



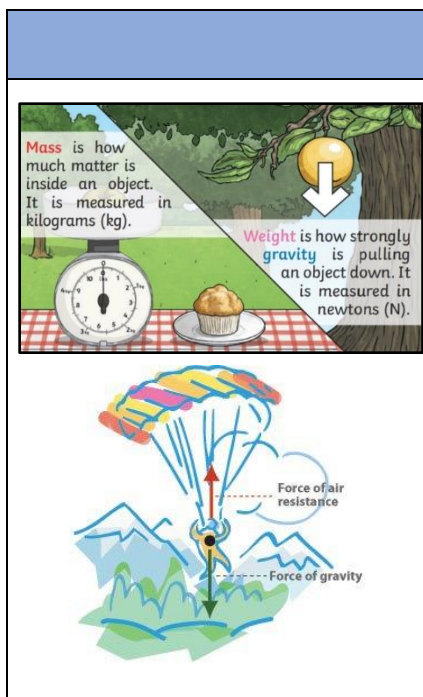
Subject	Science	Theme	Forces	Term	Summer 1 & 2
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What should I already know?
<ul style="list-style-type: none"> - A force is a push or a pull - There are larger, smaller and equal forces - Forces can be measured (in newtons) using a forcemeter - How things move on different surfaces (friction) - That some forces need contact between 2 objects

Working Scientifically
<ul style="list-style-type: none"> - Planning different types of scientific enquiries to answer questions, including recognising and controlling variables - Taking measurements, using a range of scientific equipment, with increasing accuracy - Recording data and results using tables and bar chart

Investigations
<ul style="list-style-type: none"> - Compare different forces and decide if they are balanced or unbalanced - Investigate the effects of gravity and see if there is a link between weight and mass - Investigate air resistance by re-designing a parachute. Plan a scientific enquiry and control variables to find the best design - Investigate the effects of water resistance and streamlining - Find the 'Goldilocks' path – which surface provides 'just right' friction? - Design a pulley to lift a 1 kg weight

What should I know by the end of the unit?
<ul style="list-style-type: none"> - 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, by observing how different objects such as parachutes and sycamore seeds fall. - Identify the effects of water resistance and friction that act between moving surfaces. - Explore the effects of friction on movement and find out how it slows or stops moving objects. - Experience forces that make things begin to move, get faster or slow down. - Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.



Key Vocabulary	
Force	A movement, such as a push or a pull, caused by contact between two objects.
Gravity	A pulling force exerted by the Earth (on anything that has mass).
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.
Streamlined	When an object is shaped to minimise the effects of air or water resistance.
Mechanism	Parts which work together in a machine. Examples of mechanisms are levers, pulleys and gears.