Year 5 Forces

Key Vocabulary

Force - A force is a push or a pull. Forces make objects start moving, stop moving, speed up, slow down or change direction.

Gravity - A force which pulls things down towards the centre of the Earth.

Newton (N) - The unit for measuring force.

Air resistance - The force that slows down objects that move through air.

Water resistance - A force that slows down objects moving through water.

Friction - When one surface moves against another, the rubbing force that tries to stop them is called friction. It gives us grip.

Mechanisms - A device that allows a small force to be increased to a larger force.

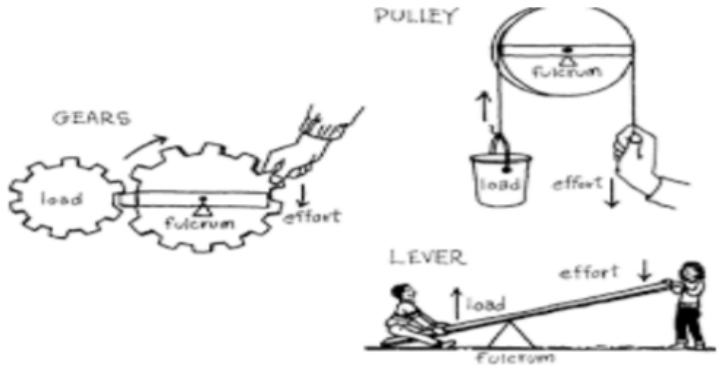
Simple machines - Levers, pulleys and gears are all types of simple machines

TYPES OF MECHANISMS

Pulleys – they are used to reduce the amount of force needed to lift a load. The more wheels in a pulley the less force is needed to lift the weight.

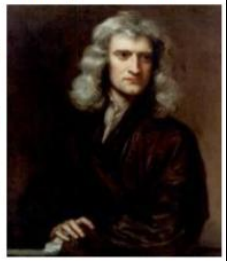
Gears or cogs – are used to change speed, direction or force of a motion. When 2 gears are connected they always turn in the opposite direction to one another.

Levers – can be sued to make a small force lift a lighter load. A lever always rests on a pivot or fulcrum.



ISAAC NEWTON

Is considered by some as one of the most important scientists in history. One of his achievements was developing the theory of gravity. It is thought he developed the theory when he saw an apple fall from a tree.



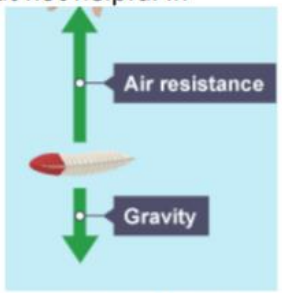
FORCE METER – is marked in Newtons and measures the weight of an object.

FORCES

Gravity – the force that pulls things to the ground. Gravity also holds Earth and other planets in their orbits around the sun.

Friction – friction is a force between 2 surfaces that are sliding or trying to slide across each other. Friction works in the opposite direction to which the object is moving. It slows down the moving object and also produces heat. It can be helpful in certain situations but not helpful in others.

Air resistance – a type of friction between air and another material. Aeroplanes and cars are streamlined so that they can move through the air as easily as possible.



Water resistance – a type of friction between water and another material. When you go swimming there is friction between your skin and the water particles.