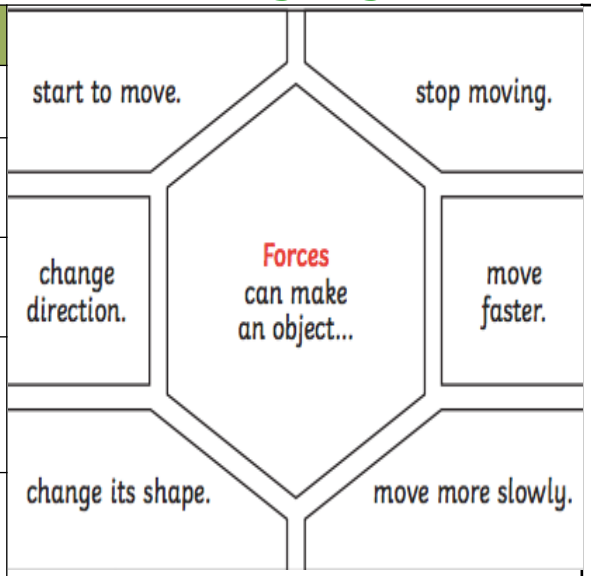
Year 5: Forces Learning Organiser

Vocabulary	
force	A push, pull, twist or turn.
friction	Friction is a force between two surfaces that are sliding, or trying to slide, across each other.
gravity	Gravity is the force that pulls objects down towards the centre of the Earth (or anything else which has mass).
Earth's gravitational pull	The pull that Earth exerts on an object, pulling it towards Earth's centre. It's the Earth's gravitational pulls which keeps us on the ground.
air resistance	Air resistance is a type of friction between air and another material. For example, when an aeroplane flies through the air.
water resistance	If you go swimming, there is friction between your skin and the water particles.
mechanisms	Parts which work together in a machine. Examples of mechanisms are pulleys, levers and gears.
buoyancy	An upward force that a liquid applies to forces.
streamlined	When an object is shaped to minimise the effects of air or water resistance.
weight	The measure of the force of gravity on an object, measured in Newtons (N)
balance	When two opposite forces act equally on an object so that it either stays still or carries on moving at the same speed.
mass	A measure of the amount of matter ('stuff') is an object. It's measured in kilograms or grams



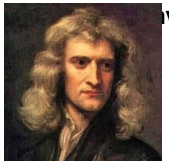
Galileo Galilee (15.02.1564 – 8.01.1642)



He disagreed with the idea that everything revolved around the Earth and that Earth was at the centre of the Universe. He discovered that actually everything revolves around the Sun. At the time no one believed him and he was treated badly because of his view.

Sir Isaac Newton (25.12.162 – 31.03.172)7

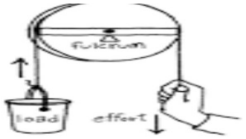
He discovered what is called the **Law of ...vitation.**



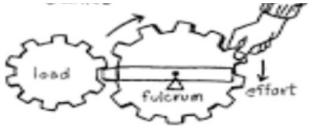
This discovery came about when he saw an apple falling from a tree, and this led him to the answer that "Whatever goes up must come down."

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 used to make a small force lift a lighter load. A lever always rests on a pivot or fulcrum.



