

# Transport: Railways

Summer 2, Year 4

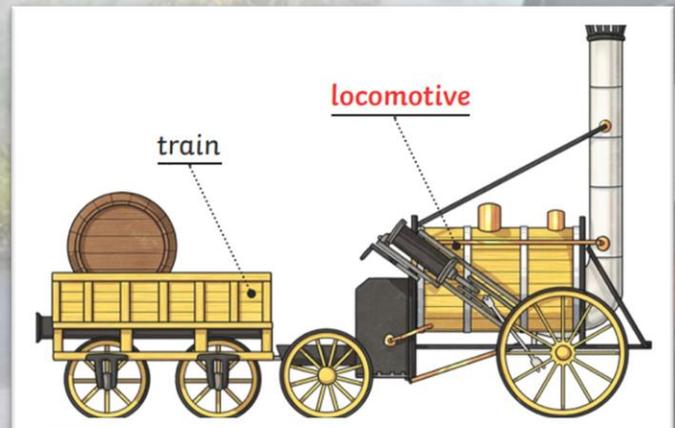


Key Vocabulary	
<b>locomotive</b>	'Moving engine'. A vehicle that moves using its own power.
<b>nationalised</b>	Under the government's control and management.
<b>passenger</b>	A person riding in a vehicle.
<b>privatised</b>	Run by individual, private companies.
<b>railroad</b>	A old term for railway.
<b>Rainhill Trials</b>	A competition designed to find the <b>locomotive</b> fit to run on the new Liverpool to Manchester line in 1829.

- Key questions:
- What is transport?
  - Can you name different types of transport?
  - What is a train?
  - What is a locomotive?
  - Can you describe how the first trains and railways were developed?
  - Describe the similarities and differences of different steam locomotives.
  - Describe the impact of the first railways on different aspects of society?
  - What are different types of engines?



- ### The First Trains
- The first **railroads** in Britain were mine carts pulled along wooden tracks by horses.
  - Thomas Savery invented and made one of the first steam engines in 1698.
  - In 1807, the first **passenger** railway opened in South Wales. Horses pulled carriages along tracks.



- Useful links:
- <https://www.bbc.co.uk/bitesize/articles/z94r3j6#zctng7h>
  - <https://www.bbc.co.uk/bitesize/articles/zmbk8hw>
  - <https://www.bbc.co.uk/bitesize/articles/z88jmbk>

## Types of Engines



**Steam** - Works by burning coal and making steam in a boiler which is used to power the pistons to turn the wheels.



**Diesel** - Diesel is mixed with oxygen and squashed which creates a very high temperature. This causes an explosion which is used to power the engine.



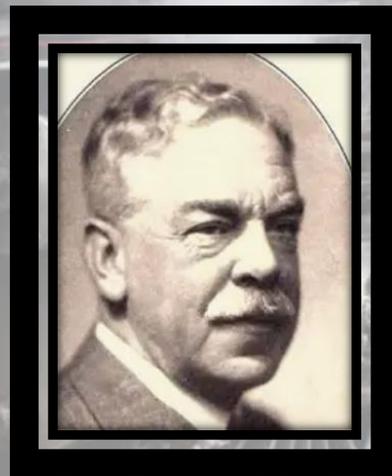
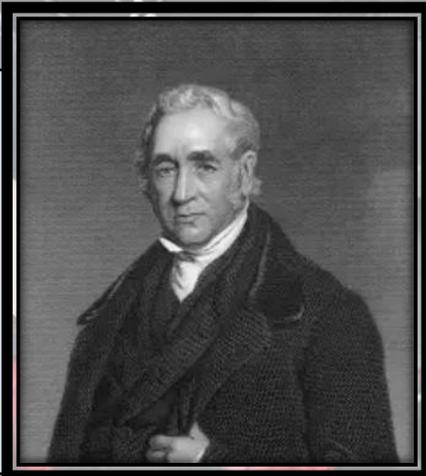
**Electric** - Overhead lines power the trains with electricity.



**High-Speed Trains** - These trains have special tracks, carriages and wagons. They can travel between 125mph and 177mph.

Rocket	Flying Scotsman	Mallard	Evening Star
			
George Stephenson 1829	Sir Nigel Gresley 1923	Sir Nigel Gresley 1938	RA Riddles 1960
Record speeds of 29mph (miles per hour).	First steam <b>locomotive</b> to travel non-stop from London to Edinburgh.	Broke the world record in 1938 for the fastest ever steam <b>locomotive</b> - 126mph.	The last steam <b>locomotive</b> for British Railway.
Won the <b>Rainhill Trials</b> .	The first steam <b>locomotive</b> to reach a top speed of 100mph.	Travelled nearly 1.5 million miles in its 25-year career.	Could transport <b>passengers</b> at over 90mph.

George Stephenson was many things. Though, he is most well known as the 'Father of Railways'. He built the first steam powered locomotive and railways for it.



Sir Herbert Nigel Gresley was a British railway engineer. He was one of Britain's most famous steam locomotive engineers, who rose to become Chief Mechanical Engineer (CME) of the London and North Eastern Railway (LNER)