

Science Knowledge Progression - Chemistry

Strand	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Materials and their properties	<p>Know the names of some materials and explore the different properties</p> <p>Know how to explore natural materials, indoors and outside</p>	<p>Know the differences between materials and changes they notice</p> <p>Know and explore collections of materials with similar and/or different properties</p> <p><i>Know how different materials sink and float</i> <i>Know that light can be shone through some materials, but not others</i></p>	<p>Know the difference between an object and the material from which it is made</p> <p>Know and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</p> <p>Know the simple physical properties of a variety of everyday materials</p> <p>Know a variety of everyday materials on the basis of their simple physical properties</p>	<p>Know and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>Know that materials can be changed by squashing, bending, twisting and stretching</p>			<p>Know how to compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</p> <p>Know how mixtures might be separated, including through filtering, sieving and evaporating</p> <p>Know the particular uses of everyday materials, including metals, wood and plastic, based on evidence from comparative and fair tests Know that dissolving, mixing and changes of state are reversible changes</p> <p>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 of soda</p>	

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States of matter		<i>Know and recognise when materials change from one state to another (i.e cooking, melting etc.)</i>				<p>Know how to group materials together, according to whether they are solids, liquids or gases</p> <p>Know that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)</p> <p>Know the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</p>		
Rocks					<p>Know how to group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>Know in simple terms how fossils are formed when things that have lived are trapped within rock</p> <p>Know that soils are made from rocks and organic matter</p>			