

Objective	Milestone Indicators	Basic Activities	Advanced Activities	Deep Activities	Resources
<p><b>Milestone 3</b></p> <p>To investigate materials.</p>	<p><b>Milestone 3</b></p> <p>Understand how some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution.</p>	<p>Provide children with sand, salt, baking powder, powder paint and plaster of Paris. Children mix each with water and describe what happened to each in words and pictures on Worksheet 1A. Make sure to mix plaster of Paris in a clear disposable plastic cup.</p>	<p>Provide children with eight different materials to mix with water, e.g. sand, salt, sugar, baking powder, powder paint, stock cubes, iron filings and plaster of Paris. Children described what happened to each on Worksheet 1B. Make sure to mix plaster of Paris in a clear disposable plastic cup.</p>	<p>Provide children with eight different materials to mix with water, e.g. sand, salt, sugar, baking powder, powder paint, stock cubes, iron filings and plaster of Paris. Children describe what happened to each. When finished, children complete the table stating which materials dissolved, reacted or floated or sank. Make sure to mix plaster of Paris in a clear disposable plastic cup.</p>	<p>Powerpoint Slides Worksheets 1A/1B Containers for mixing Water, salt, sugar, poster paint, sand, plaster of Paris, baking powder, iron filings etc.</p>

<p><b>Milestone 3</b></p> <p>To investigate materials.</p>	<p><b>Milestone 3</b></p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p>	<p>On Worksheet 2A, children draw diagrams to describe how they would separate each of the mixtures listed on the worksheet.</p>	<p>On Worksheet 2C, children define 'soluble' and 'insoluble' and describe how they would separate each of the mixtures listed on the worksheet.</p>	<p>Place the Challenge Cards with the corresponding equipment. Children explore how best to separate different mixtures using sieves and filters. Children record their findings for each of the challenges. When children have finished all of the challenges, discuss their findings as a group and the different methods they used for separating each of the materials.</p>	<p>Powerpoint Slides Worksheets 2A/2C Challenge Cards Sand, marbles, paperclips, rice, gravel, ground coffee, sugar, water, filter paper, different sizes of sieve</p>
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<p><b>Milestone 3</b></p> <p>To investigate materials.</p>	<p><b>Milestone 3</b></p> <p>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, oxidation and the action of acid on bicarbonate of soda.</p>	<p>Provide children with vinegar, bicarbonate of soda, water and plaster of Paris. Children follow the instructions on Worksheet 3A to create the two mixtures, note down their observations of what happens when the materials are mixed and explain why they are irreversible changes.</p>	<p>Provide children with vinegar, bicarbonate of soda, lemon juice, water, plaster of Paris, effervescent tablets and washing powder. Children mix each of the examples listed on Worksheet 3B, note down their observations and explain what new material has been produced to make an irreversible change.</p>	<p>Children think of some examples of irreversible changes in everyday life that occur when you mix two materials together (e.g. baking a cake, making a cup of tea, etc). Children list their ideas.</p>	<p>Powerpoint Slides Worksheets 3A/3B Vinegar, bicarbonate of soda, lemon juice, plaster of Paris, effervescent tablets, washing powder, water</p>
<p><b>Milestone 3</b></p> <p>To investigate materials.</p>	<p><b>Milestone 3</b></p> <p>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, oxidation and the action of acid on bicarbonate of soda.</p>	<p>Children explain what would happen to each of the objects listed on Worksheet 4A when they are heated or cooled.</p>	<p>Children explain what would happen to each of the objects listed on Worksheet 4B when they are heated or cooled.</p>	<p>Children create a list of materials that would cause an irreversible reaction and a list of materials that wouldn't, describing the reaction for each.</p>	<p>Powerpoint Slides Worksheets 4A/4B</p>

<p><b>Milestone 3</b></p> <p>To investigate materials.</p>	<p><b>Milestone 3</b></p> <p>Compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, conductivity, and response to magnets.</p>	<p>Give children a set of material cards. Children sort them using a given Carroll diagram, then answer questions about the materials shown on the cards.</p>	<p>Give children a set of material cards. Children sort them using a given Carroll diagram. They then choose one of the everyday objects listed, explore some of its properties and create a new materials card for it.</p>	<p>Give children a set of materials cards. Children design a table, Venn diagram or Carroll diagram to sort the different materials according to two or more of their properties. Children then choose one of the everyday objects listed, explore some of its properties and create a new materials card for it.</p>	<p>Powerpoint Slides Materials Cards</p>
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Mrs Hansell

Class 3 (Y5/6)