



The Industrial Revolution in America

The Big Idea

The Industrial Revolution transformed the way goods were produced in the United States.

Main Ideas

- The invention of new machines in Great Britain led to the beginning of the Industrial Revolution.
- The development of new machines and processes brought the Industrial Revolution to the United States.
- Despite a slow start in manufacturing, the United States made rapid improvements during the War of 1812.



Next

Main Idea 1: The invention of new machines in Great Britain led to the beginning of the Industrial Revolution.

- Most people at the beginning of the 1700s were farmers who made most of what they needed by hand.
- Skilled workers, such as blacksmiths, carpenters, and shoemakers, made goods by hand in the towns.
- People began using machines to make the manufacturing process more efficient.
- The **Industrial Revolution**, a period of rapid growth using machines to make goods, arose in Great Britain in the mid-1700s.



Previous



Next

Textile Industry

- The first breakthrough in the Industrial Revolution was in how **textiles**, or cloth goods, were made.
- **Richard Arkwright**, an Englishman, invented a spinning machine in 1769 called the water frame, which replaced hand spinning.
- The water frame used flowing water as a source of power.
 - Could produce dozens of cotton threads at the same time
 - Lowered the cost of cotton production and increased the speed of textile production
- Merchants built textile mills near rivers and streams.
- Great Britain soon built the world's most productive textile manufacturing industry.



Previous



Next

Main Idea 2: The development of new machines and processes brought the Industrial Revolution to the United States.

- **Samuel Slater** brought the secrets of textile mill manufacturing from Great Britain to the United States.
- The textile industry arose in the Northeast, introducing the Industrial Revolution to the United States.



Previous



Next



Manufacturing Breakthroughs

- U.S. factories needed better **technology**, or tools, to manufacture muskets.
- Inventor **Eli Whitney** developed musket factories using water-powered machinery.
- Whitney introduced the idea of **interchangeable parts**, or parts of a machine that are identical, to make musket manufacturing easier.
- Interchangeable parts sped up the process of **mass production**.



Previous



Next



Main Idea 3: Despite a slow start in manufacturing, the United States made rapid improvements during the War of 1812.

- Lower British prices on manufactured goods made it difficult for American manufacturing to grow.
- American manufacturing was limited to cotton goods, flour milling, weapons, and iron products.
- The War of 1812 cut off trade with Great Britain, allowing manufacturing in the United States to prosper and expand.
- Americans realized that the United States had been relying too heavily on foreign goods.



Previous



Next

Changes in Working Life

The Big Idea

The introduction of factories changed working life for many Americans.

Main Ideas

- The spread of mills in the Northeast changed workers' lives.
- The Lowell system revolutionized the textile industry in the Northeast.
- Workers organized to reform working conditions.



Previous



Next

Main Idea 1: The spread of mills in the Northeast changed workers' lives.

- Factory jobs usually involved simple, repetitive tasks done for low pay.
 - Could produce dozens of cotton threads at the same time
- The mill industry filled jobs by hiring whole families and paying children low wages.
 - Built housing for workers and provided a company store
- Samuel Slater's strategy of hiring families and dividing factory work into simple tasks was called the **Rhode Island system**.



Previous



Next

Main Idea 2: The Lowell System revolutionized the textile industry in the Northeast.

- **Francis Cabot Lowell** created a new system of mill manufacturing in 1814, called the **Lowell system**.
- The Lowell system involved
 - Employing young, unmarried women, who were housed in boardinghouses
 - Providing clean factories and free-time activities for its employees
 - Having mills that included both spinning thread and weaving in the same plant



Previous



Next

Main Idea 3: Workers organized to reform working conditions.

Deteriorating Working Conditions

- Employees worked 12-to-14 hour days in unhealthy conditions.
- Craftsmen's wages dropped in competition against cheap manufactured goods.
- Wages of factory workers dropped as they competed for jobs.

Trade Unions Formed

- Craftsmen formed **trade unions** to gain higher wages and better working conditions.
- Factory workers also formed trade unions.
- Labor unions staged protests called **strikes**, refusing to work until employers met their demands.



Previous



Next

Labor Reform Efforts

- Millworker **Sarah G. Bagley** helped lead the union movement in Massachusetts.
- Bagley's union campaigned to reduce the 12-to 14-hour workday to a 10-hour workday.
- Several states passed 10-hour workday laws, giving Union workers some victories.
- In other states, the workday remained long and child labor prevailed.



Previous



Next

The Transportation Revolution

The Big Idea

New forms of transportation improved business, travel, and communication in the United States.

Main Ideas

- The Transportation Revolution affected trade and daily life.
- The steamboat was one of the first developments of the Transportation Revolution.
- Railroads were a vital part of the Transportation Revolution.
- The Transportation Revolution brought many changes to American life and industry.



Previous



Next



Main Idea 1: The Transportation Revolution affected trade and daily life.

- The 1800s gave rise to a **Transportation Revolution**: a period of rapid growth in new means of transportation.
- Transportation Revolution created boom in business by reducing shipping costs and time.
- Two new forms of transportation were steamboat and steam-powered trains.
 - Goods, people, and information were able to travel rapidly and efficiently across the United States.



Previous



Next

Main Idea 2: The steamboat was one of the first developments of the Transportation Revolution.

- **Robert Fulton** invented the steamboat, testing the *Clermont* in 1807.
- Steamboats increased trade by moving goods more quickly and more cheaply.
- More than 500 steamboats were in use by 1840.
- ***Gibbons v. Ogden*** (1824): The Supreme Court reinforced the federal government's authority to regulate trade between states.
 - Gibbons argued that a federal license meant he could use New York waterways without another license.
 - The Supreme Court agreed with Gibbons.



Previous



Next

Main Idea 3: Railroads were a vital part of the Transportation Revolution.

- Steam-powered trains had been developed in Great Britain, but it took 30 years for the idea to catch on in the United States.
- **Peter Cooper** raced his *Tom Thumb* locomotive against a horsedrawn railcar in 1830, proving its power and speed despite losing because of a breakdown near the end of the race.
- About 30,000 miles of railroads linked American cities by 1860.
- The U.S. economy surged as railroads moved goods cheaply to distant markets.



Previous



Next

Main Idea 4: The Transportation Revolution brought many changes to American life and industry.

- People in all areas of the nation had access to products made and grown far away.
- Railroads contributed to the expansion of the nation's borders.
- Cities and towns grew up along railroad tracks.
- Growing prosperity of the nation encouraged Americans to take pride in their country.



Previous



Next

Impact of Railroads

- Coal replaced wood as a source of fuel as trains grew bigger.
- Railroads helped create the coal industry.
- Coal, shipped cheaply on trains, became the main fuel in homes and in the emerging steel industry.
- Railroads helped the lumber industry grow, leading to large-scale deforestation.
- Railroads caused cities to grow, including Chicago, which became a transportation hub.



Previous



Next

More Technological Advances

The Big Idea

Advances in technology led to new inventions that continued to change daily life and work.

Main Ideas

- The telegraph made swift communication possible from coast to coast.
- With the shift to steam power, businesses built new factories closer to cities and transportation centers.
- Improved farm equipment and other labor-saving devices made life easier for many Americans.
- New inventions changed lives in American homes.



Previous



Next

Main Idea 1: The telegraph made swift communication possible from coast to coast.

- In 1832, **Samuel F. B. Morse** perfected the **telegraph**—a device that could send information over wires.
 - The device did not catch on until the 1844 Democratic National Convention, when the nomination was telegraphed to Washington.
- A Morse associate created **Morse code** to communicate messages over the wires.
 - Morse code turned pulses of electric current into long and short clicks.
 - Clicks, also called dots and dashes, were arranged in patterns representing letters of the alphabet.
- The telegraph grew with the railroad; the first transcontinental telegraph line was completed in 1861.



Previous



Next



Chapter 12

Main Idea 2: With the shift to steam power, businesses built new factories closer to cities and transportation centers.

- The shift from water power to steam power allowed owners to build factories anywhere.
- Factories were shifted closer to cities and transportation centers.
- Cities became centers of industrial growth.



Previous



Next



Main Idea 3: Improved farm equipment and other labor-saving devices made life easier for many Americans.

- **John Deere** designed a steel plow in 1837 that replaced the less efficient iron plow.
- **Cyrus McCormick** developed a mechanical reaper in 1831, which quickly and efficiently harvested wheat.
 - McCormick used a new method to encourage sales, advertising.
 - He also allowed people to buy on credit and provided repairs and spare parts for his machines.
- These inventions allowed farmers to plant and harvest huge crop fields, helping the country prosper.



Previous



Next

Main Idea 4: New inventions changed lives in American homes.

- The sewing machine, invented by Elias Howe and improved by **Isaac Singer**, made home sewing easier.
- Ice boxes and iron cookstoves improved household storage and preparation of food.
- Mass-produced goods, such as clocks, matches, and safety pins, were more affordable and added convenience to households.



Previous



Next