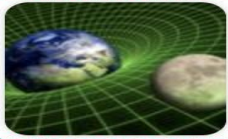




Knowledge Organiser: Year 5 - Forces



Lesson Sequence



1. Explore gravity and the life and work of Isaac Newton. Vocabulary - weight, mass, astronomy, Sir Isaac Newton, gravity.



2. Examine the connection between air resistance and parachutes. Vocabulary – Galileo Galilei, opposing, air resistance, parachute, streamlined



3. Explore factors which affect an object's ability to resist water. Vocabulary - streamlined, up thrust, buoyant, water resistance, sink



4. Investigate the effects of friction on different surfaces. Vocabulary - Newton meter, resistance, lubricant, Newton, friction



5. Investigate mechanism – levers and pulleys. Vocabulary - load, pulley, lever, pivot, fulcrum

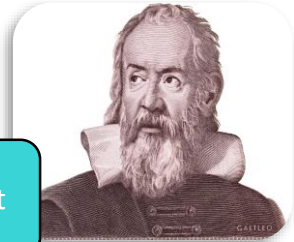


6. Investigate mechanisms – gears. Vocabulary - gear, mesh, mechanism, rack and pinion, bevel gear

Forces in Action

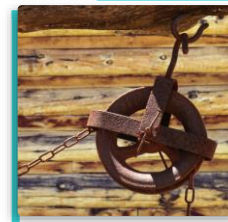


Sir Isaac Newton developed his theory of gravity.



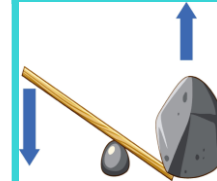
Galileo conducted experiments to test mass.

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.

Mass and Weight



The mass of an item can be measured in **Grams/ Kilograms.**

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





Unit Rocket Words: Year 5 - forces



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