Annunciation Catholic Junior School:

KNOWLEDGE ORGANISERS

YEAR 5 Properties and Changes of Materials

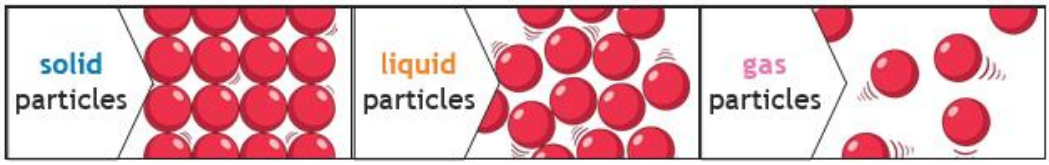
What? (Key Vocab)

Spelling	Definition
materials	The substance that something is madeout of, e.g. wood, plastic, metal.
solids	One of the three states of matter. Solid particles are very close together,meaning solids, such as wood and glass,hold their shape.
liquids	This state of matter can flow and take the shape of the container because the particles are more loosely packed than solids and can move aroundeach other. Examples of liquids includewater and milk.
gases	One of the three states of matter. Gas particles are further apart than solidor liquid particles and they are free tomove around. A gas fills its container, taking both the shape and the volume of the container. Examples of gases areoxygen and helium.
melting	The process of heating a solid until it changes into a liquid.

What? (Key Vocab)

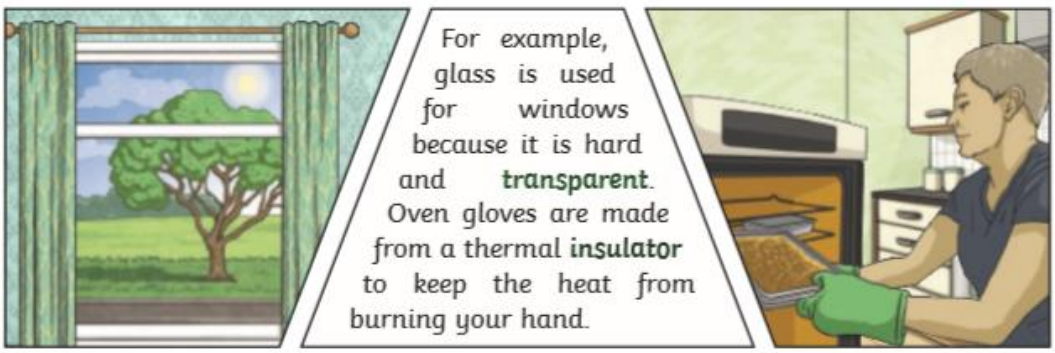
Spelling	Definition
freezing	When a liquid cools and turns into a solid.
evaporating	When a liquid turns into a gas or vapour.
condensing	When a gas, such as water vapour, cools and turns into a liquid.
conductor	A conductor is a material that heat or electricity can easily travelthrough. Most metals are both thermal conductors (they conduct heat) and electrical conductors (they conduct electricity).
insulator	An insulator is a material that doesnot let heat or electricity travel through them. Wood and plastic are both thermal and electrical insulators.
transparency	A transparent object lets light through so the object can be lookedthrough, for example glass or some plastics.

Diagrams and Symbols

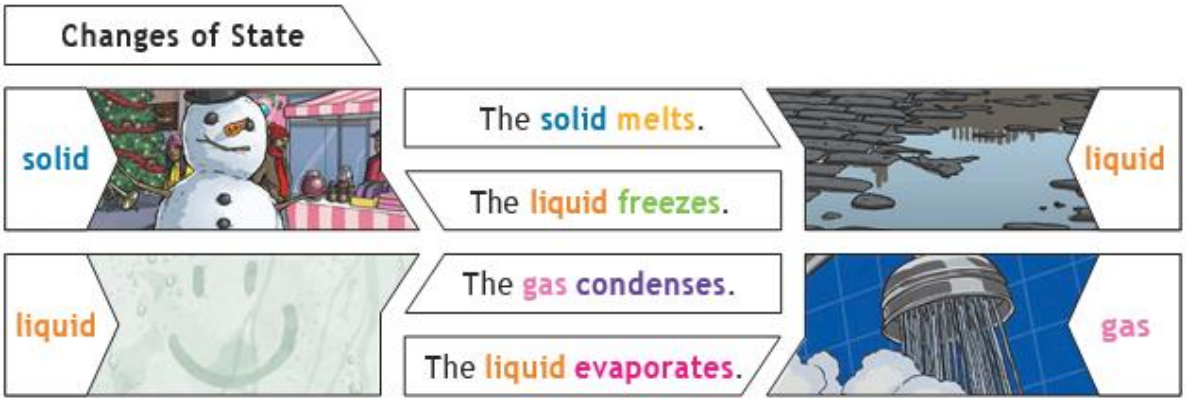


Key Knowledge

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



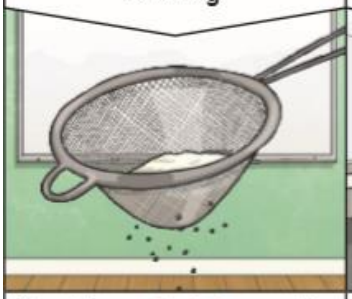
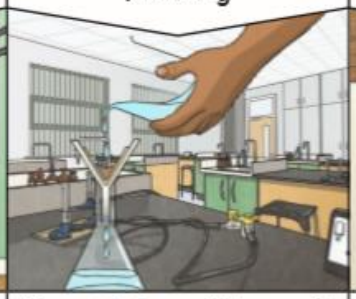
Diagrams and Symbols



Diagrams and Symbols

Key Knowledge

Reversible changes, such as mixing and dissolving **solids** and **liquids** together, can be reversed by:

Sieving	Filtering	Evaporating
		
Smaller **materials** are able to fall through the holes in the sieve, separating them from larger particles.	The **solid** particles will get caught in the filter paper but the **liquid** will be able to get through.	The **liquid** changes into a **gas**, leaving the **solid** particles behind.

Diagrams and Symbols

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.

Sugar is a soluble **material**.

Sand is an insoluble **material**.