
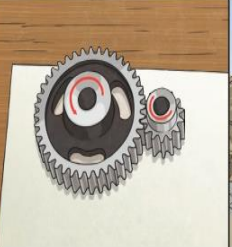



Previous knowledge: What should I already know?

- Be able to compare how things move on different surfaces.
- Understand that some forces need contact between 2 objects, but magnetic forces can act at a distance.
- Identify some materials that magnets attract and some that they repel.
- Understand that magnets have 2 poles.

Key facts / information

Pulleys	Gears/Cogs	Lever
		
Pulleys can be used to make a small force lift a heavier load. The more wheels in a pulley, the less force is needed to lift a weight .	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.	Lever can be used to make a small force lift a heavier load. A lever always rests on a pivot.

Key vocabulary

attract – to pull towards

contact – when objects touch

force – a push or a pull that acts upon an object that can cause it to move, change shape or change direction.

friction – the force that acts upon one surface when it moves against another.

gear – a toothed wheel that works with others to alter the speed of a mechanism.

gravity – a pull force that acts at a distance.

gravitational pull - the pull that a planet (such as the Earth) exerts on an object, pulling it towards its centre.

mass - a measure of how much matter (or stuff) is inside an object.

mechanism – a system of parts moving together in a machine.

pull – to cause something to move towards you / another object.

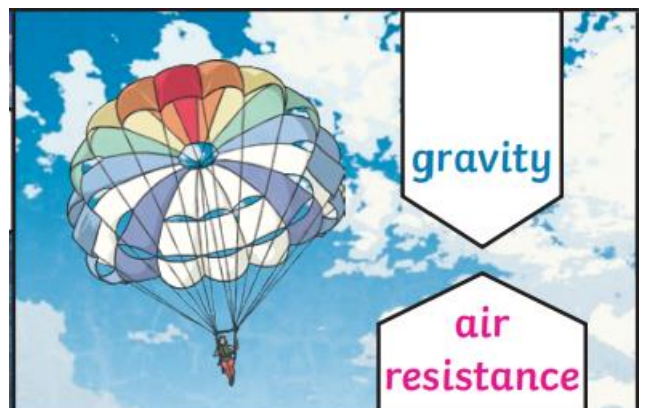
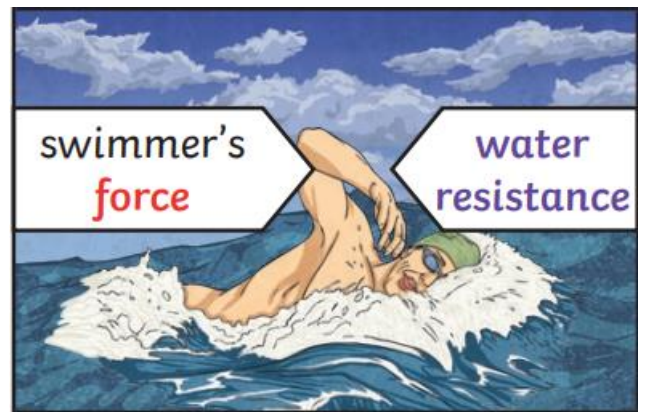
pulley – a wheel with a grooved rim which is used to raise heavy weights.

push – to cause something to move away from you / another object.

repel – to push something away

resistance – a force that acts in the opposite direction to a moving object.

weight – the measure of the force of gravity on an object.

Diagrams – forces in action**Key knowledge: What I should know by the end of the unit?**

- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
- Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.
- Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.

Forces Mini Quiz

1. A force is either a _____ or a _____

2. Which force is being described?

This force is created between two surfaces when they rub together. This force creates heat and can slow objects down.

3. True or false? Gravity is a contact force. _____

Why? _____

4. When we are walking, what forces are acting upon us?

5. What does resistance mean?
