The 2nd Industrial Revolution

After the Civil War was over, Americans began looking for ways to, not only rebuild, but to grow and develop new industries. There was an increasing push out West to find new land and the flourishing cities in California were demanding new transportation methods for gold and for supplies.

Historians have labeled the years from 1870-1914 as the period of the Second Industrial Revolution, a period of rapid growth in U.S. manufacturing the late 1800’s.

| First Industrial Revolution: coal, iron, railroads and textiles (fabrics) |
| Second Industrial Revolution: electricity, petroleum and steel |

...which led to

Electrically-run machinery, industrial equipment, personal appliances and medical breakthrough.

Steel & Oil

Many of the changes that occurred during this period had to do with new products simply replacing old ones. For instance, during this time, steel began to replace iron. Steel was being utilized for construction projects, industrial machines, railroads, ships and many other items. Steel production made it possible for rail lines to be built at competitive costs, which further spread transportation.

Steel is iron that has been made stronger by heat and the addition of other metals. In the mid-1850’s, Henry Bessemer invented the Bessemer process, a way to manufacture steel quickly and cheaply by blasting hot air through melted iron to quickly remove impurities. Rather than taking a day or more, the Bessemer process took only 10 to 20 minutes to produce several tones of quality steel!

Another important technological breakthrough in the late 1800s was the use of petroleum, or oil, as a power source. People had known about oil for thousands of years, but had few ways to use it. However, in the 1850’s, scientists invented a way to convert oil into a fuel called kerosene. Kerosene could be used for cooking, heating and lighting.

Electricity

In addition to kerosene, electricity became a critical source of light and power. The possible uses of electricity interested inventors like Thomas Edison. Edison eventually held more than 1,000 patents which are exclusive rights to make or sell an invention. In 1879, Edison and his team of inventors had created the electric light bulb that could be used by the common person. Edison realized that few homes or businesses
during that time could get electricity, so he built the first power plant that began supplying electricity to dozens of New York City buildings in September 1882. In the late 1880’s, George Westinghouse built a power system that could send electricity across many miles.

Before the introduction of public electricity, candles and gas lamps were used to light homes and factories and therefore many activities were simply done in the daytime. The use of electricity changed the way people worked and lived. With electric lighting and energy, factories and plants could now work 24 hours a day to manufacture their products. This, then, meant longer workdays for employees, and many people found themselves working 10-16 hours a day.

**Big Business**

The Industrialization of America caused many new businesses to form. In the late 1800s many entrepreneurs (people who take the risk to start a new business) formed their businesses as corporations, businesses that sell portions of ownership to several investors. The investors who own portions of the corporation are called stockholders. Stockholders in a corporation have advantages over the owners: stockholders are not responsible for business debts or failures. If the corporation fails, the stockholders only lose the money that they invested like the leaders of the corporation.

The leaders of these corporations, such as John D. Rockefeller, Andrew Carnegie, or Leland Stanford, were some of the most widely respected members of American society in the late 1800s. They became extremely wealthy by producing large amounts of industrial products and consumer products (items purchased and consumed by the public). Political leaders praised prosperous businesspeople as examples of American hard work, talent and success.

Problems began arising however.

- Pollution and waste began to affect the cities.
- Many business owners paid very low wages and allowed their employees to work in very poor working conditions. Low lighting, unsafe machinery, long tedious hours and back-breaking work were common in factories and plants.
- Many families were paid so low, they made their children quit school to get a job as well. Children as young as 5 or 6 worked long hours for very low pay.

Many business leaders justified their business methods through their belief in social Darwinism. Social Darwinists thought that Darwin’s survival of the fittest theory decided which human beings would succeed in business and in life in general.

Soon, people began to protest and force change in America. The Industrial Revolution brought both wonderful technological advances and social change.
The 2nd Industrial Revolution Reader
Question Set

**Directions:** Answer each question in a complete sentence. When you have completed answering the questions you will put this in the classwork/homework section of your notebook. If you don’t finish answering all the questions in class, you must finish it for homework.

1. What is the time period (years) that historians have labeled as the Second Industrial Revolution?

2. When combining the First and Second Industrial Revolutions together, what “results” did the revolutionary advancements lead to?

3. What is steel?

4. Describe the Bessemer process. What effect did the Bessemer process have on the production of steel?

5. What EFFECT did the invention of electric lighting have on how Americans worked?

6. Describe a PRO and a CON to the rise of big business during the Industrial Revolution.

7. What is Social Darwinism? Do you agree or disagree with Social Darwinism? Explain your response.