




## Physical and Chemical Changes Year 5

<p><b>Science Concepts</b></p>	<p><b>Nature</b> Knowing about the natural world</p>  <p>Nature</p>	<p><b>Phenomenon</b> Knowing 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>• Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li> <li>• Use knowledge of solids, liquids and gases to decide how mixtures might be separated, included through filtering, sieving and evaporating</li> <li>• Demonstrate that dissolving, mixing and changes of state are reversible changes</li> <li>• Explain that some changes result in the formation of new materials, and this this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda</li> </ul>		<ul style="list-style-type: none"> <li>• Planning and setting up different types of enquiries</li> <li>• Observing and measuring</li> <li>• Gathering and recording data</li> <li>• Reporting, presenting and communicating data/findings</li> </ul>
<p><b>Lesson</b></p>	<p><b>Learning Intention</b></p>		
<p><b>1. What happens during a state change?</b></p>	<ul style="list-style-type: none"> <li>• Describe how particles are arranged in solids, liquids and gases</li> <li>• Explain what happens to particles in substances that change state</li> <li>• Identify phase changes present in a range of examples</li> </ul>		
<p><b>2. What is a physical change and how can we identify them?</b></p>	<ul style="list-style-type: none"> <li>• Know what a physical change is</li> <li>• Describe signs that a physical change has taken place</li> <li>• Give examples of physical changes</li> </ul>		
<p><b>3. What is a physical change and how can we identify them?</b></p>	<ul style="list-style-type: none"> <li>• Give examples of physical changes</li> <li>• Know how to separate two substances from a mixture</li> </ul>		

4. <b>What is a physical change and how can we identify them?</b>	<ul style="list-style-type: none"> <li>• Give examples of physical changes</li> <li>• Know how to separate two substances from a mixture</li> </ul>
5. <b>What is a physical change and how can we identify them?</b>	<ul style="list-style-type: none"> <li>• Give examples of physical changes</li> <li>• Know how to separate two substances from a solution</li> </ul>
6. <b>What is a chemical reaction and how can we identify them?</b>	<ul style="list-style-type: none"> <li>• Know what a chemical reaction is</li> <li>• Describe signs that a chemical reaction has taken place</li> <li>• Give examples of chemical reactions</li> </ul>
7. <b>What is the difference between physical and chemical changes?</b>	<ul style="list-style-type: none"> <li>• Describe the similarities and differences between physical and chemical changes</li> <li>• Identify whether a physical or chemical change has taken place</li> <li>• Suggest when a physical or chemical change may be useful</li> </ul>
8. <b>What can we do to investigate chemical reactions?</b>	<ul style="list-style-type: none"> <li>• Identify whether a physical or chemical change has taken place</li> <li>• Suggest when a physical or chemical change may be useful</li> </ul>
9. <b>What can we do to investigate chemical reactions?</b>	<ul style="list-style-type: none"> <li>• Explain how to tell which reaction is larger</li> <li>• Identify the variables in an acids and metals investigation</li> <li>• Write a method for investigating a reaction between acids and metals</li> </ul>
10. <b>What can we do to investigate chemical reactions?</b>	<ul style="list-style-type: none"> <li>• Explain how to tell which reaction is larger</li> <li>• Identify the variables in an acids and alkali investigation</li> <li>• Write a method for investigating a reaction between acids and alkali</li> </ul>
11. <b>What happens when we place metals into acid?</b>	<ul style="list-style-type: none"> <li>• Complete and investigation into acid and metal reactions</li> <li>• Evaluate evidence to make a conclusion</li> <li>• Know how to compare your results with other sets of results</li> </ul>
12. <b>Review</b>	<ul style="list-style-type: none"> <li>• End of unit quiz</li> </ul>