

## KNOWLEDGE PROGRESSION YEAR GROUP OVERVIEW – Science (Chemistry)

Science: Chemistry						
	At both key stages the knowledge progression takes full account of the National Curriculum's Chemistry strands of: <ul style="list-style-type: none"> <li>○ Everyday materials</li> <li>○ Rocks</li> <li>○ States of matter</li> <li>○ Properties and changes in materials</li> </ul>					
	Skills are dependent on specific knowledge. A skill is the capacity to perform and in order to perform a deep body of knowledge needs to be acquired and retained.					
	Knowledge statements should be what pupils retain for ever. In other words, this knowledge is within their long-term memory and will be retained.					
	When considering pupils' improvement in subject specific vocabulary, pupils could be provided with a knowledge organiser which contains all words used for geography for their age group.					
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Everyday materials</b>	<ul style="list-style-type: none"> <li>• Know the name of the materials an object is made from</li> <li>• Know about the properties of everyday materials</li> </ul>	<ul style="list-style-type: none"> <li>• Know how materials can be changed by squashing, bending, twisting and stretching</li> <li>• Know why a material might or might not be used for a specific job</li> </ul>				
<b>Rocks</b>		<ul style="list-style-type: none"> <li>• Compare and group rocks based on their appearance and physical properties, giving reasons</li> <li>• Know how soil is made and how fossils are formed</li> <li>• Know about and explain the difference between sedimentary, metamorphic and igneous rock</li> </ul>				
<b>States of matter</b> <b>EYFS</b> Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.				<ul style="list-style-type: none"> <li>• Group materials based on their state of matter (solid, liquid, gas)</li> <li>• Know the temperature at which materials change state</li> <li>• Know about and explore how some materials can change state</li> <li>• Know the part played by evaporation and condensation in the water cycle</li> </ul>		
<b>Properties and changes in materials</b>				<ul style="list-style-type: none"> <li>• Compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical &amp; thermal]), and response to magnets</li> </ul>		

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<b>Properties and changes in materials</b>					<ul style="list-style-type: none"><li>• Know and explain how a material dissolves to form a solution</li><li>• Know and show how to recover a substance from a solution</li><li>• Know and demonstrate how some materials can be separated (e.g. through filtering, sieving and evaporating)</li><li>• Know and demonstrate that some changes are reversible and some are not</li><li>• Know how some changes result in the formation of a new material and that this is usually irreversible</li></ul>	
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