

Key vocabulary	
<b>Aerodynamic</b>	It has little resistance travelling through the air.
<b>Equilibrium</b>	All forces acting on the object are balanced.
<b>Force</b>	The pulling or pushing effect that something has on something else.
<b>Friction</b>	The force that makes it difficult for things to move freely when they are touching each other.
<b>Fulcrum</b>	The point at which a lever is placed to balance over.
<b>Gear</b>	A wheel that has teeth that meshes with another one
<b>Gravity</b>	A force that causes things to drop to the ground.
<b>Lever</b>	A simple machine consisting of a bar that pivots on a fixed support,
<b>Mass</b>	Is a measure of the amount of matter in an object.
<b>Mechanism</b>	A part, often consisting of a set of smaller parts, which performs a particular function.
<b>Newton</b>	The unit in which forces are measured.
<b>Pulley</b>	A device consisting of a wheel over which a rope or chain is pulled in order to lift heavy objects.
<b>Resistance</b>	A force that slows down a moving object or vehicles.
<b>Streamline</b>	A form that presents very little resistance to a flow of air or water.
<b>Up thrust</b>	The upward force that a liquid exerts on the object floating in it.
<b>Weight</b>	How much gravity is pulling on the object.

Key Knowledge	
<b>Preceding</b>	Explore and describe how objects move on different surfaces. (Y3) Explain how some forces require contact and some do not (Y3) explore and explain how objects attract and repel in relation to objects and other magnets (Y3) Predict whether objects will be magnetic and carry out an enquiry to test this out. (Y3) Describe how magnets work (Y3) Predict whether magnets will attract or repel and give a reason (Y3)
	Explain what gravity is and its impact on our lives. Identify and explain the effect of air resistance. Identify and explain the effect of water resistance. Identify and explain the effect of friction. Explain how levers, pulleys and gears allow a smaller force to have a greater effect.

Suggested Progression	
<b>1</b>	<i>Gravity- what it is and its impact on our lives.</i>
<b>2</b>	<i>Air resistance - what effect does it have?</i>
<b>3</b>	<i>Water resistance- what effect does it have?</i>
<b>4</b>	<i>Friction- what it is and how it effects objects?</i>

<b>5</b>	<i>Gears and levers - how these allow a smaller force to have a greater effect.</i>
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**Scientific Enquiry**

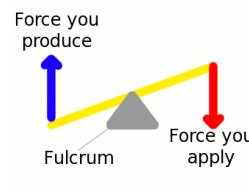
To test difference between the weight and mass of objects.

To test effect of air resistance on different materials.

To test the amount of friction of different materials.

To investigate the effects of pulleys levers and gears.

**Pattern seeking Comparative and Fair Testing**




Force you produce

Fulcrum

Force you apply

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gravity

air resistance

air resistance

driving force