invent the light bulb, but he refined the filament, making it practical for everyday use.

Along with his team of scientists, Edison is credited with producing a minor invention every ten days, and a major invention every six months. During his lifetime, Edison was granted an astonishing 1,093 patents.

### Agriculture

Despite advances in industry, agriculture remained America's basic occupation. Like the revolution in industry, the switch from hand labor to mechanized labor marked the revolution in agriculture. By 1870, the reaper, thresher, steel plow and combine had encouraged farming in the

rugged prairies west of the Mississippi. To feed the growing population, settlers pushed west to cultivate new lands, due in part to the Homestead Act of 1862.

The Homestead Act promoted the settlement of publicly owned land in the Great Plains in either of two ways: for a \$10 fee, land was given in 160 acre parcels to anyone who would live on or farm the land for five years, or settlers could buy the land outright for \$1.25 per acre.

By 1870, migrants flowed west from Kentucky, Missouri and Illinois at the rate of over 5,000 wagons per month.

But crop yields were low to the 500,000 families who claimed Homestead land, due to light rainfall and arid conditions. In response to this hardship, a new method called dry farming was developed, which required that the fields be left fallow every other year. This allowed the dry soil to store up moisture and nutrients for the following year's crop.

These frontier farmers discovered that wheat was an ideal crop for dry farming, and by 1900, the plains had become one of the greatest wheat producing regions in the world.

But farmers faced many hardships. For pioneer farmers neighbors were few, water was scarce, and families faced brutal winter blizzards, and intense summer heat.

The dreaded summer dust storm might erase a season's labor, and swarms of locusts could wipe out entire crops. In some treeless plains areas, families lived in houses made of sod, or "Nebraska marble" to insulate themselves against the extreme changes in temperature.

Between 1860 and 1890, the nation's population more than doubled, but the American farmer rose to the challenge,

growing enough grain, cotton, and corn, and raising enough beef and pork to not only supply the growing population, but to create a surplus as well.

By 1890, the first successful gasoline powered tractors were in use enabling farmers to meet urban demand. Each successful farm produced enough food to feed five people in 1850. Forty years later, those same farms could feed 15 people, largely through the use of more sophisticated and modern equipment. Along with these conveniences came problems unique to modern development.

By 1890, overproduction had begun to occur, leading to a glut of produce on the world market. Inevitably, prices plummeted.

With increasing demand, shipping rates were steadily rising, and by 1877, it took fully half of gross sales to pay the exorbitant freight charges. Overwhelmed by this predicament, 80% of Homestead farms failed by 1900. Most never completed their five-year residency requirement.

### Mining

While farming drew people to the prairies and plains, mining beckoned them even further west. By horseback or rail, prospectors converged on the mountainous countryside seeking their fortunes in silver and gold.

Overnight, makeshift homes and tents would spring up along hillsides in the great wilderness. These settlements were the forerunners of cities such as Boise, Idaho and Denver, Colorado.

It was a rough and dangerous existence. Bandits roamed the roads, seeking the precious metal at the owner's expense. Vigilante law was established in many western towns, where the rope and gun ruled. While mining made some rich, most prospectors managed only a meager living from the rapidly disappearing pockets of precious minerals.

### **The Cattlemen**

Nearly four million longhorn steer roamed the Texas plains in 1860. As demand for beef grew in faraway cities such as Chicago, St. Louis, and Philadelphia, the challenge was created to move large herds toward the cities.

In 1867, Joseph G. McCoy built a cattle-trading station in Kansas near the railroad. McCoy recruited cowboys to drive herds, and within five months, 25,000 longhorn had arrived.

Several other cattle trails snaked their way to Kansas in a remarkably short time. Farmland along these trails was often trampled by the steer, and the Homesteaders reacted bitterly to the haphazard destruction of their cultivated lands.

As railway routes began to crisscross the country in the 1880s, the demand fell for cowboys to relocate Texas herds. By the 1890s, the peak of the cowboy era had come to an end.

### **The Urban Transformation**

The American Industrial Revolution was marked not only by the changing face of American industry, but also by the changing face of America. As mills and factories sprouted across the land, cities grew up around them. In turn, the cities beckoned to workers by the millions from the American countryside and from overseas to fuel the burgeoning industrialization.

What was once a rural nation was rapidly becoming an urban state. Between 1860 and 1910, the urban population grew from 6 million to over 44 million. Rural Americans abandoned their farms to take factory jobs in the big cities.

Joining them en mass were new immigrants from overseas.

By 1870, they were arriving on American shores at a rate of nearly 400,000 per year. By 1882, this number had doubled to 800,000 annually.

This tide of urban migration brought with it new social problems. Until 1885, most immigrants were from northern Europe and Britain, but by the late 1880s, people from Southern and Eastern Europe and Latin America began to disembark from the transcontinental steamships, creating racial and ethnic tensions.

Due to increased cultural diversity, the scope of social problems began to grow. These were the landless, the unskilled and poverty stricken. The “huddled masses” that Emma Lazarus reflected upon in her poignant inscription for the Statue of Liberty.

Give me your tired, your poor,  
Your huddled masses yearning to breathe free,  
The wretched refuse of your teeming shore.  
Send these, the homeless, tempest-tossed to me,  
I lift my lamp beside the golden door!

The growth of our urban centers was nothing short of astounding. In the twenty years after 1870, the population of Minneapolis grew from 13,000 to 165,000; Denver grew from 4,700 to 107,000; and New York had a population of over 2 million. Chicago and Philadelphia had more than a million citizens each and Baltimore, Boston, and St. Louis were home to nearly half a million people.

Housing, water, and crucial services, such as sanitation, roads and bridges, were woefully inadequate. New tenements sprung up and were immediately overcrowded. Garbage collection efforts and police and fire protection simply could not meet the overwhelming demand from city dwellers.

Journalist H.L. Mencken described the stench of 1880s Baltimore “like a billion polecats.”

Widespread corruption in the cities was blamed on the immigrants who crowded dilapidated buildings, packed the jails, and voted for the candidates of powerful politicians in return for small favors.

In 1900, a local journalist marveled at the capacity people displayed to survive in deplorable conditions: “The wonder is that they are not all corrupted, and speedily, by their surroundings.”

Nineteenth Century sociologist William Graham Sumner held the controversial belief that the “fittest members adapt to the environment and prosper, while weaker members do not.” For the Social Darwinist, these principles of natural selection applied to capitalism. The more prevalent view, championed by the wealthy including John D. Rockefeller, was that “the power to make money is a gift from God.”

Modern America rose from the foundations laid by men such as Rockefeller, and history views them kindly for their contributions. But despite their wealth, they were often reluctant to share the good fortune with their employees.

Employees often worked 12 to 18 hour days. Factories were dark, dirty and dangerous. Working conditions in many factories were shocking. One Massachusetts textile worker compared the animosity between worker and employer to “the former feeling of bitterness between the North and the South.”

While business tycoons risked huge amounts of money to gamble on technological advances and new markets, they were unwilling to share profits with their workers.

Their words reflect the expectations of one Massachusetts employer: “I regard my work-people just as I regard my machines. When my machines get old and useless, I replace them. It’s the same with these people. As long as they do the work for what I choose to pay, I get out of them what I can.”

Many factory machines were run by women and children, some as young as eight years old. These children, who were paid less than adults, were forced to work the same long hours. This was a typical factory workday for children in textile factories around 1870.

6 am- Awaken  
7 am- Begin Work  
9 am- Breakfast (15 min.)  
1 pm- Lunch until 2 pm  
8 pm- Workday ends  
Sundays Off  
Pay- 30 cents per week

Many families depended on the small incomes of their young children to survive in America.

These are the words of Sadie Frowne, a 16-year old sweatshop girl:

“Those machines run like mad, all day long. Sometimes, my finger gets caught, then the needle goes through it. If it goes through the nail too, it hurts real bad. But, I just tie a rag around it and keep on sewing. Sometimes a finger has to come off. We all have accidents like that.”

If workers complained, they were quickly replaced with other immigrants eager for the work. These conditions planted the seeds for labor reform. The skilled workers, cigar makers, printers and ironworkers began to organize in 1875.

Soon after, factory workers also began to unite. They sought to get equal pay for women, and shorter workdays. By the end of the decade, union membership reached 300,000.

In 1877, pay cuts totaling 20% caused Baltimore and Ohio rail workers to strike. Two-thirds of the nation's rail service was affected. Ten workers in Baltimore were killed in the resulting riots. Another 26 in Pittsburgh died, prompting President Rutherford B. Hayes to call out federal troops, thus ending the strike.

These events led to the formation of the Knights of Labor in the 1880s, led by Terence Powderly. This organization worked to improve adverse sweatshop and factory conditions, and to outlaw child labor.

The Knights were at odds with the more conservative American Federation of Labor, a movement headed by Samuel Gompers. Gompers emerged as leader of Labor Reform, leading the AFL from 1886 until his death in 1924. By 1900, laws were being passed to improve housing conditions, health and education for the poor.

#### The Price of Progress

Before the mid-nineteenth century, America had a seemingly endless supply of natural resources including timber, minerals and wildlife.

Throughout much of the country's history, pollution was not a major problem, but the industrial revolution upset the balance between man and nature.

For decades, waste from factories was dumped haphazardly into lakes, rivers and streams. Pollution from the mainstream use of factory machinery and motor-driven vehicles had an adverse impact on the atmosphere.

By 1870, the devastating consequence to natural and animal resources spurred the formation of wildlife organizations dedicated to reversing this dangerous trend.

Wide-scale, careless environmental pollution became an issue vigorously debated in political circles. By 1880, modern conservationists, who had become organized to champion the movement, lobbied congressman and state legislators.

In response, by 1890, Congress had set aside millions of acres of land across the U.S. to preserve resources. Huge expanses of terrain were set aside as national parks and habitats.

Prior to the end of his term, President Grover Cleveland created new forest reserves totaling 20 million acres in 1897.

In 1888, the Boone and Crockett Club, a sportsmen's conservation organization, was formed by Theodore Roosevelt. In 1891, the Forest Reserve Act gave the President the authority to set aside public lands marked by forests. Twenty-seven men founded the Sierra Club in 1892, with John Muir as its president.

Water pollution was addressed in 1899, when The Rivers and Harbors Act prohibited the dumping of waste in the nation's harbors, canals and waterways.

#### The Impact of an Era

The turn of the century symbolized the end of the old America. The former rural country grounded in agriculture and hand-worked goods, had become an urbanized industrial Goliath. The completion of the transcontinental railroad had at long last fulfilled the march of Manifest Destiny. New industries set the stage for future growth. And The New Colossus had seen a native population

become a land of immigrants. Revolutionary changes, achieved at a revolutionary pace.

As the nineteenth century faded, the nation, having survived its struggle for independence, the ravages of a Civil War, and the impact of an era, stood poised on the brink of a new century. Much remained to be done, but the foundation had been laid. America was now strong enough to face the unique challenges the twentieth century would bring.

**THE AMERICAN INDUSTRIAL REVOLUTION****Discussion Questions**

**Direction:** After viewing the video, answer the following questions. Use the back of this sheet if necessary.

1. What were the connections between industrialization, the rise of big business, and the advent of the modern corporation?
2. How did industrialization, the rise of big business, and the advent of the modern corporation affect living standards and opportunity for the upper strata of society?
3. How did industrialization, the rise of big business, and the advent of the modern corporation affect living standards and opportunity for the lower strata of society?
4. What was Social Darwinism? How was it used during the American industrial revolution?
5. What effect did geography have on the makeup of different cities in different parts of the country?
6. How did urban political machines gain power and how did immigrants, middle-class reformers, and political bosses view them?
7. Describe the beginnings of the American labor movement. What factors contributed to its rise and growth? What are the roles of the labor movement in today's business environment?
8. What was the gender and ethnic diversity of farmers, miners, railroad workers, and ranchers in the West? How did this diversity contribute to growing cultural unrest in the growing cities?
9. Describe how agriculture, mining, and ranching were transformed by the industrial revolution. What role did oil play in this process?

## THE AMERICAN INDUSTRIAL REVOLUTION Timeline

- |  |  |
|--|--|
| <p><b>1839</b> • John D. Rockefeller born in New York.<br/>• Kentuckian William Kelly and Englishman Henry Bessemer independently discover an efficient way to process iron ore into steel.<br/>• Edwin L. Drake strikes oil in Titusville, Pennsylvania.</p> <p><b>1860</b> • U.S. steel production at 13,000 tons annually.<br/>• U.S. Government offers free land to anyone willing to occupy it for five years—known as the Homestead Act of 1862.</p> <p><b>1866</b> • Delegates organize National Labor Union.<br/>• Joseph G. McCoy builds cattle trading station in Kansas.</p> <p><b>1867</b> • Christopher Sholes invents the typewriter.</p> <p><b>1868</b> • George Westinghouse invents the air brake for railroad engines.</p> <p><b>1869</b> • Union Pacific Railroad and Central Pacific Railroad meet at Promontory Point, Utah, completing the first transcontinental railroad - 53,000 total miles of railroad track in the U.S.</p> <p><b>1870</b> • John D. Rockefeller incorporates Standard Oil Company of Ohio.<br/>• Skilled workers begin to organize.<br/>• Baltimore and Ohio rail workers strike.<br/>• Alexander Graham Bell patents the telephone.</p> <p><b>1877</b> • Great Railroad Strike of 1877 - first interstate strike.<br/>• Edison invents the phonograph.<br/>• Edison invents the first successful incandescent light bulb.<br/>• Standard Oil Company controls 95% of America's oil refining business.</p> <p><b>1879</b> • Terrence Powderly becomes leader of Knights of Labor.</p> | <p><b>1880</b> • U.S. steel production at 1,400,000 tons annually.<br/>• 94,000 total miles of railroad track in the U.S.</p> <p><b>1884</b> • Automated cigarette rolling introduced.</p> <p><b>1883-1884</b> • Fence Cutters' War results from tensions between ranchers.<br/>• Samuel Gompers becomes head of newly formed American Federation of Labor.</p> <p><b>1886</b> • One striker is killed in the Haymarket Square Riot.</p> <p><b>1886</b> • Statue of Liberty unveiled.<br/>• Boone and Crockett Club formed by Theodore Roosevelt.</p> <p><b>1889</b> • Andrew Carnegie publishes <i>Gospel of Wealth</i>.</p> <p><b>1890</b> • 167,000 total miles of railroad track in the U.S.<br/>• Forest Reserve Act passed, giving the President authority to set aside public land marked by forest.</p> <p><b>1889</b> • Otis Elevator Company installs first electric elevator.<br/>• Supreme Court of Ohio dissolves Standard Oil Trust.</p> <p><b>1892</b> • Homestead Steel Strike and Massacre.<br/>• Sierra Club founded with John Muir as its President.</p> <p><b>1894</b> • Pullman Strike.<br/>• Rivers and Harbors Act passed, prohibiting the dumping of waste in the nation's harbors, canals, and waterways.</p> <p><b>1900</b> • 199,000 total miles of railroad track in the U.S.</p> <p><b>1901</b> • Andrew Carnegie sells his steel company to J.P. Morgan for \$480 million.</p> |
|--|--|

## THE AMERICAN INDUSTRIAL REVOLUTION Vocabulary

arid- Parched and dry; difficult to sustain life

capitalist- A person who has money (capital) invested in a business

depression- In economics, a period of low economic activity or output in an industrialized country, bringing rising levels of unemployment and business failures

fallow- A field that has been plowed but left without crop plantings

filament- The thread-like wire in an incandescent light bulb

holding company - A corporation whose primary purpose is having a controlling interest in the stocks of other companies

The Homestead Act of 1862- The United States government offered title to 160 acres of public land to any eligible individuals who filed a claim, made improvements and lived on the settlement for five continuous years

immigrant- One who comes into a country from another

iron ore- A raw material significant in the production of steel

locust- The destructive winged insect which troubled settlers of the plains

migrant- One who moves from one place to another, i.e., "Many Americans migrated from the country to the city in search of jobs."

monopoly- An economic condition whereby a single seller or producer has exclusive ownership or control over the distribution and sales of his or her product

patent- A deed securing to a person exclusive rights to an invention

prospector- One who searches for gold or other precious metals

refinery- An operation where oil is refined from its crude state into usable fuels

regulated- To be under the control of law of a legal authority

Social Darwinism- The belief that the fittest members of a society will survive and prosper while the weaker will not

sod- A flat strip of earth with grass attached

tenement- A building consisting of a number of suites of rooms - usually in shabby condition

transcontinental- Extending or going across a continent, as a railway system

trust- A combination of businesses joined together to secure a monopoly

## THE AMERICAN INDUSTRIAL REVOLUTION

### The Homestead Act

May 20, 1862

(U. S. Statutes at Large, Vol. XII, p. 392 ff.)

AN ACT to secure homesteads to actual settlers on the public domain.

Be it enacted, That any person who is the head of a family, or who has arrived at the age of twenty-one years, and is a citizen of the United States, or who shall have filed his declaration of intention to become such, as required by the naturalization laws of the United States, and who has never borne arms against the United States Government or given aid and comfort to its enemies, shall, from and after the first of January, eighteen hundred and sixty-three, be entitled to enter one quarter-section or a less quantity of unappropriated public lands, upon which said person may have filed a pre-emption claim, or which may, at the time the application is made, be subject to pre-emption at one dollar and twenty-five cents, or less, per acre; or eighty acres or less of such unappropriated lands, at two dollars and fifty cents per acre, to be located in a body, in conformity to the legal subdivisions of the public lands, and after the same shall have been surveyed: Provided, That any person owning or residing on land may, under the provisions of this act, enter other land lying contiguous to his or her said land, which shall not, with the land so already owned and occupied, exceed in the aggregate one hundred and sixty acres.

Sec. 2. That the person applying for the benefit of this act shall, upon application to the register of the land office in which he or she is about to make such entry, make affidavit before the said register or receiver that he or she is the head of a family, or is twenty-one or more years of age, or shall have performed service in the Army or Navy of the United States, and that he has never borne arms against the Government of the United States or given aid and comfort to its enemies, and that such application is made for his or her exclusive use and benefit, and that said entry is made for the purpose of actual settlement and cultivation, and not, either directly or indirectly, for the use or benefit of any other person or persons whomsoever; and upon filing the said affidavit with the register or receiver, and on payment of ten dollars, he or she shall there upon be permitted to enter the quantity of land specified: Provided, however, That no certificate shall be given or patent issued therefor until the expiration of five years from the date of such entry; and if, at the expiration of such time, or at any time within two years thereafter, the person making such entry — or if he be dead, his widow; or in case of her death, his heirs or devisee; or in case of a widow making such entry, her heirs or devisee, in case of her death — shall prove by two credible witnesses that he, she, or they have resided upon or cultivated the same for the term of five years immediately succeeding the time of filing the affidavit aforesaid, and shall make affidavit that no part of said land has been alienated, and that he has borne true allegiance to the Government of the United States; then, in such case, he, she, or they, if at that time a citizen of the United States, shall be entitled to a patent, as in other cases provided for by law: And provided, further, That in case of the death of both father and mother, leaving an infant child or children under twenty-one years of age, the right and fee shall inure to the benefit of said infant child or children, and the executor, administrator, or guardian may, at any time within two years after the death of the surviving parent, and in accordance with the laws of the State in which such children for the time being have their domicile, sell said land for the benefit of said infants, but for no other purpose; and the purchaser shall acquire the absolute title by the purchase, and be entitled to a patent from the United States, and payment of the office fees and sum of money herein specified.

## THE AMERICAN INDUSTRIAL REVOLUTION

### The Statue of Liberty

THE STATUE OF LIBERTY stands on Liberty Island in the Upper Bay of New York Harbor, United States. She commemorates the friendship of the peoples of the United States and France. Standing 302 feet (92 meters) high, including her pedestal, the Statue portrays a woman holding a torch in her raised right hand and a tablet proclaiming liberty, bearing the date July 4, 1776, in her left. A plaque at the pedestal's entrance is inscribed with a sonnet, "The New Colossus" (1883), by Emma Lazarus. It was written to help raise money for the pedestal. The text appears below.

A French historian, Edouard de Laboulaye, made the proposal for the statue after the American Civil War. Funds were contributed by the French people, and work began in France in 1875 under sculptor Frederic-Auguste Bartholdi. The statue was constructed of copper sheets, hammered into shape by hand and assembled over a framework of four gigantic steel supports, designed by Eugene-Emmanuel Viollet-le-Duc and Alexandre-Gustave Eiffel. In 1885, the completed statue, 151 feet 1 inch high and weighing 225 tons, was disassembled and shipped to New York City. The pedestal, designed by American architect Richard Morris Hunt and built within the walls of Ft. Wood on Bedloe's Island, was completed later. President Cleveland dedicated the statue, mounted on its pedestal, on Oct. 28, 1886. In the mid-1980s, the statue was repaired and restored by both American and French workers for a centennial celebration held in July, 1986.

### The New Colossus by Emma Lazarus

Not like the brazen giant of Greek fame,  
With conquering limbs astride from land to land;  
Here at our sea-washed, sunset gates shall stand  
A mighty woman with a torch, whose flame  
Is the imprisoned lightning, and her name  
Mother of Exiles. From her beacon-hand  
Glowing world-wide welcome; her mild eyes  
Command the air-bridged harbor that twin cities frame.  
"Keep, ancient lands, your storied pomp!" cries she  
With silent lips. "Give me your tired, your poor,  
Your huddled masses yearning to breathe free,  
The wretched refuse of your teeming shore.  
Send these, the homeless, tempest-tossed to me,  
I lift my lamp beside the golden door!"

## THE AMERICAN INDUSTRIAL REVOLUTION

### Biographies

**Directions:** Match the biographical information with the letter corresponding to a name from the list at the bottom of the page.

1. \_\_\_\_\_ American civil engineer responsible for much of the railroad construction in the western and southwestern United States during the nineteenth century.
2. \_\_\_\_\_ Naturalist and advocate of U.S. forest conservation who was largely responsible for the establishment of Sequoia and Yosemite National Parks in California.
3. \_\_\_\_\_ Labor organizer and Socialist Party candidate for U.S. president five times between 1900 and 1920.
4. \_\_\_\_\_ Scottish-born American audiologist best known as the inventor of the telephone in 1876.
5. \_\_\_\_\_ U.S. labor leader and first president of the American Federation of Labor.
6. \_\_\_\_\_ Founder of the meat packing firm and innovator of the refrigerated freight car for shipping meat.
7. \_\_\_\_\_ Drilled the first productive oil well in the United States at Titusville, Pennsylvania.
8. \_\_\_\_\_ U.S. industrialist and founder of the Standard Oil Company, which dominated the oil industry and was the first great U.S. business trust.
9. \_\_\_\_\_ American writer best known for her sonnet "The New Colossus," written to the Statue of Liberty.
10. \_\_\_\_\_ English engineer and inventor of the process by which iron ore was efficiently converted to steel.
11. \_\_\_\_\_ American inventor and industrialist who was chiefly responsible for the manufacture of the air brake.
12. \_\_\_\_\_ U.S. iron master who devised a purification process for the manufacture of steel.
13. \_\_\_\_\_ American manufacturer whose introduction of the first Kodak camera helped to promote large-scale amateur photography.
14. \_\_\_\_\_ Writer, explorer, and soldier, who founded the Boone and Crockett Club.
15. \_\_\_\_\_ Scottish-born American industrialist who led the enormous expansion of the American steel industry in the late nineteenth century. He was also one of the most important philanthropists of his era.
16. \_\_\_\_\_ Controversialist, humorous journalist, and critic of American life who commented that Baltimore smelled "like a billion polecats."
17. \_\_\_\_\_ American labor leader who led the Knights of Labor from 1879 to 1893.
18. \_\_\_\_\_ President of the United States, serving from 1885 to 1889 and from 1893 to 1897, who was responsible for groundbreaking forestry legislation.
19. \_\_\_\_\_ U.S. sociologist and proponent of Social Darwinism.
20. \_\_\_\_\_ American inventor responsible for the phonograph, the carbon-button transmitter for the telephone speaker and microphone, the incandescent lamp, and many other inventions.
21. \_\_\_\_\_ American financier and industrialist who organized the United States Steel Corporation.

- |                           |                          |                         |
|---------------------------|--------------------------|-------------------------|
| A. Bell, Alexander Graham | B. Bessemer, Sir Henry   | C. Carnegie, Andrew     |
| D. Cleveland, Grover      | E. Debs, Eugene          | F. Dodge, Grenville     |
| G. Drake, Edwin L.        | H. Eastman, George       | I. Edison, Thomas Alva  |
| J. Gompers, Samuel        | K. Kelly, William        | L. Lazarus, Emma        |
| M. Mencken, H.L.          | N. Morgan, John Pierpont | O. Muir, John           |
| P. Powderly, Terrence     | Q. Rockefeller, John D.  | R. Roosevelt, Theodore  |
| S. Sumner, William Graham | T. Swift, Gustavus       | U. Westinghouse, George |

**THE AMERICAN INDUSTRIAL REVOLUTION****Internet Resources**

The following Internet resources offer insights into some of the facets of the American industrial revolution:

**<http://www.ellisland.org>**  
The Ellis Island Homepage

**<http://sunp.nyit.edu/visions/liberty.html>**  
Historical and other interesting facts about the Statue of Liberty

**<http://www.nps.gov/stli/mainmenu.html>**  
The National Park Service Website

**[http://cmp.ucr.edu/exhibitions/immigration\\_id.html](http://cmp.ucr.edu/exhibitions/immigration_id.html)**  
The University of California and California Museum of Photography Website

**<http://www.kbs.citri.edu.au/~ming/result1/mp2.html>**  
Immigration Facts

**<http://www.adventure.com/encyclopedia/america.ellis.html>**  
Gateway to America

**<http://www.icgnet.com/users/phil/rvins/ellis/index.html>**  
Ellis Island Photographs

**<http://www.usda.gov:8000/history2/text3.html>**  
United States Department of Agriculture Homepage. Includes timeline of agriculture throughout American history

Find three additional sites of interest involving the American industrial revolution.

**THE AMERICAN INDUSTRIAL REVOLUTION****Quiz****True or False**

**Directions:** Indicate if a statement is true by placing a "T" or false by placing an "F" in the blank.

1. \_\_\_\_\_ The industrialization of America had no impact on the distribution of wealth; everyone made the same money and had the same financial opportunities.
2. \_\_\_\_\_ Social Darwinism espouses that the fittest members of a society will thrive, whereas the weakest will fail.
3. \_\_\_\_\_ Geography had little impact on the growth of cities during the American industrial revolution.
4. \_\_\_\_\_ Thomas Alva Edison invented the telephone.
5. \_\_\_\_\_ The Homestead Act of 1862 contributed greatly to westward expansion as people moved westward to take advantage of the government's offer of free land.

**Multiple Choice**

**Directions:** Circle the letter which best answers the question.

6. Where did the Union Pacific Railroad and the Central Pacific Railroad meet?
  - a. Promontory Point, Utah
  - b. San Francisco, California
  - c. Billings, Montana
  - d. Chicago, Illinois
  - e. Salt Lake City, Utah
7. During the urban transformation, what geographical segment of the population grew the most?
  - a. rural
  - b. city
  - c. suburban
  - d. farmers
  - e. miners
8. What factors led to the organization of labor?
  - a. wages
  - b. working conditions
  - c. Social Darwinism
  - d. a. and b.
  - e. all of the above
9. This man led the Knights of Labor.
  - a. Andrew Carnegie
  - b. Samuel Gompers
  - c. Terrence Powderly
  - d. John D. Rockefeller
  - e. Gustavus Swift
10. Fallow is defined as:
  - a. iron ore use in the production of steel
  - b. a refrigerated railway boxcar
  - c. the lack of sanitation in the inner city
  - d. wheat ideal for dry farming
  - e. a field that has been plowed but left without crop plantings

## THE AMERICAN INDUSTRIAL REVOLUTION Quiz (Continued)

### Fill-in-the-Blank

**Directions:** Fill in each blank with the correct word or phrase from the list below. Not all options on the list will be used.

11. A \_\_\_\_\_ is a business organized according to the regulations of the United States government.
12. The labor movement gave rise to \_\_\_\_\_, which represented the labor force in negotiations for wages, working conditions, and benefits.
13. The reaper, thresher, steel plow and combine were mechanical advances used in \_\_\_\_\_.
14. The movement of people from one culture or region to another is called \_\_\_\_\_.
15. \_\_\_\_\_ contributed to growing unrest in America's cities due to misunderstanding, fear, and ethnocentrism.
16. The \_\_\_\_\_ of 1890 gave the President authority to set aside public land marked by forest.
17. \_\_\_\_\_ was the American civil engineer responsible for much of the railroad construction in the western and southwestern United States during the nineteenth century.
18. As railway routes began to crisscross the country in the 1880's, the demand fell for \_\_\_\_\_ to relocate Texas herds.
19. An economic condition whereby a single seller or producer has exclusive ownership or control over the distribution and sales of his or her product is known as a(n) \_\_\_\_\_.
20. As local governments dawned in the growing American cities, the \_\_\_\_\_ became a resource for addressing the increasing everyday problems of urban living: transit, paving, water, sanitation, street lighting and cleaning, policing and fire protection.

industrialization  
geography  
immigration  
cultural diversity  
urban political machine  
Grenville Dodge  
Emma Lazarus  
middle-class reformers

mining  
agriculture  
holding company  
monopoly  
Samuel Gompers  
corporation  
cowboys  
ranchers

Social Darwinism  
Manifest Destiny  
Homestead Act  
miners  
transcontinental  
Forest Reserve Act  
unions  
sanitation