

Introduction

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This support pack contains the following materials:

- The article that you can listen to in the podcast
- An optional comprehension activity based on the article
- Links to other activities on the LearnEnglish website on this theme (transport).

Read the article

Trains: past, present and future

by John Russell

Why did railways develop?

Railways are not a modern invention as most of us think. The idea of transporting things and people on rails has been around for a long time. Rails were made of wood, stone or metal, and railway wagons were pulled by horses, some were even wind powered and had sails. At the start of the Industrial Revolution in Britain, people needed to transport raw materials such as coal, so created a network of canals and rail links between towns. But canals and horsepower were a very slow way to move things around the country, so the speed of railway wagons needed to be increased.

How did steam engines help?

By 1800 many industries were using steam engines, designed by James Watt (from where we get the electrical measurement - Watt). Richard Trevithick, a Cornish engineer, refined Watts' invention and after failing to build a steam powered road vehicle, he designed the first locomotive for an Iron Works in Wales. He called it a 'puffer' because of the noise it made, and on its first journey it travelled at almost 8 km/h an hour! Unfortunately, it was so heavy that it broke the rails - it only made three journeys. But it had shown that steam engines could be used to move trains, and speeds began to increase.

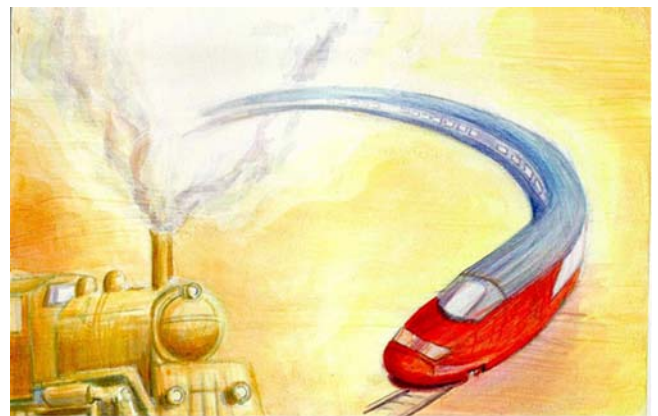
When was the first accident?

By 1829 locomotives were travelling at speeds of over 45km/h and the first public railway had been opened, the Stockton and Darlington Railway. The most famous early locomotive was The Rocket. In 1833 it won a competition organised by the owners of the Manchester and Liverpool railway, to find the best locomotive for their new

line. Unfortunately, during the competition, a Member of Parliament wasn't careful as he crossed the tracks and The Rocket knocked him down. He died later. This was one of the first train accidents in history.

What was the Golden Age of Steam?

The next 130 years can be described as a Golden Age of Steam. Railways were built all over the world, and the size, speed and comfort of trains continued to increase. By 1870 it was possible to cross America by train, and the building of railways in many other countries allowed people and progress to move quickly across the world.



There were famous trains and famous journeys. The Orient Express started in 1883 and carried people in luxury through more than 13 countries between France and Turkey. The Flying Scotsman travelled non-stop from London to Edinburgh, between 1928 and 1963, and reached speeds of over 130 km/h. The Trans-Siberian railway was finished in 1916, and is still the longest railway line in the world. It goes between St. Petersburg and Vladivostok, is over 9000 km

long and even today the journey takes over a week.

The fastest steam train in the world was The Mallard. This locomotive travelled up and down the east coast of England between London and York, and in 1938 reached 202 km/h.

What replaced steam engines?

Although it is still possible to travel on the Trans-Siberian railway, and take the Orient Express from Paris to Vienna, steam trains such as the Mallard or Flying Scotsman, have not travelled regularly for almost 30 years in many countries. Diesel powered locomotives or trains running on electrified lines now run on most railways. Modern trains are cleaner and much faster than steam engines but many people still miss the puffing sound and the romance of steam.

How fast can trains travel now?

Quite a few countries now use high speed trains.

The famous Bullet Train in Japan and the TGV in France can both carry passengers at speeds of over 300km/h. Journey times are now much shorter, and trains can travel on some unusual routes; up hills, through mountains, even under the sea. Euro-tunnel was opened in 1994 and connects Britain to France through a railway that goes under the sea.

How can trains further develop?

The future of train travel could be in Maglev trains. These trains are supported by electro-magnets and hover off the ground. Some countries are already using this technology in cities, and others are planning to use it on longer journeys. At the moment they can go more than 500km/h, but some engineers think speeds of over 1000 km/h are possible – some even think they could be used to launch space shuttles! Trains have come a long way since Richard Trevithick's puffer.

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Glossary

coast (n): the land next to or close to the sea.

comfort (n): a pleasant feeling of being relaxed.

electrify (v): to make a machine or system operate using electricity.

hover (v): to stay in one place in the air.

knock sb down (phr v): to hit someone with a vehicle and injure or kill them.

locomotive (n): the engine of a train.

luxury (n): great comfort, especially as provided by expensive and beautiful things.

magnet (n): an object that is able both to attract iron and steel objects and also push them away.

network (n): a large system consisting of many similar parts that are connected together to allow

movement or communication between the parts.

rails (n): one of the two bars fixed to the ground on which trains travel.

refine (v): to improve an idea, method, system, etc. by making small changes.

steam engine (n): a machine that uses the energy from steam to produce movement.

tracks (n): the pair of long metal bars fixed on the ground at an equal distance from each other, along which trains travel.

wagons (n): a vehicle with four wheels, usually pulled by horses or oxen, used for transporting heavy goods, especially in the past.