

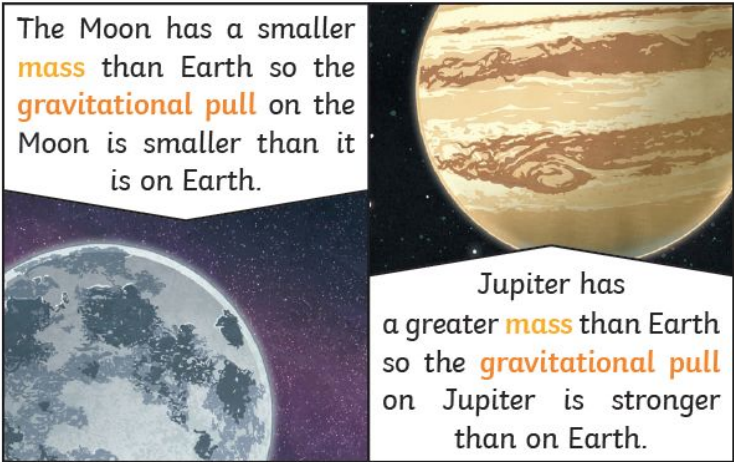
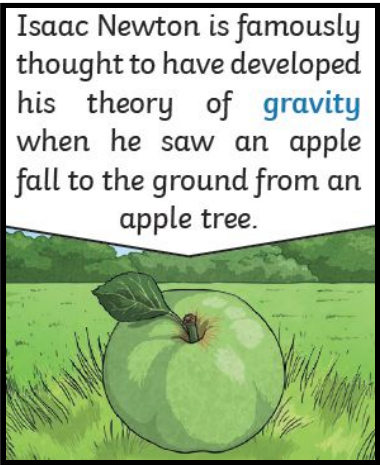
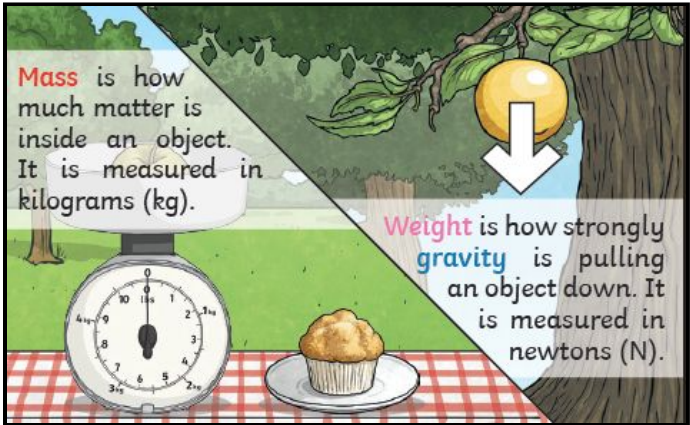
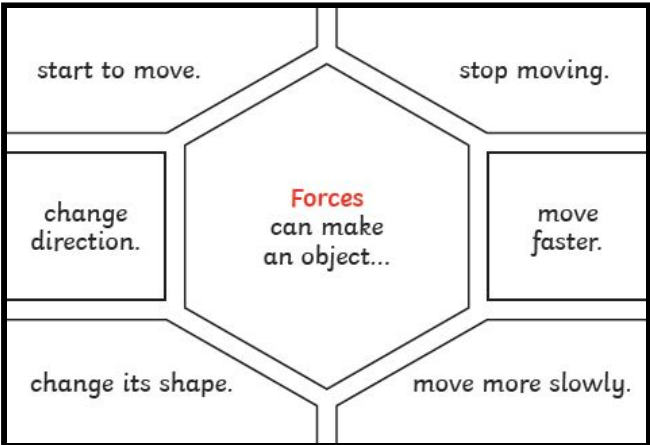


Knowledge Organiser

SCIENCE: Forces Year 5 AUTUMN 1

Project Summary
This project helps children to understand more about forces and their effect.

Key Ideas



Examples of **forces** in action:

swimmer's **force**

water **resistance**

gravity

air **resistance**

cyclist's driving **force**

friction

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.

Pulleys	Gears/Cogs	Levers
<p>Pulleys can be used to make a small force lift a lighter load. The more wheels in a pulley, the less force is needed to lift a weight.</p>	<p>Gears or cogs can be used to change the speed, force or direction of a motion. When two gears are connected, they always turn in the opposite direction to each other.</p>	<p>Levers can be used to make a small force lift a lighter load. A lever always rests on a pivot.</p>

Key Vocabulary	
forces	Pushes or pulls.
mass	A measure of how much matter an object is made up of.
gravity	A pulling force exerted by an object that has mass e.g. the Earth.
weight	The measure of the force of gravity on 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 a moving object.
Water resistance	A type of friction caused by water pushing against a moving object.
Buoyancy	An upward force that a liquid applies to objects.
Streamlined	When an object is shaped to minimise the effects of air or water resistance.
Mechanism	Parts which work together in a machine. For example: pulleys, gears and levers.

Useful websites

www.sciencemuseum.org.uk

<https://www.dkfindout.com/uk/science/>