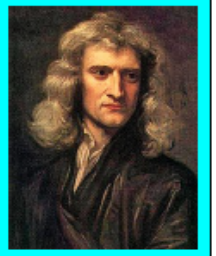
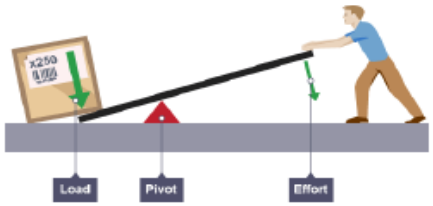
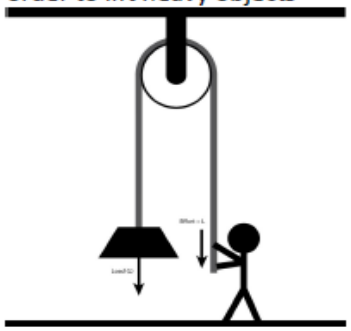
St. Paul's C of E VA Primary and Nursery School
Knowledge Organisers

Year Group: Year 5

Topic: Forces

Vocabulary	
forces	a force is the pulling or pushing effect that something has on something else.
physics	the scientific study of forces
gravity	the force which causes things to drop to the ground.
orbit	the curved path in space that is followed by an object going round a planet, moon, or star.
mass	A measure of the amount of matter in an object (measured in grams and kilograms). This stays the same whether you are on Earth or in space (often confused with weight)
matter	The physical part of the universe consisting of solids, liquids and gases
weight	The force of gravity on an object. This changes whether you are on Earth or in space. (Often confused with mass)
friction	the force that makes it difficult for things to move freely when they are touching each other.
air resistance	Air resistance is a type of friction between air and another material (this is sometimes called drag).
water resistance	a force that slows things down that are moving through water
upthrust	an upward push or thrust
buoyancy	the ability that something has to float on a liquid or in the air.
mechanism	a part, often consisting of a set of smaller parts, which performs a particular function.
Fulcrum	The point where a lever turns (also called a pivot)

Pioneers of Science	
Galileo Galilei (1564 - 1642) 	Italian scientist Discovered that if two objects of similar shape and size are dropped, they will fall at the same rate.
Sir Isaac Newton (1642 - 1726) 	English mathematician and scientist. Developed Newton's Law of **universal gravitation.** 'discovered' the concept of gravity when sitting under a tree and an apple fell to the ground near him.
Galileo's Thought Experiment	
A **thought experiment** is when you imagine the outcome of an experiment rather than carry it out directly. Galileo is said to have dropped objects from the Leaning Tower of Pisa in Italy to test the idea that objects fall at the same speed. This is believed to be a thought experiment and never happened	

Simple Mechanisms	
Lever	A simple mechanism used to move or lift objects. 
Pulley	A device consisting of a wheel over which a rope or chain is pulled in order to lift heavy objects 
Gear	Toothed wheels that lock together and turn each other. 