

**PROGRESSION OF SKILLS AND VOCABULARY POLICY 2019**



<b>SCIENCE ESSENTIAL SKILLS Y1-Y6: FORCES</b>					
<b>KEY STAGE 1</b>		<b>LOWER KEY STAGE 2</b>		<b>UPPER KEY STAGE 2</b>	
<b>End of Y1 expectations</b>	<b>End of Y2 expectations</b>	<b>End of Y3 expectations</b>	<b>End of Y4 expectations</b>	<b>End of Y5 expectations</b>	<b>End of Y6 expectations</b>
<b>Identifying and naming:</b>					
		Name a range of familiar daily activities which rely upon or are caused by forces and magnets.	Identify how the magnetic north and south pole is different to the geographical north and south pole.	Identify and define the opposing forces that act upon objects moving through air, water or along a surface.	
<b>Physical processes:</b>					
		Describe forces in action (pulling and pushing) and whether the force requires direct contact between objects or whether the force can act at distance (magnetic force).	Demonstrate using models or actions, the key forces in action during a given activity.	Describe the force of gravity, what causes it and how the force of gravity changes (e.g. if we were standing on a different planet). Use study skills to research the work of scientists such as Galileo and Newton.	
<b>Phenomena:</b>					
		Explain the terms 'magnetic attraction' and 'repulsion' and 'magnetic poles', using a model for assistance.	Develop research skills, using secondary sources (e.g. finding out why aurora form at the north and south magnetic poles).	Demonstrate, using a model, how simple levers, gears and pulleys assist the movement of objects using less force.	
<b>Testing:</b>					
		Make predictions, explaining thinking then test a range of magnets for their strength and polarity.	Test whether any materials block magnetic attraction.	Make predictions, supported by scientific reasoning to test the effects of friction on movement and distance travelled.	
<b>Comparing:</b>					

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		Compare how an object moves over surfaces made from different materials, making predictions and measuring the distance travelled.	Compare the speed in which objects fall to the ground through the same distance of air or water, using their knowledge of forces to explain the outcomes.	Compare the speed with which objects of different shapes and surface area fall through the air or water, and explain the reason for any differences in terms of the forces acting on the objects.	
<b>Classification:</b>					
		Sort and group materials into those that are magnetic and those that are not and identify patterns within the groups.		Classify and group forces based on their actions or whether they act directly, or at distance.	

<b>KEY VOCABULARY: FORCES</b>					
<b>KEY STAGE 1</b>		<b>LOWER KEY STAGE 2</b>		<b>UPPER KEY STAGE 2</b>	
End of Y1 expectations	End of Y2 expectations	End of Y3 expectations	End of Y4 expectations	End of Y5 expectations	End of Y6 expectations
		force push pull open surface magnet magnetic attract repel magnetic poles North South	As in Year 3	<b>Galileo Galilei, Isaac Newton</b> theory of gravitation gravity, air resistance, water resistance, friction surface force effect move, accelerate, decelerate stop, change direction brake, mechanism, pulley, gear, spring	