

# THE RAILWAYS

WHAT WILL YEAR 3/4 BE LOOKING AT IN THE SECOND AUTUMN 2025 TERM?

## WHAT ARE WE LEARNING ABOUT?

English	Narrative based on The Iron Man Poetry Instructions
Maths	Addition & Subtraction Multiplication & Division Reasoning Problems
Science	Forces & Magnets
Art	Texture
Computing	Spreadsheets
French	Instruments
History	The Railways in Britain
Music	Samba
PE	Volleyball Dance
PSHE	Jigsaw: Celebrating Differences
RE	Christianity: Christmas
DT	Creating a lever using recycled material

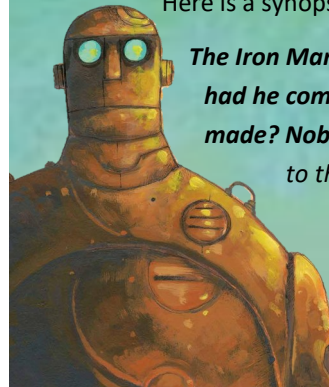
## CAN YOU FIND OUT?

- HAVE YOU EVER BEEN ON A TRAIN? WHERE DID YOU GO?
- WHAT MAGNETIC THINGS DO YOU HAVE AROUND THE HOUSE?

## THE IRON MAN

This term in English, we will be writing instructions, looking at poetry and developing a narrative based on the book *The Iron Man*.

Here is a synopsis of the novel below:



*The Iron Man came to the top of the cliff. Where had he come from? Nobody knows. How was he made? Nobody knows. Mankind must put a stop to the dreadful destruction by the Iron Man and set a trap for him, but he cannot be kept down. Then, when a terrible monster from outer space threatens to lay waste to the planet, it is the*

## MATHS

In Maths this term, we will continue to look at **addition** (+) and **subtraction** (-), and start to look at **multiplication** (x) and **division** (÷). We will also be continuing with the written methods and linking these to **reasoning** and **problem solving** questions.

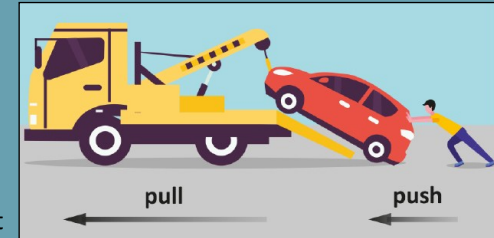
$$\begin{array}{r} 789 \\ + 642 \\ \hline 1431 \\ 11 \end{array} \quad \begin{array}{r} 8121 \\ 932 \\ - 457 \\ \hline 475 \end{array} \quad \begin{array}{r} 342 \\ \times 7 \\ \hline 2394 \\ 21 \end{array} \quad \begin{array}{r} 86r2 \\ 432 \\ 5 \overline{) 432} \end{array}$$



KEEP PRACTICING YOUR  
MULTIPLICATION TABLES  
ON TIMES TABLES ROCK  
STARS. WHO WILL BE TOP

## FORCES

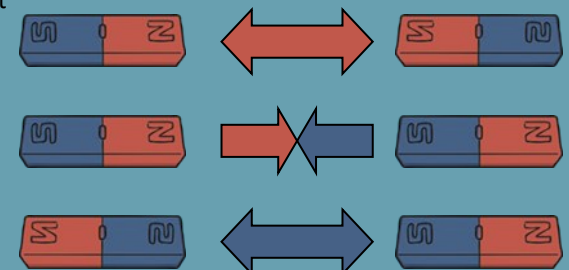
A force is a **push** or **pull**. Forces cannot be seen, but it is possible to see what forces do. Forces will change the motion of an object. They will either make it start to move, speed up, slow it down or even make it stop.



Different surfaces create different amounts of **friction**. The amount of friction created by an object moving over a surface depends on how rough or smooth the **surface** and the object is, and the force between them. Friction can be a useful force. It keeps our shoes from slipping and stops car tyres from skidding.

## MAGNETS

A magnet is an object which produces a **magnetic force** that pulls certain objects towards it. Objects which are **attracted** to a magnet are magnetic. Objects containing iron, nickel or cobalt metals are magnetic. Not all metals are magnetic. North and south **poles** are found at







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## TIMELINE

- |      |   |
|------|---|
| 1804 | The world's first steam locomotive is built by Richard Trevithick.  |
| 1807 | The first passenger carrying railway is opened by the Oystermouth Railway. It uses horse drawn carriages.               |
| 1812 | The first successful steam powered locomotive is built by John Blenkinsop and Matthew Murray.                           |
| 1825 | The first steam operated railway, George Stephenson's Stockton and Darlington Railroad, opens, carrying flour and coal. |
| 1829 | George and Robert Stephenson's locomotive, <i>The Rocket</i> , sets a speed record of 29 mph at the Rainhill Trials.    |
| 1830 | The Liverpool and Manchester Railway opens, and the first railway passenger service is started.                         |
| 1838 | The <i>Great Western Railway</i> from Paddington to Maidenhead, by Isambard Kingdom Brunel, opens.                      |
| 1842 | Queen Victoria made her first railway journey from Slough to Paddington, giving respectability to railways.             |
| 1844 | Railway companies had to provide at least one train each day charging no more than 1 pence per mile.                    |
| 1863 | World's first underground railway opened in London.   |
| 1921 | An Act of Parliament is passed, merging 123 railway companies into just four.   |
| 1938 | <i>The Mallard</i> achieved 126mph on the north-eastern line, the world record for a steam engine.                      |
| 1955 | Modernisation programme as diesel and electric trains are introduced to replace steam trains.                           |
| 1963 | The railways are re-organised with many secondary routes and branch lines closed.                                       |
| 1970 | Introduction of the high-speed diesel-electric <i>Intercity 125</i> trains.   |
| 1994 | The Channel Tunnel opens, beginning a rail service between London and Paris.  |
| 2002 | <i>Network Rail</i> takes on Britain's railways.  |

## TYPES OF ENGINES

	<b>Steam</b>  Works by burning coal and making steam in a boiler which is used to power the pistons to turn the wheels.
	<b>Diesel</b>  Diesel is mixed with oxygen and squashed which creates a very high temperature. This causes an explosion which is used to power the engine.
	<b>Electric</b>  Overhead lines power the trains with electricity.
	<b>High-Speed Trains</b>  These trains have special tracks, carriages and wagons. They can travel between 125mph and 177mph.

## GEORGE STEPHENSON



George Stephenson was born on 9th June 1781. Known as the 'Father of the Railways', he was a pioneering engineer and inventor who rose from a humble background to play the key role in the development and building of Britain's railways. He was an engineer who built steam locomotives for the first ever railways and lived in the time of the Industrial Revolution, when Britain was changing to a land of big factories instead of farms. The railways he built

## KEY VOCABULARY

<b>attract</b>	To pull or draw things together.
<b>forces</b>	A push or pull.
<b>friction</b>	A force that is created when two surfaces rub against each other. It makes things slow down.
<b>locomotive</b>	'Moving engine'. A vehicle that moves using its own power.
<b>magnet</b>	An object which produces a magnetic force that pulls certain objects towards it.
<b>magnetic</b>	Objects which are attracted to a magnet, containing iron, nickel or cobalt.
<b>magnetic field</b>	The area around a magnet where there is a magnetic force which will pull magnetic objects.
<b>nationalised</b>	Under the government's control and management.
<b>passenger</b>	A person riding in a vehicle.
<b>poles</b>	North and south poles are found at different ends of a magnet.
<b>privatised</b>	Run by individual, private companies.
<b>pull</b>	A force that moves something towards a person, animal or object.
<b>push</b>	A force that moves something away from a person, animal or object.
<b>railroad</b>	An old term for railway.
<b>repel</b>	To push things away or apart.

## USEFUL WEBSITES

**BBC Bitesize - Forces**

<https://www.bbc.co.uk/bitesize/topics/znmmn39>

**DKfindout! - History of trains**

<https://www.dkfindout.com/uk/transport/history-trains/>

**Purple Mash**

<https://www.purplemash.com/sch/holbeach-pe12>

**Times Tables Rockstars**

<https://play.ttrockstars.com/auth/school/student/18519>

Please note, although these external links have been checked,