



<p><b>Vocabulary</b></p> <p>Materials, Hardness, Transparency, Magnetism, Electrical conductivity, Thermal conductivity, Reversible/irreversible changes, Hazards, Comparative testing, Filtering, Reactant</p>	<p><b>Skills</b> <i>Enquiry and working scientifically skills (UKS2)</i></p> <ul style="list-style-type: none"> <li>• plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>• <b>take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</b></li> <li>• <b>record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</b></li> <li>• use test results to make predictions to set up further comparative and fair tests</li> <li>• <b>report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</b></li> <li>• identify scientific evidence that has been used to support or refute ideas or arguments.</li> </ul>	<p><b>What we already know</b></p> <p><u>KS1 knowledge</u></p> <ul style="list-style-type: none"> <li>• Y2/Sp1 – Everyday materials – properties and uses including what properties are needed to implement a change in appearance of material</li> <li>• Y2/Sp1 - Shapes of solids objects can be changed by squashing, bending, twisting and stretching</li> </ul> <p><u>KS2 knowledge</u></p> <ul style="list-style-type: none"> <li>• Y3/A2 – Rocks - Different surfaces ‘feel’ different</li> <li>• Y3/Sp2 – Magnets - can separate ‘magnetic’ from ‘non-magnetic’ materials</li> <li>• Y4/Sp1/2 – States of Matter – The differences between solids, liquids and gases.</li> <li>• Understand that ice, water and steam are the same ‘material’ in different ‘states’</li> </ul>
<p><b>Application/ Outcomes</b></p> <ul style="list-style-type: none"> <li>• Separating solutions</li> <li>• Solubility investigation</li> <li>• Information booklet – new man made materials</li> <li>• Identify materials that are good insulators or conductors of heat. Design a product with real life benefits using this knowledge (eg. Packed lunch bag)</li> <li>• Build a circuit using different electrical conductors.</li> <li>• Group materials based on their properties and suggest uses</li> <li>• Reversible and irreversible changes</li> <li>• Changes of state</li> </ul>		<p><b>Concepts</b></p> <ul style="list-style-type: none"> <li>• Different materials are used for different jobs based on their properties (electrical conductivity, flexibility, hardness, insulators, magnetism, solubility, thermal conductivity, transparency)</li> <li>• Some materials can change state and these changes can be reversible (through sieving, filtering or evaporating)</li> <li>• Some materials can change state and these changes can be irreversible – A new product is formed, and this is called a reactant.</li> </ul>
<p><b>Other/Cross Curricular Links with English/Maths</b></p> <p>Topic reading – new materials      Diversity – women in science</p>	<p><b>SEND Adaptations</b></p> <p>Word banks, image mats, differentiated worksheets, adult support</p>	