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# Industrialism, Immigration & Urbanization Remediation 2016

**A New Industrial Age****Section 1****The Expansion of Industry****Terms and Names**

**Edwin L. Drake** First person to use steam engine to drill for oil

**Bessemer process** Technique used to make steel from iron

**Thomas Alva Edison** Inventor of the light bulb

**Christopher Sholes** Inventor of the typewriter

**Alexander Graham Bell** Inventor of the telephone

**Before You Read**

In the last section, you read about the growth of the Populist movement. In this section, you will read how Americans used their natural resources and technological breakthroughs to begin building an industrialized society.

**As You Read**

Use a chart to list the resources and ideas that affected the industrial boom and how each contributed to industrialization.

**NATURAL RESOURCES FUEL INDUSTRIALIZATION (Pages 436–438)****What were America's important natural resources?**

In the years after the Civil War, advances in technology began to change the nation. There were three causes of these advances: a large supply of natural resources, an explosion of inventions, and a growing city population that wanted the new products.

One of the more important natural resources was oil. In 1840 a Canadian geologist discovered that kerosene could be used to light lamps. Kerosene was produced from oil. This increased Americans' demand for oil.

In 1859, **Edwin L. Drake** used a steam engine to drill for oil. This technological breakthrough helped start an oil boom. Oil-refining industries started in Cleveland

and Pittsburgh. There, workers turned oil into kerosene.

Oil produced yet another product—gasoline. At first, gasoline was thrown away. However, when the automobile became popular, gasoline was in great demand.

In addition to oil, Americans discovered that their nation was rich in coal and iron. In 1887, explorers found large amounts of iron in Minnesota. At the same time, coal production increased from 33 million tons in 1870 to more than 250 million tons in 1900.

Iron is a strong metal. However, it is heavy and tends to break and rust. Researchers eventually removed the element carbon from iron. This produced a lighter, more flexible metal that does not rust. It became known as steel. The **Bessemer process**, named after British

Section 1, *continued*

manufacturer Henry Bessemer, provided a useful way to turn iron into steel.

Americans quickly found many uses for steel. The railroads, with their thousands of miles of track, bought large amounts of the new metal. Steel was also used to improve farm tools such as the plow and reaper. It also was used to make cans for preserving food. Engineers used steel to build bridges. One of the most remarkable bridges was the Brooklyn Bridge. It connected New York City and Brooklyn. Steel also was used to build skyscrapers, such as the Home Insurance Building in Chicago.

1. Name two ways Americans used steel.

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**INVENTIONS PROMOTE CHANGE**

(Pages 438–439)

**How did the new inventions change Americans' way of life?**

Beginning in the late 1800s, inventors produced items that changed the way people lived and worked. In 1876, **Thomas Alva Edison** established the world's first research laboratory in Menlo Park, New Jersey. He used the lab to develop new inventions. Edison perfected an early light bulb there. He then worked to establish power plants to generate electricity.

Another inventor, George Westinghouse, developed ways to make electricity safer and less expensive.

The use of electricity changed America. By 1890, electricity ran machines such as fans and printing presses. Electricity soon became available in homes. This led to the invention of many appliances. Cities built electric streetcars. They made travel cheaper and easier.

In 1867, **Christopher Sholes** invented the typewriter. This led to dramatic changes in the workplace. Almost ten years later, in 1876, **Alexander Graham Bell** and Thomas Watson invented the telephone.

The wave of inventions during the late 1800s helped change Americans' daily life. More women began to work in offices. By 1910, women made up about 40 percent of the nation's office work force. In addition, work that had been done at home—such as sewing clothes—was now done in factories. Unfortunately, many factory employees worked long hours in unhealthy conditions.

Inventions had several positive effects. Machines allowed employees to work faster. This led to a shorter work week. As a result, people had more leisure time. In addition, citizens enjoyed new products such as phonographs, bicycles, and cameras.

2. Name two ways in which electricity changed people's life.

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**Section 1, continued**

After the Civil War, the United States was still a mostly rural nation. By the 1920s, it had become the leading industrial nation of the world. This immense change was caused by three major factors. Answer the questions for two of the factors.

**Factor 1: Abundant Natural Resources**

1. Which resources played crucial roles in industrialization?	2. How did Edwin L. Drake help industry to acquire larger quantities of oil?	3. How did the Bessemer process allow better use of iron ore?	4. What new uses for steel were developed at this time?
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**Factor 2: Increasing Number of Inventions**

5. How did Thomas Alva Edison contribute to this development?	6. How did George Westinghouse contribute to it?	7. How did Christopher Sholes contribute?	8. How did Alexander Graham Bell contribute?
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**Factor 3: Expanding Urban Population**

Provided markets for new inventions and industrial goods	Provided a ready supply of labor for industry
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**A New Industrial Age****Section 2****The Age of the Railroads****Terms and Names**

**transcontinental railroad** A railroad that crosses the entire country

**George M. Pullman** Inventor of the sleeping car

**Crédit Mobilier** Name of company involved in stealing of railroad money

**Munn v. Illinois** Court case that gave government right to regulate private industry

**Interstate Commerce Act** Law granting Congress authority to regulate railroad activities

**Before You Read**

In the last section, you read about how Americans used their natural resources and numerous inventions to begin transforming society. In this section, you will read about the growth of the nation's railroad industry and its effect on the nation.

**As You Read**

Use a diagram to take notes on the effects of the rapid growth of railroads.

**RAILROADS SPAN TIME AND SPACE (Pages 442–443)**

**How did the railroads change the way Americans told time?**

Before and after the Civil War, railroads were built to span the entire United States. In 1869, the nation completed work on its first **transcontinental railroad**—a railroad that crossed the entire continent. In the years that followed, railroad tracks spread throughout the country. By 1890, more than 200,000 miles of rail lines zigzagged across the United States.

Railroads made long-distance travel a possibility for many Americans. However, building and running the railroads was difficult and dangerous work. Those who did most of the work were Chinese and Irish immigrants and desperate out-of-work Civil War veterans. Accidents and diseases affected thousands of railroad

builders each year. By 1888, more than 2,000 workers had died. Another 20,000 workers had been injured.

Railroads eventually linked the many different regions of the United States. However, railroad schedules proved hard to keep. This was because each community set its own times—based mainly on the movement of the sun. The time in Boston, for example, was almost 12 minutes later than the time in New York.

To fix this problem, officials devised a plan in 1870 to divide the earth into 24 time zones, one for each hour of the day. Under this plan, the United States would contain four time zones: Eastern, Central, Mountain, and Pacific. Everyone living in a particular zone would follow the same time. The railroad companies supported this plan. Many communities also supported it.

Section 2, *continued*

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1. How did times zones first come about?

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**OPPORTUNITIES AND OPPORTUNISTS (Pages 443–444)**  
**How did the growth of the railroads affect the nation?**

Railroads made it easier for people to travel long distances. They also helped many industries grow. The iron, steel, coal, lumber, and glass industries all grew partly because the railroads needed their products. Railroads also increased trade among cities, towns, and settlements. This allowed many communities to grow and prosper.

Railroads led to the creation of new towns. In 1880, **George M. Pullman** built a factory on the prairie outside Chicago. There, workers made the sleeping cars he invented for trains. As demand for his sleeping cars rose, Pullman built a large town to house the workers he needed. Pullman created quality housing for his workers. But he tried to control many aspects of their lives. Eventually, his workers rebelled.

The railroad industry offered people the chance to become rich. The industry attracted many corrupt individuals. One of the most well-known cases of corruption was the **Crédit Mobilier** scandal. In 1868, some officers of the Union Pacific railroad formed a construction company called **Crédit Mobilier**. They gave their company contracts to lay railroad track at two to three times the actual cost. They kept all profits. To prevent the government from interfering, they paid off members of Congress. Eventually, authorities uncovered the scheme.

2. What was one positive and negative effect of the growth of railroads?

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**THE GRANGE AND THE RAILROADS (Pages 444–446)**  
**Why did the farmers fight the railroads?**

One group angered by corruption in the railroad industry were farmers. Farmers were upset for a number of reasons. First, they claimed that railroads sold government land grants to businesses rather than to families. They also accused the railroad industry of setting high shipping prices to keep farmers in debt.

In response to these abuses, the Grangers took political action. They convinced some states to pass laws regulating railroad activity. Members of the railroad companies challenged the states' rights to regulate them.

The battle reached the Supreme Court in 1877. In the case of *Munn v. Illinois*, the Court declared that government could regulate private industries in order to protect the public interest. The railroads had lost their fight.

A decade later, Congress passed the **Interstate Commerce Act**. The act gave the federal government even more power over the railroads. The railroad companies, however, continued to resist all government intervention.

Beginning in 1893, an economic depression struck the country. It affected numerous institutions—including the railroads. Many railroad companies failed. As a result, they were taken over by financial firms. By 1900, seven companies owned most of the nation's railways.

3. Give two reasons why farmers were upset with the railroad companies.

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**Section 2, continued**

As you read, take notes to answer questions about the growth of the railroads.

**Realizing that railroads were critical to the settlement of the West and the development of the nation, the federal government made huge land grants and loans to the railroad companies.**

<b>Benefits</b>	→	<p>The railroad companies built transcontinental and local lines.</p>	<p>The nation was transformed from a collection of regions into a united nation.</p>	<p>Railroad time became the nation's standard, linking Americans in one more way.</p>
<b>Drawbacks</b>	→	<p>The unchecked power and greed of the railroad companies led to widespread corruption and abuse of power.</p>		

<p>1. What problems did employees of the railroad companies face?</p>	<p>2. What was it like to live as a Pullman employee in the town of Pullman?</p>
<p>3. Who was involved in Crédit Mobilier, and what was the purpose of this company?</p>	<p>4. In what ways did the railroad companies use their power to hurt farmers?</p>
<p>5. Why didn't the decision in the <i>Munn v. Illinois</i> case succeed in checking the power of the railroads?</p>	<p>6. Why didn't the Interstate Commerce Act immediately limit the power of the railroads?</p>

## A New Industrial Age

### Section 3

# Big Business and Labor

## Terms and Names

**Andrew Carnegie** Scottish immigrant who became a giant in the steel industry

**vertical integration** Process in which a company buys out its suppliers

**horizontal integration** Process in which companies producing similar products merge

**Social Darwinism** Theory that taught only the strong survived

**John D. Rockefeller** Head of the Standard Oil Company

**Sherman Antitrust Act** Law that outlawed trusts

**Samuel Gompers** Union leader

**American Federation of Labor (AFL)** Name of union led by Gompers

**Eugene V. Debs** Leader of the American Railway Union

**Industrial Workers of the World (IWW)** Union of radicals and socialists nicknamed the Wobblies

**Mary Harris Jones** Organizer for United Mine Workers

## Before You Read

In the last section, you read about the growth of the railroad industry in the United States. In this section, you will read about the growth and power of big business in America and how workers united to improve conditions in the nation's growing industries.

## As You Read

Use a time line to take notes on the achievements and setbacks of the labor movement between 1876 and 1911.

### CARNEGIE'S INNOVATIONS; SOCIAL DARWINISM AND BUSINESS (Pages 447–449)

**How did Carnegie take control of the steel industry?**

Andrew Carnegie attempted to control the entire steel industry. Through **vertical integration** he bought companies that supplied his raw materials such as iron and coal, and railroads needed to transport the steel. He used **horizontal integration** by buying out or merging with other steel companies.

Carnegie's success helped popularize the theory of **Social Darwinism**. This theory, based on the ideas of biologist Charles Darwin, said that "*natural selection*" enabled the best-suited people to survive and succeed. Social Darwinism supported the ideas of competition, hard work, and responsibility.

1. Describe two ways in which Carnegie tried to control the steel industry.

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Section 3, *continued***FEWER CONTROL MORE; LABOR UNIONS EMERGE** (Pages 449–451)**How did entrepreneurs try to control competition?**

Most entrepreneurs tried to control competition. Their goal was to form a monopoly by buying out competitors or driving them out of business. **John D. Rockefeller** used the Standard Oil trust to almost completely control the oil industry. Rockefeller's ruthless business practices earned him huge profits, but caused people to label him a robber baron. In 1890, the **Sherman Antitrust Act** made it illegal to form a trust, but many companies were able to avoid prosecution under the law. The business boom in the United States bypassed the South which continued to suffer economic stagnation.

Workers responded to business consolidation by forming labor unions. Many workers worked long hours under dangerous conditions for low wages. Women, children, and workers in sweatshops worked under especially harsh conditions. The National Labor Union (NLU) was an early labor union that persuaded Congress to legalize an eight-hour day for government workers in 1868. The NLU excluded African-American workers who formed the Colored National Labor Union (CNLU). The Knights of Labor also enjoyed success but declined after the failure of a series of strikes.

2. Why did entrepreneurs form trusts?

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**UNION MOVEMENTS DIVERGE; STRIKES TURN VIOLENT**

(Pages 451–455)

**What were the two major types of unions?**

Two major types of unions made great gains. One was craft unions. **Samuel**

**Gompers** formed the **American Federation of Labor (AFL)** in 1886.

Gompers used strikes and collective bargaining— negotiations between labor and management to win higher wages and shorter workweeks. **Eugene V. Debs** believed in industrial unionism—a union of all workers, both skilled and unskilled in a single industry. He formed the American Railway Union (ARU). Debs and other workers turned to socialism. In 1905, a union of radicals and socialists was formed called the **Industrial Workers of the World (IWW)** or the Wobblies. In the West, Japanese and Mexican farm workers formed a union to improve conditions.

Unions used strikes to improve conditions. In 1877, workers for the Baltimore and Ohio railroad went out on strike. The strike was broken up when the railroad president persuaded President Rutherford B. Hayes to bring in federal troops to end the strike.

Later strikes turned violent. The Haymarket Affair took place in 1886. A bomb exploded at a demonstration in Chicago's Haymarket Square in support of striking workers. Several people were killed. Labor leaders were charged with inciting a riot and four were hanged although no one knows who actually set off the bomb. In 1892, steel workers and Pinkerton Guards fought a battle at Homestead, Pennsylvania, near Pittsburgh, that left dead on both sides. Two years later a strike against the Pullman Company led by Eugene Debs and his American Railway Union turned violent when federal troops were called out to break the strike.

**Mary Harris Jones**, known as Mother Jones, gained fame as an organizer for the United Mine Workers. The unions' struggle for better conditions was hurt by

**Section 3, *continued***

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government intervening on the side of management. Courts used the Sherman Antitrust Act against the workers. Despite the pressures of government action, unions continued to grow.

3. What were the two types of unions?

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**Section 3, *continued***

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As you read this section, answer the questions below about government's attempts to regulate big business.

**a. What is it?**

**b. How did it help businesses such as the Carnegie Company and tycoons like Andrew Carnegie?**

1. Vertical integration	a. b.
2. Horizontal integration	a. b.
3. Social Darwinism	a. b.
4. Monopoly	a. b.
5. Holding company	a. b.
6. Trust	a. b.

**c. How did it harm businesses such as Standard Oil and tycoons like John D. Rockefeller?**

7. The perception of tycoons as "robber barons"	
8. Sherman Antitrust Act	

## Immigrants and Urbanization

### Section 1

# The New Immigrants

## Terms and Names

**Ellis Island** Inspection station for immigrants arriving on the East Coast

**Angel Island** Inspection station for immigrants arriving on the West Coast

**melting pot** A mixture of different cultures living together

**nativism** Overt favoritism toward native-born Americans

**Chinese Exclusion Act** Act that limited Chinese immigration

**Gentlemen's Agreement** Agreement that limited Japanese emigration to U.S.

## Before You Read

In the last section, you read about the nation's labor union movement. In this section, you will read how millions of immigrants entered the United States, where they faced culture shock, prejudice, and opportunity.

## As You Read

Use a diagram to take notes on the causes and effects of immigration to the United States.

### THROUGH THE "GOLDEN DOOR"

(Pages 460–462)

#### Where did the immigrants come from?

Between 1870 and 1920, about 20 million Europeans immigrated to the United States. Many of them came from eastern and southern Europe.

Some immigrants came to escape religious persecution. Many others were poor and looking to improve their economic situation. Still others came to experience greater freedom in the United States. Most European immigrants arrived on the East Coast.

A smaller number of immigrants came from Asia. They arrived on the West Coast. About 200,000 Chinese immigrants came between 1851 to 1883. Many Chinese immigrants helped build the nation's first transcontinental railroad. When the United States annexed Hawaii in

1898, several thousand Japanese immigrants came to the United States.

From 1880 to 1920, about 260,000 immigrants arrived from various islands in the Caribbean Sea. They came from Jamaica, Cuba, Puerto Rico, and other islands. Many left their homelands because jobs were scarce.

Many Mexicans came to the United States as well. Some became U.S. citizens when the nation acquired Mexican territory in 1848 as a result of the Mexican War. About a million Mexicans arrived between 1910 to 1930 to escape turmoil in their country.

1. Name two regions of the world where immigrants to the U.S. came from.

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Section 1, *continued*

**LIFE IN THE NEW LAND**

(Pages 462–464)

**How did immigrants cope in America?**

Many immigrants traveled to the United States by steamship. On board the ship they shared a cramped, unsanitary space. Under these harsh conditions, disease spread quickly. As a result, some immigrants died before they reached America.

Most European immigrants to the United States arrived in New York. There, they had to pass through an immigration station located on **Ellis Island** in New York Harbor. Officials at the station decided whether the immigrants could enter the country or had to return. Any immigrant with serious health problems or a contagious disease was sent home. Inspectors also made sure that immigrants met the legal requirements for entering the United States.

Asian immigrants arriving on the West Coast went through **Angel Island** in San Francisco. The inspection process on Angel Island was more difficult than on Ellis Island.

Getting along in a new country with a different language and culture was a great challenge for new immigrants. Many immigrants settled in communities with other immigrants from the same country. This made them feel more at home. They also formed organizations to help each other.

2. Name two ways immigrants dealt with adjusting to life in the United States.

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**IMMIGRATION RESTRICTIONS**

(Pages 464–465)

**How did some Americans react to immigration?**

By the turn of the century, some observers called America a **melting pot**.

This term referred to the fact that many different cultures and races had blended in the United States.

However, this was not always the case. Many new immigrants refused to give up their culture to become part of American society.

Some Americans also preferred not to live in a melting pot. They did not like the idea of so many immigrants living in their country. The arrival of so many immigrants led to the growth of **nativism**. Nativism is an obvious preference for native-born Americans. Nativism gave rise to anti-immigrant groups. It also led to a demand for immigration restrictions.

On the West Coast, prejudice against Asians was first directed at the Chinese. During the depression of the 1870s, many Chinese immigrants agreed to work for low wages. Many American workers feared they would lose their jobs to the Chinese. As a result, labor groups pressured politicians to restrict Asian immigration. In 1882, Congress passed the **Chinese Exclusion Act**. This law banned all but a few Chinese immigrants. The ban was not lifted until 1943.

Americans showed prejudice against Japanese immigrants as well. In San Francisco, the local school board put all Chinese, Japanese, and Korean children in special Asian schools. This led to anti-American riots in Japan. President Theodore Roosevelt persuaded San Francisco officials to stop their separation policy. In exchange, Japan agreed to limit immigration to the United States under the **Gentlemen’s Agreement** of 1907–1908.

3. Give two examples of anti-immigration measures in the U.S.

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**Section 1, *continued***

As you read about people who immigrated to the United States in the late 19th and early 20th centuries, write notes to answer the questions below.

Immigrants from . . .	What were some of the countries they came from?	What reasons did they often have for coming to the U.S.?	Where did they often enter the U.S.?
1. Southern and Eastern Europe			<input type="checkbox"/> Ellis Island <input type="checkbox"/> Angel Island <input type="checkbox"/> Southeastern U.S. <input type="checkbox"/> Southwestern U.S.
2. Asia			<input type="checkbox"/> Ellis Island <input type="checkbox"/> Angel Island <input type="checkbox"/> Southeastern U.S. <input type="checkbox"/> Southwestern U.S.
3. Caribbean Islands and Central America			<input type="checkbox"/> Ellis Island <input type="checkbox"/> Angel Island <input type="checkbox"/> Southeastern U.S. <input type="checkbox"/> Southwestern U.S.

In each box below, identify an important difference that tended to exist between native-born Americans and some or all of the new immigrants around the turn of the century.

Native-Born	New Immigrants