

The Industrial Revolution in Great Britain

Glossary

Industrial revolution	The changes that took place in Britain and other countries during the 18th and 19th centuries as a result of industrialisation
Mechanisation	The equipping of industry with machines
Agriculture	The process of producing food, and fibres by farming of certain plants or raising animals
Economy	The system of how money is used within a particular country
Industry	The process of making products by using machines and factories
Mass production	The production of many products in one go e.g. textiles
Poverty	The lack of basic human needs such as clean water, nutrition, healthcare, education and shelter
Slums	The squalid part of a city, full of overcrowded houses in poor conditions
Sanitation	A system (e.g. plumbing) that disposes of human waste
Workhouse	A place where people who were too poor to support themselves received food and lodging in return for doing work. Conditions were harsh.
Empire	A group of countries controlled by one country.

From 1750 to 1900 Britain went through a process of huge change in a number of key areas:

- **Agriculture** - New tools, fertilizers and harvesting techniques were introduced, resulting in increased productivity and agricultural prosperity.
- **Industry** - Before the Industrial Revolution, Britain was a rural country, most people lived off the land with livestock. People began to realise that coal and steam could be used to power factories, large machines, flour and cotton mills. This reduced the time it took to make something and increased the amount that could be made and so the Industrial Revolution began. Factories sprung up all over the country. The increase in factories brought thousands of new jobs and towns expanded. People would migrate to the towns attracted by reliable work and pay from the factories. Houses for workers were built closer to the factories.
- **Transport and communications** - Thomas Telford built roads and canals in the 1700s and George Stephenson and Isambard Kingdom Brunel oversaw the 'Railway Mania' of the 1800s. Better transport links helped boost trade by transporting people and goods quickly and cheaply all across the country for the first time.
- **Technology** - There were also many scientific discoveries and technological inventions that changed society and industry. Changes to sanitation and medical treatment such as the work of John Snow and Edward Jenner improved people's quality of life.

Key Inventions of the Industrial Revolution

The Steam Engine - 1717

Thomas Newcomen invented the first steam engine. It would later be improved by James Watt which meant steam engines could replace water and horse power in a wide variety of industries, which in turn allowed factories to be built anywhere.

The Water Frame - 1769

Richard Arkwright invented a machine, powered by water, to spin cotton into yarn, quickly and easily. His machines did not need skilled operators so Arkwright paid unskilled women and others to work on them. This invention allowed factories and mills to be built.

The Spinning Jenny - 1770

James Hargreaves, a British carpenter and weaver, invented the spinning jenny. The machine spun more than one ball of yarn or thread at a time, making it easier and faster to make cloth. This allowed more workers to make cloth more cheaply and increases the amount of factories built.

The Locomotive - 1814

Richard Trevithick was a pioneer in early steam engine technology. He developed a new high-pressure steam engine which could be used to reliably move goods and passengers. This invention made transport much easier and quicker.

Important individuals of the Industrial Revolution

James Watt

Known as the 'Father of the Industrial Revolution'. He improved the steam engines so they could be smaller; use less coal and were used in factories throughout England.

George Stephenson

A British civil and mechanical engineer who was known as the "Father of Railways".

Isambard Kingdom Brunel

A British civil engineer - one of the greatest figures in engineering history. He created ground-breaking designs and ingenious constructions. Brunel built railways and ships and opened up Britain to a new network of industry.

Robert Peel

Created and supported the Factories Act of 1844 which restricted the number of hours that children could work in factories. He also set safety standards for machinery.

Queen Victoria

Queen of the United Kingdom from 1837 to 1901. She came to the throne at the age of 18 and encouraged great domestic change and growth.