

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

pStrand	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
<b>Materials and their properties</b>	<ul style="list-style-type: none"> <li>SCN.1 know the names of some simple materials</li> <li>SCN.2 know how to explore collections of materials, with similar and/or different properties.</li> </ul>	<ul style="list-style-type: none"> <li>SCR.1 know the differences between simple materials and the changes they notice (e.g. adding water to sand)</li> <li>SCR.2 know the name of the everyday materials; wood, metal, glass, plastic</li> </ul>	<ul style="list-style-type: none"> <li>SC1.1 know the difference between an object and the material from which it is made</li> <li>SC1.2 know and name a variety of everyday materials, including wood, plastic, glass, metal, water, rock and more</li> <li>SC1.3 know the simple properties (e.g. hard, soft, stretchy, stiff, waterproof, not waterproof, opaque, transparent) of a variety of everyday materials</li> <li>SC1.4 know a variety of everyday materials and compare and group them together on the basis of their simple physical properties</li> </ul>	<ul style="list-style-type: none"> <li>SC2.1 know how materials can be changed by squashing, bending, twisting and stretching</li> <li>SC2.2 know and compare the suitability of a variety of everyday materials including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> </ul>	<ul style="list-style-type: none"> <li>SC3.1 know how to compare and group rocks based on their appearance and physical properties</li> <li>SC3.2 know in simple terms how fossils are formed when things that have lived are trapped within rocks</li> <li>SC3.3 know that soils are made from rocks and organic matter</li> </ul>		<ul style="list-style-type: none"> <li>SC5.1 know how to compare and group together everyday materials on the basis of their properties (e.g. hardness, solubility, transparency, conductivity, [electrical &amp; thermal], and response to magnets)</li> <li>SC5.2 know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li> <li>SC5.3 know how mixtures might be separated using knowledge of solids, liquids and gas, including through filtering, sieving and evaporating</li> <li>SC5.4 know the particular uses of everyday materials including metal, wood and plastic, based on evidence from comparative and fair tests</li> <li>SC5.5 know that dissolving, mixing and changes of state are reversible changes through investigation</li> <li>SC5.6 know that some changes result in the formation of new materials and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate soda</li> </ul>		<ul style="list-style-type: none"> <li>SC7.1 know how the properties of the different components of a mixture lead to different methods of separating them</li> <li>SC7.2 know the difference between a chemical and physical change</li> <li>SC7.3 link knowledge of chemical and physical changes to reactions with acids and alkalis</li> </ul>

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<b>States of Matter</b>		SCR.3 know some materials can change, (e.g. ice in the water tray, baking; combing ingredients; turning bread into toast)				<ul style="list-style-type: none"> <li>• SC4.1 know how to compare and group materials together according to whether they are solids, liquids or gases</li> <li>• SC4.2 know that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens (°C)</li> <li>• SC4.3 know the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</li> </ul>			<ul style="list-style-type: none"> <li>• SC7.4 know how the properties of solids, liquids and gases are determined by the particle model</li> </ul>