



# Year 5 – Spring 2 – Knowledge Organiser

## Properties & changes of materials: Are all changes reversible?



Subject Specific Vocabulary	
Soluble	Able to be dissolved.
Insoluble	Not able to be dissolved.
Solute	A substance that will dissolve into a liquid.
Solvent	The liquid in which a substance is dissolved.
Solution	What is formed when a solute dissolves in a solvent.
Dissolve	When something solid mixes with a liquid and becomes part of the liquid.
Particles	The tiny pieces of 'stuff' or matter that make up everything on Earth.
Reversible change	Can be reversed back to its original state.
Irreversible change	Cannot be reversed back to its original state.
Transparent	Allows light to pass through.
Thermal conductor	A material or device which allows heat to pass through.
Condensation	The process by which a gas turns back into a liquid.
Electrical conductor	A material or device which allows electricity to pass through.
Filtering	The process of separating solids from liquids using filter paper.
Magnetic	Capable of being magnetised or attracted by a magnet.
Permeable	A material which allows liquid or water to pass through.
Evaporation	When liquid is heated, it turns into water vapour (gas).

**Key Knowledge**

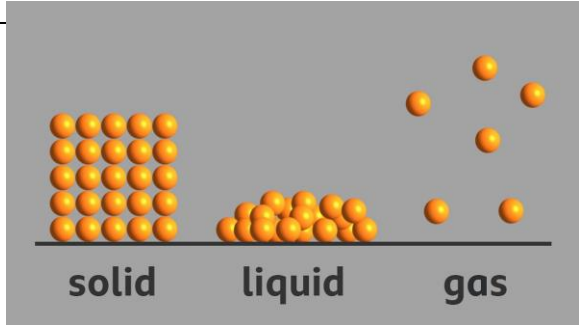
Different materials are used for particular jobs based on their properties: electrical conductivity, flexibility, hardness, insulators, magnetism, solubility, thermal conductivity & transparency.

A solution is made when solid particles are mixed with liquid particles.

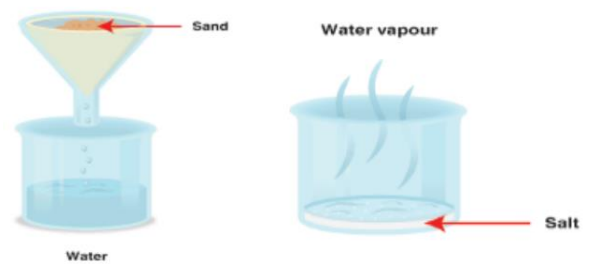
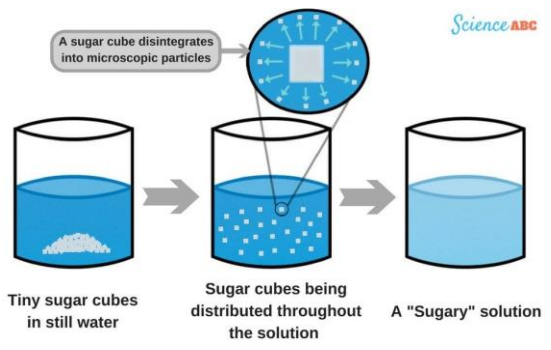
Materials that will dissolve are known as soluble.  
Materials that won't dissolve are known as insoluble.  
More will dissolve in a hot liquid than in a cold liquid.  
We can use sieving, filtering or evaporating to separate

Some changes are reversible – the materials can be changed back to how they were before the reaction took place e.g. When ice melts to form water, it can be frozen to form ice again.

Some changes are irreversible – the materials cannot be changed back to how they were before the reaction took place e.g. When a piece of wood is burned to form ash, it cannot be changed back into wood.



Key images and diagrams





**English**

**Main text: Brightstorm by Vashti Hardy.**

To know how to write a newspaper report based on the disappearance of Ernest Brightstorm.

To know how to use direct and reported speech to write quotations.



To know how and when to use formal and informal language within our writing.

To know how to write a persuasive letter of application

Draw inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence.

**Properties & changes of materials**

Are all changes reversible?

Brightstorm by Vashti Hardy - Please provide a copy of the text to support your child in school.

**Computing**

**Game Creator**

To know how to plan a game.

To know how to design and create the game environment.

To know how to finish and share the game.

To know how to self-evaluate the game.

**3D modelling**

To know how to use computer software to design, refine, print and make a 3D model.

**Maths**

To know how to recognise some equivalent fractions, decimals and percentages. To know how to order and compare decimals.

To know how to find the perimeter and area of shapes including composite shapes.

**Physical Education**

**Hockey**

To know how to be aware of space.

To know how to use space to support team-mates.

To know how to use space to cause problems for the opposition.

To know how to use the rules fairly.

**Dance**

To know how to compose my own dances in a creative way.

To know how to ensure that my dance shows clarity, fluency, accuracy and consistency.

**Science**

To know how to compare and group together everyday materials on the basis of their properties.

To know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.

To know how to use knowledge of solids, liquids & gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.

Give reasons based on evidence from comparative and fair tests for the particular uses of everyday materials including metal, wood & plastic.

Demonstrate that dissolving, mixing and changing state are reversible changes.

Explain that some changes result in the formation of new materials and that this kind of change is not usually reversible.

**PSHE**

To know the health risks of smoking.

To know some of the risks linked to misusing alcohol including anti-social behaviour.

To know basic emergency procedures, including the recovery position.

To know how to get help in emergency situations.

To know that the media, social media & celebrity culture promotes certain body types.

To know the different roles food can play in people's lives and know that people can develop eating problems/disorders related to body image pressure.

To know what makes a healthy lifestyle.

**Religious Education**

How significant is it for Christians to believe that God intended Jesus to die?

To begin to consider ideas of destiny and free will.

To begin to consider whether the crucifixion was a consequence of the events of Holy Week or whether Jesus knew and it was part of God's plan for him to die and rise again.

**French**

**That's Tasty & Family & Friends.**

To know how to engage in conversations, asking and answering questions in the context of food and drink.

To know how to introduce different family members.

To know how to describe their home by size and explain where items can be found.

**Design Technology**

To know how to investigate and evaluate bread products.

To know how to find out which different ingredients are needed to make bread and how ingredients can be altered and mixed to create different effects.

To know how to design a new bread product for a particular person or event.

To know how to able make bread based on a plan and design.

**Music**

Guitar - Delivered by OCM using First Access programme.