

The Industrial Revolution

Big Idea

The Industrial Revolution changed the way people lived and worked. As you read, use a table like the one below to name important inventors mentioned in this section and their inventions.

Inventors	Inventions



Notes

Read to Learn

The Industrial Revolution in Great Britain *(page 614)*

Determining Cause and Effect

What effect resulted from each of the causes listed below?

changes in farming

new machines

railroads

The Industrial Revolution began in Great Britain in the 1780s. Changes in farming had increased food production and reduced the need for farm labor, so workers were available for factories. Parliament also passed **enclosure movement** laws, which fenced off common lands and forced many peasants to move to towns, where the factories were.

Britain also had wealthy people with money, or **capital**, to invest. The country had natural resources, such as rivers, iron, and coal. **Entrepreneurs** found new ways to make profits. With growing cities and a vast colonial empire, there were markets at home and abroad.

James Hargreaves invented a spinning jenny. Edmund Cartwright invented a water-powered loom. These new machines made spinning and weaving cotton into cloth much faster. James Watt invented a steam engine and a way for his engine to drive machinery. The new spinning and weaving machines had to be near the source of power: water or steam. Work moved from homes (**cottage industry**) into factories. Children as well as adults worked long hours in the factories.

Better-quality iron was produced through a process called **puddling**. Richard Trevithick built a steam locomotive, and George Stephenson designed wheels that would let it run on a railway. Railroads carried resources to the factories and manufactured goods to markets. Building railroads created new jobs. More people could afford the mass-produced factory products, so business owners built more factories. The economy grew.

The Spread of Industrialization *(page 618)*

Making Generalizations

Based on the text, what general statement can be made about the role of government in industrial growth?

The Industrial Revolution spread faster to some countries than to others. Most countries did not have as much wealth as Great Britain had. Also, government policies influenced the rate of industrialization.

On the continent of Europe, the first three industrialized areas were Belgium, France, and the German states. Governments helped by providing money for roads, canals, and railroads. By 1850 railroads connected many parts of Europe.

Industrialization also grew quickly in the United States. Because the country was so large, transportation was especially important. Thousands of miles of roads, canals, and railroads were built to connect east and west. Robert Fulton built the first paddle-wheel steamboat in 1807, making river transport easier. The whole country became one large market for goods made in the northeastern United States.

American factory workers typically came from farm families. Most of the textile workers were women and girls. Sometimes whole families would work together in a factory.

Social Impact in Europe *(page 619)*

Problems and Solutions

If you were a member of Parliament in Britain in the 1800s, what law might you propose to improve conditions for the industrial working class?

Huge social changes resulted from the Industrial Revolution. Between 1750 and 1850, the population of Europe almost doubled. Cities grew and the number of large cities increased. One reason was the increasing food supply. The only major famine in Western Europe was the Irish potato famine of 1840s, caused by a fungus. Many Irish people died, and many more migrated to the United States.

Industrial capitalism was an economic system based on industrial production. It gave rise to new social classes: the industrial middle class and the industrial working class. Someone who ran the factories or developed the markets was a member of the industrial middle class, or *bourgeois*. The industrial working class, who worked in a factory or mine, toiled long hours in dangerous, unhealthy settings. Conditions in textile mills and coal mines were especially harsh.

Poor conditions in cities and factories gave rise to reform movements. The Factory Act of 1833 limited child labor in Britain. Some reformers hoped to replace industrial capitalism with **socialism**. In socialism, the public would own the means of production, such as factories. Early socialists thought this would make society fairer.

