



Science Unit Planner Year: 5 Title: Properties and changes of materials

<b>Unit Overview</b>	In this unit, children build on their knowledge of materials by investigating how materials can change, and how these changes can be reversible or irreversible. They look at properties of materials and how they can be used in real – life. They learn about the particles in materials and will group materials based on their composition.	
<b>Prior Learning/ Links</b>	EY – Children learn about different materials and how they look/feel. KS1 – Children learn to group and find properties of materials. They investigate what materials will be good for a purpose and why. They investigate how materials can be changed through squashing, stretch, squeezing etc... KS2 – children learn about more properties of materials, including magnetism, electrical conductors and how materials can change state.	
<b>Unit Title:</b>	<b>Substantive Knowledge</b>	<b>Disciplinary Knowledge</b>
<b>Key Questions:</b>  <b>What happens when you mix eggs and flour? Can you reverse it?</b>  <b>Once a cake is baked, why can you not get the original mix back?</b>  <b>What types of change are reversible?</b>	<ul style="list-style-type: none"> <li>• Children know materials can be grouped based on what properties they have: hard, soft, soluble, magnetic, electrical conductor.</li> <li>• Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution through evaporation.</li> <li>• They can use their knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li> <li>• Children can give reasons as to why a particular material will be used for a purpose using their knowledge.</li> <li>• Children can name some reversible and irreversible changes.</li> <li>• Children can explain 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.</li> <li>• Children can talk through the process of a fair test And what type of observations can be made to collect results.</li> </ul>	<b>Questioning and Planning</b> Plan an enquiry stating what will work well and why. To plan tests involving the control of variables – stating why this is important in conducting a fair test. <b>Observation and Measurement</b> Take accurate measurements and observations, repeating readings in order to achieve accuracy.  <b>Recording and Presenting</b> Use more complex diagrams, graphs and charts to present findings: tables, keys, bar and line graphs, diagrams with labels. Report and present findings to others using graphs, charts and written explanations.  <b>Analysing and Evaluating</b> Look for causal relationships between the data and how this supports or refutes the ideas originally thought. Describe the causal relationships between the findings. Discuss the reliability of the results
<b>Vocabulary</b>	<b>Trips/ Visits/Useful Websites/ Resources</b>	<b>Key Misconceptions:</b>
<b>Substantive:</b> Dissolve Solution Solute	<a href="#">Year 5: Properties of materials   STEM</a>	



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<p>Soluble Change Reversible Irreversible Filter Separate Solid <b>Liquid</b> <b>Gas</b> <b>change</b></p> <p><b>Disciplinary:</b> Test Enquire Question Prediction Method Results conclusion</p>	<p><a href="#">Materials - Year 5/6 - P6/7 - Science Collection - Home Learning with BBC Bitesize - BBC Bitesize</a></p>	
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