



Year 5 Science
Aut 2
Topic: Materials: reversible and irreversible changes

Key Facts	Diagram/Investigations	
<p>Reversible changes, such as mixing and dissolving solids and liquids together, can be reversed by:</p> <p>Sieving - Smaller materials are able to fall through the holes in the sieve, separating them from larger particles.</p> <p>Filtering - The solid particles will get caught in the filter paper but the liquid will be able to get through.</p> <p>Evaporating - The liquid changes into a gas, leaving the solid particles behind.</p> <p>Irreversible changes often result in a new product being made from the old materials (reactants). For example, burning wood produces ash. Mixing vinegar and milk produces casein plastic.</p> <p>Dissolving: A solution is made when solid particles are mixed with liquid particles. Materials that will dissolve are known as soluble. Materials that won't dissolve are known as insoluble. A suspension is when the particles don't dissolve.</p> <p>Sugar is a soluble material. Sand is an insoluble material.</p>	<p>Revise use of sieves to separate materials.</p> <p>Investigate what happens when sand is mixed with water. Discuss the terms soluble and insoluble.</p> <p>Create Alien soup and then plan how to separate all of the materials again.</p> <p>Investigate reversible and irreversible changes, such as self-inflating balloons, cooking an egg, glowsticks, separating materials.</p> <div data-bbox="1113 651 1980 940"></div>	
Key Learning:	Prior Learning:	Books to support/ Enrichment Opportunities:
<p>Some materials will dissolve in liquid to form a solution.</p> <p>Describe how to recover a substance from a solution.</p> <p>Separate solids, liquids and gases through filtering, sieving and evaporating.</p> <p>That dissolving, mixing and changes of state are reversible changes.</p> <p>Some changes result in the formation of new materials.</p>	<p>Previously children will have learned about: Year 4 Changing States of Matter</p>	

Subject Specific Vocabulary	
Key word	Definition
Solid	Solid particles are very close together, meaning solids hold their shape.
Liquid	Liquid particles flow and take the shape of the container because they are more loosely packed than solids.
Gas	Gas particles are further apart than solid or liquid particles and they are free to move around. A gas fills its container, taking both the shape and the volume of the container.
Dissolve	When a solid mixes with a liquid to make a solution
Solution	Made when solid particles are mixed with liquid particles
Solute	A solute is a substance that can be dissolved by a solvent to create a solution.
Soluble	Materials that will dissolve.
Reversible	When mixing and dissolving solids and liquids together, can be reversed
Irreversible	When mixing and dissolving solids and liquids together, can not be reversed. A new substance is formed.
Filtering	Separating solid particles from a liquid through filter paper.
Sieving	Smaller materials are able to fall through the holes in the sieve, separating them from larger particles.
Evaporation	The liquid changes into a gas, leaving the solid particles behind