













## Magnetism Year 3

<p><b>Science Concepts</b></p>	<p><b>Nature</b> Knowing about the natural world</p>  <p>Nature</p>	<p><b>Phenomenon</b> Observing facts and events</p>  <p>Phenomenon</p>	<p><b>The Real World</b> Knowing about scientists and science in our everyday lives</p>  <p>The Real World</p>
<p><b>National Curriculum</b></p>	<ul style="list-style-type: none"> <li>• Compare how things move on a different surface</li> <li>• Notice that some forces need contact between two objects, but magnetic forces can act at a distance</li> <li>• Observe how magnets attract or repel each other and attract some materials and not others</li> <li>• 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</li> <li>• Describe magnets as having two poles</li> <li>• Predict whether two magnets will attract or repel each other, depending on which poles are facing</li> </ul>		<p>Performing tests Observing and measuring Identifying and classifying Gathering and recording data Interpreting data</p>
<p><b>Common Misconceptions</b></p>	<ul style="list-style-type: none"> <li>• All metals are magnetic</li> <li>• Barriers, such as paper, will stop the attraction of a magnet</li> <li>• Larger magnets are stronger than smaller magnets</li> </ul>		
<p><b>Safety</b></p>	<ul style="list-style-type: none"> <li>• Possible sharp edges on metals must be avoided</li> <li>• Care needs to be taken when using springs and stretching elastic bands. If over stretched, elastic bands may break and flick back painfully</li> </ul>		

Lesson	Learning Intention	Concept
1. What are non-contact forces? (NOA)	<ul style="list-style-type: none"> <li>What are forces?</li> <li>What are contact and non-contact forces?</li> <li>Name contact and non-contact sources</li> </ul>	 Phenomenon
2. What are magnets?(NOA)	<ul style="list-style-type: none"> <li>Know what magnets are</li> <li>Describe when magnets attract and repel</li> </ul>	 The Real World
3. How can we test the strength of magnets? (NOA)	<ul style="list-style-type: none"> <li>Know what magnets are</li> <li>Describe when magnets attract and repel</li> <li>Describe how to test the strength of a magnet</li> </ul>	 The Real World
4. How can we test the strength of magnets?	<ul style="list-style-type: none"> <li>Know what magnets are</li> <li>Describe when magnets attract and repel</li> <li>Describe how to test the strength of a magnet</li> </ul>	 The Real World
5. How can we present our findings	<ul style="list-style-type: none"> <li>Present data in a bar chart</li> </ul>	 The Real World
6. How does a compass work? (NOA)	<ul style="list-style-type: none"> <li>Explain what a compass is</li> <li>Describe what a compass does</li> </ul>	 The Real World
7. How can we make a compass?	<ul style="list-style-type: none"> <li>Describe how to make a compass</li> </ul>	 The Real World
8. How can we see a magnetic field? (NOA)	<ul style="list-style-type: none"> <li>Describe how field lines help us to understand the effect of an invisible force</li> <li>Use a diagram of field lines to see where the force will be strongest and where it will be weakest</li> </ul>	 Phenomenon
9. How can we tell if a material is magnetic or not? (NOA)	<ul style="list-style-type: none"> <li>Describe how to find out if a material is magnetic or not</li> <li>State the difference between permanent magnets and temporary magnets</li> <li>Name examples of magnetic and non-magnetic materials</li> </ul>	 Phenomenon
10. Review	<ul style="list-style-type: none"> <li>Complete end of unit quiz.</li> <li>Return to cover page and identify any misconceptions they may have had at the beginning of the unit, or add anything further to the question.</li> </ul>	