




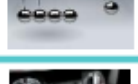


	<b>Sir Isaac Newton</b>
	<b>gravity</b>
	<b>Galileo Galilei</b>
	<b>parachute</b>
	<b>water resistance</b>
	<b>streamlined</b>
	<b>buoyant</b>
	<b>upthrust</b>
	<b>friction</b>
	<b>newton</b>
	<b>lever</b>
	<b>pulley</b>


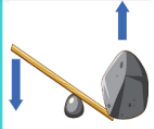

**Key learning**

A force causes an object to start moving, stop moving, speed up, slow down or change direction. Gravity is a force that acts at a distance. Everything is pulled to the Earth by gravity. This causes unsupported objects to fall. Air resistance, water resistance and friction are contact forces that act between moving surfaces. The object may be moving through the air or water, or the air and water may be moving over a stationary object. A mechanism is a device that allows a small force to be increased to a larger force. The pay back is that it requires a greater movement. The small force moves a long distance and the resulting large force moves a small distance, e.g. a crowbar or bottle top remover. Pulleys, levers and gears are all mechanisms, also known as simple machines.



**Forces in Action**



**Mechanisms**

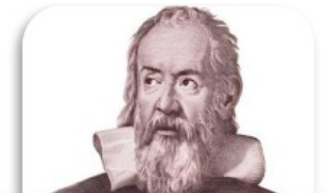
	<b>Pulleys</b> A pulley is a wheel over which a belt, rope, or chain is pulled to lift or lower a heavy object.
	<b>Levers</b> Levers are a bar that rotates around a point. They make it easier to lift a heavy load.
	<b>Gears/Cogs</b> Gears are toothed wheels that mesh together, they rotate in opposite directions.

**Mass and Weight**

	The mass of an item can be measured in <b>Grams/ Kilograms.</b>
	Weight is how much force is needed to pull an object and is measured in <b>Newtons.</b>



Sir Isaac Newton developed his theory of gravity.












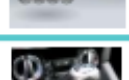


Galileo conducted experiments to test mass.



## Unit Rocket Words: Year 5 - forces



### Rocket Words

	Sir Isaac Newton	an English physicist and mathematician
	gravity	force which draws objects towards the centre of a planet
	Galileo Galilei	an Italian scientist, and the first astronomer
	parachute	a device, usually made from cloth, designed to create air resistance and slow 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 little resistance
	buoyant	to float
	upthrust	any force that is causing something to be pushed upwards
	friction	the resistance of motion when one object rubs against another
	newton	the international metric unit of 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