






Science Knowledge and Skills Overview – Year One Properties of Materials

National Curriculum Objectives		Sticky Knowledge		Key Scientists
<ul style="list-style-type: none"> Distinguishing between object and material it's made from. Identify and name materials e.g. Wood, plastic, glass, metal, water and rock , <i>brick, paper, fabric, elastic, foil</i> Describe physical properties and compare 		<ul style="list-style-type: none"> A material is what something is made from. Glass can be transparent or translucent. Metal is strong and versatile. Wood is the material which comes from a tree. Plastic is versatile because it can be shaped or moulded to any shape. Rock is naturally occurring and a hard material. Water is a liquid and a naturally occurring material. Some materials are man-made and others are naturally occurring. There are other everyday materials such as: brick, paper, elastic and foil Charles Mackintosh invented a waterproof coat called the 'mac'. 		<p>Charles Mackintosh (Chemist and Inventor)</p> <p>Ole Kirk Christiansen (Inventor)</p>
Links to NHFS core curriculum themes		Vocabulary		Key Questions
<p>Sustainability/Equality – links to recycling, plastics and the environment, climate change</p> <p>Aspirations – e.g. glazier, blacksmith, carpenter, construction</p> <p>Equality - comparing affordability</p>		<p>Translucent, versatile, strong, man-made, natural, glass, wood, plastic, rock, metal, water, liquid</p> <p><u>Comparative Language</u> hard/soft, stretchy/ stiff, shiny/dull, rough/smooth, absorbent/not absorbent, waterproof, opaque/transparent</p>		<p>When is a wooden spoon more suitable than a plastic spoon?</p> <p>Are all metals the same?</p> <p>Is glass only used for windows?</p> <p>Is all glass transparent?</p> <p>Which materials can be recycled?</p>
Prior Learning		Future Learning		Big Question
<p>In EYFS children should:</p> <ul style="list-style-type: none"> Be able to ask questions about the place they live. Talk about why things happen and how things work. Discuss the things they have observed such as natural and found objects. Manipulate materials to achieve a planned effect. 		<p>In Year 2 children will:</p> <ul style="list-style-type: none"> Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shape of solid objects made from some materials can be changed: squashing, bending, twisting and stretching. 		
 <p>Which materials are the most flexible?</p> <p>Which materials are the most absorbent?</p>	 <p>We need to choose a material to create a waterproof canopy for Santa's sleigh. Which is best and why?</p>	 <p>What happens to materials over time if we bury them in the ground?</p> <p>What happens to ice over time?</p>	 <p>Is there a pattern in the types of materials that are used to make objects in a school?</p>	 <p>How is glass made?</p> <p>What happens to our recycling?</p>