



## FORCES AND MAGNETS (PHYSICS)

National Curriculum Statements in red are from other linked topics.

Progression in Scientific knowledge, concepts & skills	EYFS (Early Learning Goals)	Year 1	Year 2	Year 3	Year 4	Year 5 (Forces)	Year 6	KS3
<p><u>Concepts</u> Cause and effect Similarity and difference</p>	<p>Children know about similarities and difference in relation to places, objects, materials and living things.</p> <p>Children talk about features of their own immediate environment and how environments might vary from one another.</p> <p>Children make observations</p>		<p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Y2 - Uses of everyday materials)</p>	<p>Compare how things move on different surfaces (friction).</p> <p>Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.</p> <p>Observe how magnets (attract or repel each</p>		<p>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.</p> <p>Recognise that some mechanisms,</p>		<p>Magnetic fields by plotting with compass, representation by field lines.</p> <p>Earth's magnetism, compass and navigation.</p> <p>Forces as pushes or pulls, arising from the interaction between two objects.</p> <p>Using force arrows in diagrams, adding forces in one dimension, balanced and unbalanced</p>



	<p>of animals and plants and explain why some things occur and talk about changes.</p>			<p>other and) attract some materials and not others.</p> <p>Notice that some forces need contact between two objects, but magnetic forces can act at a distance.</p> <p>Describe magnets as having two poles.</p> <p>Observe how magnets attract or repel each other (and attract some materials and not others).</p> <p>Predict whether two magnets will attract or</p>		<p>including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>		<p>forces.</p> <p>Moment as the turning effect of a force.</p> <p>Forces: associated with deforming objects; stretching and squashing - springs; with rubbing and friction between surfaces, with pushing things out of the way; resistance to motion of air and water.</p> <p>Forces measured in Newtons, measurements of stretch or compression as force is changed.</p>
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				repel each other depending on which poles are facing.				
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