

## Holy Family Catholic Primary School Cronton

<p><b>Year 3:</b> Science autumn term 1</p> <p><b>What I should already know:</b> I know that the shape of some materials can be changed when they are stretched, twisted, bent and squashed. I know how different toys move. I know what a force is and I can explain that a push and pull are types of forces.</p> <p><b>Fact file</b> Different surfaces affect the motion of an object? Forces act in opposite directions to each other. When an object moves across a surface, friction acts as an opposite force. Friction is a force that holds back the motion of an object. Some surfaces create more friction than others which means that objects move across them slower.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Grass</div> <div style="text-align: center;"> Wood floor</div> <div style="text-align: center;"> Carpet</div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Gravel path</div> <div style="text-align: center;"> Road</div> <div style="text-align: center;"> Sand</div> </div> <p>On a ramp, the force that causes the object to move downwards is gravity. Objects move differently depending on the surface of the object itself and the surface of the ramp.</p>	<p><b>Unit:</b> The power of forces</p> <p><b>What I will know by the end of the unit:</b> I can compare how things move on different surfaces. I notice that some forces need contact between two objects, but magnetic forces can act at a distance. I can observe how magnets attract or repel each other and attract some materials and not others. I can 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. I can describe magnets as having two poles. I can predict whether two magnets will attract or repel each other, depending on which poles are facing.</p> <p><b>Key Scientist</b> <b>Mary Somerville (1780-1872)</b> was fascinated by magnets and carried out lots of experiments with them. She was also one of the first popular Science writers - selling many books in her lifetime. She was the first woman to be elected to the Royal Astronomical Society.</p> <div style="text-align: right;"></div>	<p><b>Theme:</b> Forces and magnets</p> <p><b>Vocabulary</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"><b>Attract</b></td> <td>If one object attracts another object, it causes the second object to move towards it.</td> </tr> <tr> <td><b>Forces</b></td> <td>The pulling or pushing effect that something has on something else.</td> </tr> <tr> <td><b>Friction</b></td> <td>The resistance of motion when there is contact between two surfaces.</td> </tr> <tr> <td><b>Magnet</b></td> <td>A piece of iron or other material which attracts magnetic materials towards it.</td> </tr> <tr> <td><b>Magnetic field</b></td> <td>An area around a magnet, or something functioning as a magnet, in which the magnet's power to attract things is felt.</td> </tr> <tr> <td><b>Poles</b></td> <td>The North and South ends on a magnet.</td> </tr> <tr> <td><b>Pull</b></td> <td>When you pull something, you hold it firmly and use force in order to move it towards you or away from its previous position.</td> </tr> <tr> <td><b>Push</b></td> <td>When you push something, you use force to make it move away from you or away from its previous position.</td> </tr> <tr> <td><b>Repel</b></td> <td>If one object repels another object, it causes the second object to move away from it.</td> </tr> <tr> <td><b>Surface</b></td> <td>The flat top part of something or the outside of it.</td> </tr> </table> <p><b>Magnetic poles</b></p> <div style="text-align: center;"> <p>Attract</p>  <p>Repel</p>  <p>Repel</p>  </div>	<b>Attract</b>	If one object attracts another object, it causes the second object to move towards it.	<b>Forces</b>	The pulling or pushing effect that something has on something else.	<b>Friction</b>	The resistance of motion when there is contact between two surfaces.	<b>Magnet</b>	A piece of iron or other material which attracts magnetic materials towards it.	<b>Magnetic field</b>	An area around a magnet, or something functioning as a magnet, in which the magnet's power to attract things is felt.	<b>Poles</b>	The North and South ends on a magnet.	<b>Pull</b>	When you pull something, you hold it firmly and use force in order to move it towards you or away from its previous position.	<b>Push</b>	When you push something, you use force to make it move away from you or away from its previous position.	<b>Repel</b>	If one object repels another object, it causes the second object to move away from it.	<b>Surface</b>	The flat top part of something or the outside of it.
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