



The Railways



Timeline

1500	1750	1812	1825	1850	1863	1879	1912	1968
Railways are used in mines to move coal and minerals	Wooden and iron rails pulled by horses to move coal to harbours	Invention of the steam train	The first railroad opens in Britain	Luxury steam trains with soft seats, sleeping and dining	The Metropolitan is opened as the first underground railway	The first electric train presented in Berlin (Germany)	First diesel locomotive runs in Switzerland	The first high speed trains run in Japan

Key Vocabulary

diesel	These locomotives burn diesel as fuel and were far more powerful than previous steam locomotives.
electric	Powered from electricity which they collect from overhead cables.
freight	Incredibly long trains (sometimes miles), often with more than one locomotive used to transport goods.
high-speed	Initially produced in Japan but now international, the French TGV held the world record for travelling 357mph!
Industrial Revolution	Factories start up and minerals are mined with people flocking to cities for work.
locomotive	Engines which provide the power to pull a whole train made up of carriages or wagons.
Mallard	Fastest steam train built by Sir Nigel Gresley, which had a stream-lined casing setting a world record of 126mph.
Metropolitan	The first underground railway created beneath the streets of London. Paris and then New York opened shortly after.
Rainhill Trials	The Liverpool and Manchester railway competition to find the best locomotive, won by Stephenson's Rocket.
steam	Powered by burning coal. Steam was fed into cylinders to move long rods (pistons) and make the wheels turn.

General Knowledge

The Need for Effective Transportation

The increased use of factories and need for raw materials (due to the industrial revolution between 1750s -1850s), along with an increase in population (and need for food) meant Britain needed a way to transport larger amounts, quicker than ever before. Roads were not good enough and canals were a slow form of transportation.

Railway Mania!

After the invention of the steam engine, railways really started to take off. Stephenson's Rocket was the first to transport passengers in 1830 from Manchester to Liverpool and by 1848 over 7000km of railway track had been built connecting London to most major cities.

Positive Effects

Seaside resorts developed making cheap day trips possible, the delivery of post became faster, factory owners could get raw materials and products to market faster, national newspapers developed, suburbs of towns developed as richer people moved there to travel to work by train, it created more jobs, it allowed children to travel into cities to attend schools and travel became faster and cheaper generally.

Negative Effects

Pollution increased, canals and stage coach companies could not compete with locomotives and coaching inns lost

Famous Figures

Thomas Savery (1650-1715)

Thomas Savery was an English inventor and engineer, born in England. He invented the first commercially used steam powered device, a steam pump which is often referred to as an "engine".

James Watt (1736-1819)

Scottish engineer and inventor whose steam engine contributed substantially to the Industrial Revolution.

George Stephenson (1781-1848)

He worked on the development of railway tracks and bridge building and also designed the 'Rocket' which won the Rainhill Trials in 1829.

Isambard Kingdom Brunel (1806-1859)

famous engineer, Isambard Kingdom Brunel, played a key role in Britain's industrial revolution, designing and constructing railway lines, bridges, tunnels and docks around the country, as well as providing massive advances in naval architecture.

Mountain railways use special toothed rails (racks) and a cog which mesh together to slowly pull the train up a mountain. No power goes to the wheels as they are only used to guide the train on the track.