



Brookfield Primary School Knowledge Organiser

Year 5 Science- Forces

Science is the study of the world around us through observation, description, investigation and experimentation.



Mass and Weight

The mass of an object is how much matter it is made of and can be measured in grams/kilograms.



Weight is how much gravitational force is needed to pull an object and is measured in Newtons.



Galileo Galilei conducted experiments to test mass and the speed things fall.



Sir Isaac Newton developed the theory of gravity.

Mechanisms



Pulleys

A pulley is a wheel over which a belt, rope, or chain is pulled to lift or lower a heavy object.



Levers

Levers are a bar that rotates around a point. They make it easier to lift a heavy load.



Gears/Cogs

Gears are toothed wheels that mesh together. They rotate in opposite directions.

Key Vocabulary to use in this topic:

Word:	Definition:
Gravity	The force which draws objects towards the centre of a planet, or other body
Air resistance	Friction which acts between the air and another object
Parachute	A device, usually made from cloth, designed to create air resistance and slow the descent
Water resistance	Friction which acts on an object as it moves through water
Streamlined	An object that is shaped to travel through air or water with as little resistance as possible
Friction	A force that slows down or stops objects when two materials rub against each other
Newton	The international metric unit of a force
Lever	A long arm that rests on a support called a fulcrum
Pulley	A wheel over which a belt, rope, or chain is pulled to lift or lower a heavy object
Gear	A toothed wheel that engages with at least one other gear in order to change the speed or direction of motion

Explore gravity and the life and work of Isaac Newton.	Examine the connection between air resistance and parachutes.	Explore factors which affect water resistance.	Investigate the effects of friction on different surfaces.	Investigate mechanisms- levers and pulleys	Investigate mechanisms- gears
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General Scientific Words/Phrases:

Enquire, investigate, observe, explore, experiment, describe, record, analyse, compare, evidence, record