

Knowledge Organiser

Science Focus	Forces	Year 5	Summer
What? (Key Knowledge)		What? (Key vocab)	
Forces		Spelling	Definition
What is gravity?	<ul style="list-style-type: none">Gravity holds things to the Earth's surface and forbids things from floating up and into the atmosphere around and above us. When a person jumps, the energy they create will lift them off the ground, however, gravity is what pulls them back down again. Gravity is an invisible force.	Air resistance	A force that is caused by air with the force acting in the opposite direction to an object moving through the air
		Force	A push or pull upon an object resulting from its interaction with another object
		Friction	The resistance that one surface or object encounters when moving over another
What are the effects of air resistance, water resistance and friction, that act between moving surfaces?	<ul style="list-style-type: none">Air resistance is a type of friction between air and another material.If you go swimming, there is friction between your skin and the water particles. This is known as water resistance.Friction occurs when objects move through water or air.	Gears	A toothed wheel that works with others to alter the relation between the speed of a driving mechanism (e.g. engine) and the speed of the driven parts (e.g. the wheels)
How do some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect?	<ul style="list-style-type: none">Levers. These use a long pole and a pivot point to increase a force.Pulleys. These use a rope running over a pulley wheel to increase a force.Gears. These use cogs with teeth in to increase the force and also transit it from one part of a machine to another.	Gravity	The force that attracts a body towards the centre of the earth
Statutory requirements		Levers	A rigid bar resting on a pivot that is used to move a heavy or firmly fixed load
<ul style="list-style-type: none">Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.		Mass	Mass is how much matter (or 'stuff') is inside an object. It is measured in kilograms (kg).
		Weight	Weight is how strongly gravity is pulling an object down. It is measured in Newtons (N).
		Pull force	To draw or haul towards oneself or itself, in a particular direction
		Push force	To move something in a specific way by exerting force
		Possible experiences	
		<ul style="list-style-type: none">Measure Newtons of different objects around the school using a force meter.Design different sized parachutes to see which catches the most air resistance.Investigate streamlining, Plan a fair test to investigate how fast different shapes of plasticine fall through water.Make your own Rube Goldberg machine.	