

Science Year 5 Knowledge Organiser



Topic:
Forces

National Curriculum Statement

- 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.

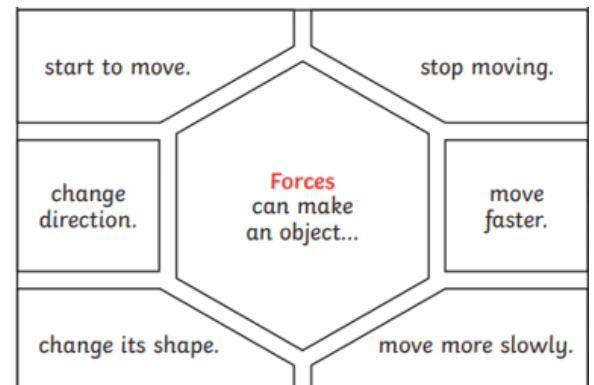
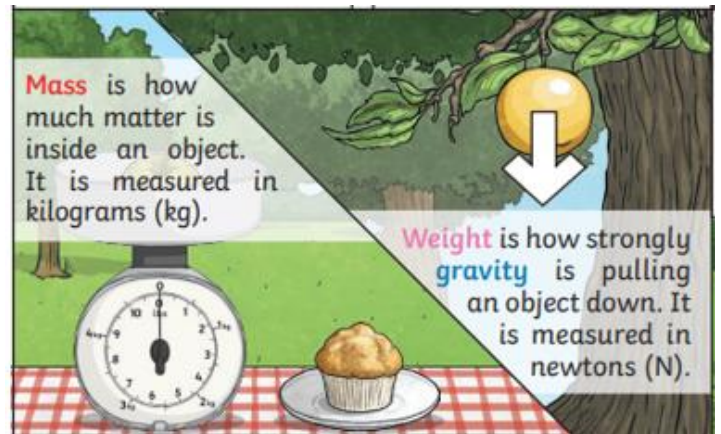
Key enquiry questions:

- What are the different types of forces?
- Which size parachute takes the longest to fall?
- Do all objects fall through water in the same way?
- Can you label and name all the forces acting on the objects in each of these situations?
- How does using a mechanism affect the force needed to lift a heavy object?

Key Vocab:

Key Vocabulary

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 object is buoyant if it floats. This is because the weight of the object is equal to the upthrust .
streamlined	When an object is shaped to minimise the effects of air or water resistance .
mechanism	Mechanisms are simple machines with moving parts that change input forces and movement into a set of useful output forces. Examples of mechanisms are pulleys, gears and levers.
upthrust	A force that pushes objects up, usually in water.



I am a scientist as I gather evidence and use research from previous scientists, to make hypotheses and test them through experiments. I discuss results and draw conclusions.