

Forces

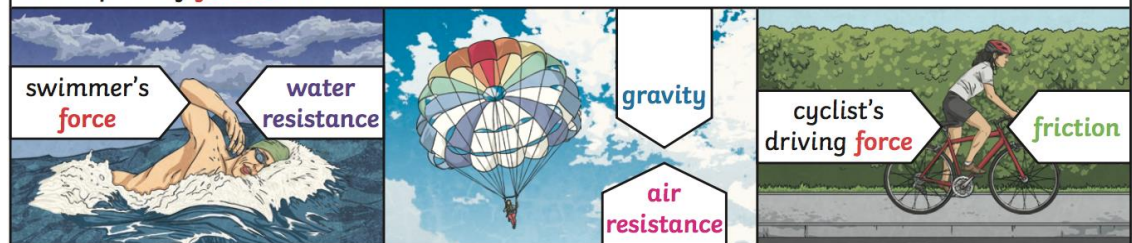
What am I going to learn?

You will learn about a variety of different forces and the effects they have.

KEY VOCABULARY	
force	Pushes or pulls.
gravity	A pulling force exerted by the Earth (or anything else which has mass).
Earth's gravitational pull	The pull that Earth exerts on an object, pulling it towards Earth's centre. It is the Earth's gravitational pull which keeps us on the ground.
weight	The measure of the force of gravity on an object.
mass	A measure of how much matter (or 'stuff') is inside an object.
friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
air resistance	A type of friction caused by air pushing against any moving object.
water resistance	A type of friction caused by water pushing against any moving object.
buoyancy	An upward force that a liquid applies to objects.

Key Knowledge

Examples of **forces** in action:



Water resistance and **air resistance** are forms of **friction**. **Friction** is sometimes helpful and sometimes unhelpful. For example, **air resistance** is helpful as it stops the skydiver hitting the ground at high speed. **Friction** on a bike chain can make the bike harder to pedal so it is unhelpful.

ISAAC NEWTON

Isaac Newton is famously thought to have developed his theory of **gravity** when he saw an apple fall to the ground from an apple tree.



GALILEO GALILEI

Galileo Galilei carried out an experiment which showed that the pull of gravity on objects which were the same size and shape was the same even though the objects were different weights.

