

**Pentecost 2**  
**Science Year 6: Whizz, Bang, Wallop!**

**Scripture Link: Jeremiah 10:12**

**National Curriculum Objective**

**Enquiry Question: How can Science help us understand our world?**

	Lesson 1	Lesson 2	Lesson 3
<b>Learning intention for each lesson</b>	Know how to make delicious crunchy candy crystals (p.40)	Know how to make worms wiggle (p.44)	Know how to find colours in cabbage (p.48)
<b>Recall and Retrieval</b>	Can name the 3 main states of matter know that a liquid is a material whose particles have gaps between them. That a liquid takes the shape of the container it is in. know that a solid is a substance that holds its shape because its particles are packed closely together. know that a gas is a substance whose particles are constantly moving rapidly. know how to group materials according to whether they are solids, liquids or gases.	Know what dissolve means. know the difference between dissolving and melting The outsides of our teeth are covered with enamel The insides of our teeth have blood vessels and nerves Acids like fruit juice, vinegar, cola dissolve the enamel on teeth.	Know what happens to light on water Know what is meant by evaporation and condensation. Know what is meant by a 'fair test'.
<b>Sequence of substantive knowledge throughout the lesson</b>	I will know that when water is hot it absorbs more sugar than when it's at room temperature.  I will know that when the solution cools, it is unable to hold as much sugar so the sugar solidifies again.  I will know that the sugar crystals cling to any available surface.	I will know that vinegar is an acid  I will know that mixing bicarb with acidic vinegar creates bubbles of carbon dioxide gas.	I will know that cabbage water reacts differently with an acidic substance to an alkaline substance.  I will know that acids and alkalis are measured using a pH scale.  I will know that cabbage water is 'neutral' to start with.  I will know that a pigment refers to the natural colouring of something.  I will know that the pigment of the water changes according to what is added.
<b>Key Skills/disciplinary knowledge</b>	<ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary;</li> </ul>	<ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary;</li> </ul>	<ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary;</li> </ul>

	<ul style="list-style-type: none"> <li>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate;</li> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs;</li> <li>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations;</li> <li>identifying differences, similarities or changes related to simple scientific ideas and processes;</li> </ul>	<ul style="list-style-type: none"> <li>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate;</li> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs;</li> <li>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations;</li> <li>identifying differences, similarities or changes related to simple scientific ideas and processes;</li> </ul>	<ul style="list-style-type: none"> <li>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate;</li> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs;</li> <li>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations;</li> <li>identifying differences, similarities or changes related to simple scientific ideas and processes;</li> </ul>
<b>Key Vocabulary</b>	Simmer, granulated, dissolved, experiment	Acid, crystals, soda, dissolve, steep,	Sieve, reference, additive, react, acid, alkaline, pH scale, pigment
<b>Main teaching activity</b> <i>If the school has another short term planning format, this does not need to be included.</i>			
<b>Scaffolding</b>			
<b>Challenge</b>			
<b>Diversity Links</b>			
<b>Catholic Social Teaching Principles</b>			
<b>British Values</b>			

<b>Wider links</b>			
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**Pentecost 2**  
**Science Year 6: Whizz, Bang, Wallop!**

	Lesson 4	Lesson 5	Lesson 6
<b>Learning intention for each lesson</b>	Know how to make a simple magnetic car (p.30)	Know how to make a sonic blaster (p.18)	
<b>Recall and Retrieval</b>	Can explain what a magnet is and how it works. Can describe which forces can change the shape of an object Can explain what gravity is and how it works.	know that sounds are made by something vibrating. know that sound is a type of energy know that vibrations travel through a medium to the ear Sounds can travel through solids, liquids and gases. know that the vibrations hit your eardrum, then pass to the middle and inner ear. The vibrations are changed into electrical signals that are sent to your brain.	
<b>Sequence of substantive knowledge throughout the lesson</b>	I will know that magnets have north and south pole.  I will know that when the opposite poles meet, they are attracted to each other.  I will know that when the same poles meet, they repel each other.	I will know that sound waves are in the air all the time.  I will know that I hear them when they hit my eardrum and make it vibrate.  I will know that a big enough sound wave can move objects.  I will know that when you drum your fingers on a tightly stretched plastic, it generates a sound.  I will know that sound can be compressed, making a sound wave powerful enough to move objects.	
<b>Key Skills/disciplinary knowledge</b>	<ul style="list-style-type: none"> <li>• <b>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary;</b></li> <li>• <b>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate;</b></li> <li>• <b>recording data and results of increasing complexity using scientific diagrams and</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary;</b></li> <li>• <b>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate;</b></li> <li>• <b>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs;</b></li> </ul>	

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<b>Key Vocabulary</b>	Bar magnet, north pole, south pole, attracted to, magnetic force, repel	Sound, compress, wave, vibrate, eardrum,	
<b>Main teaching activity</b> <i>If the school has another short term planning format, this does not need to be included.</i>			
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