
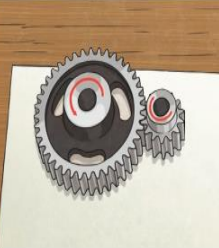



**Previous knowledge: What should I already know?**

- 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 <b>force</b> lift a heavier load. The more wheels in a pulley, the less <b>force</b> is needed to lift a <b>weight</b> .	Gears or cogs can be used to change the speed, <b>force</b> 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 <b>force</b> 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.

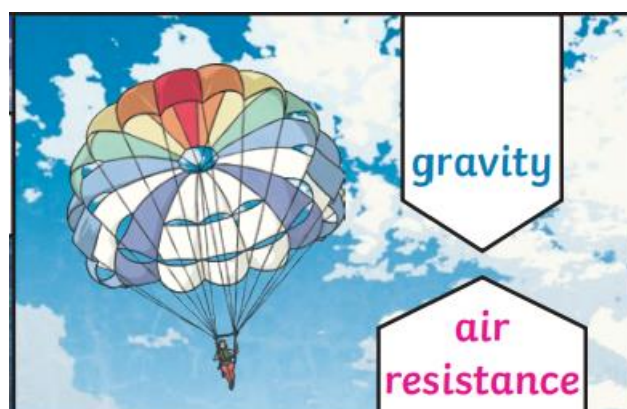
**pulley** – a wheel with a grooved rim which is used to raise heavy weights.

**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.

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3. True or false? Gravity is a contact force. \_\_\_\_\_

Why? \_\_\_\_\_

\_\_\_\_\_

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

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5. What does resistance mean?

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