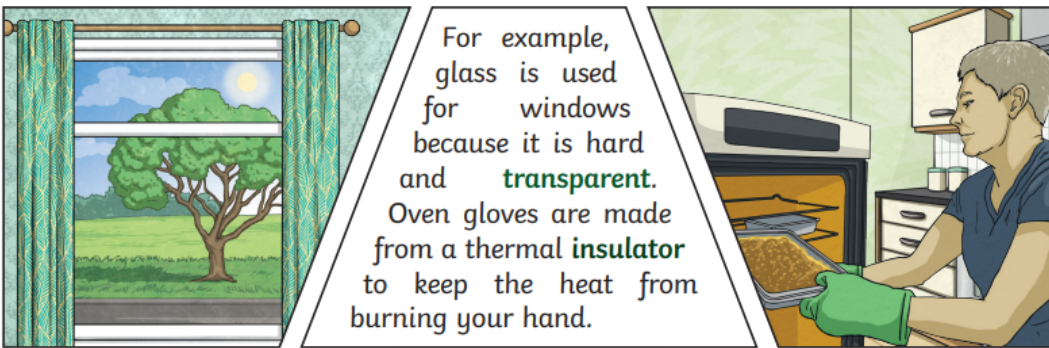


Year 5 Autumn 1 Materials Knowledge Organiser

Key Knowledge

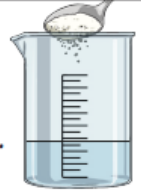
Different **materials** are used for particular jobs based on their properties: electrical **conductivity**, flexibility, hardness, **insulators**, magnetism, solubility, thermal **conductivity**, **transparency**.



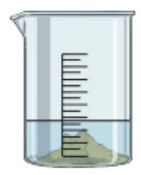
Dissolving

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.

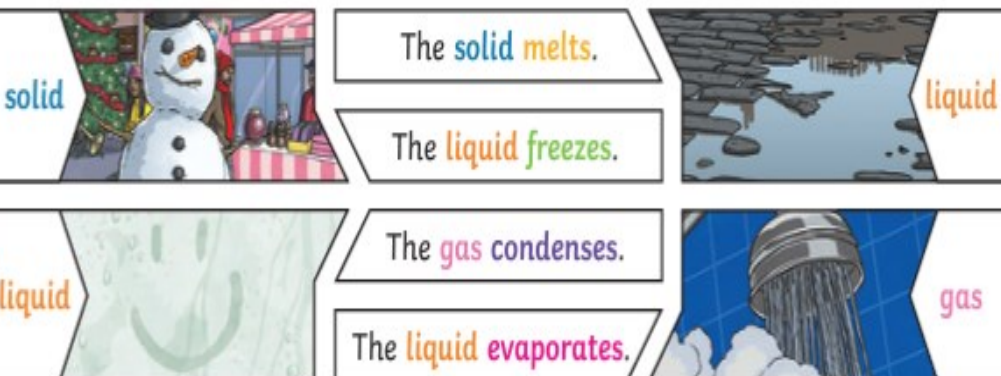
Sugar is a soluble **material**.



Sand is an insoluble **material**.



Changes of State



Key Vocabulary

material	The substance that something is made out of, e.g. wood, plastic, metal.
solid	One of the three states of matter. The particles in solids are very close together, meaning solids , such as wood and glass, hold their shape.
liquid	One of the three states of matter. A liquid can flow and take the shape of its container. Examples of liquids include water and milk.
gas	One of the three states of matter. The particles in gases are further apart than those in solids or liquids and they are free to move around. A gas fills its container, taking both the shape and the volume of the container. Examples of gases are oxygen and helium.
melting	The process of heating a solid until it changes into a liquid .
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 travel through.
insulator	An insulator is a material that does not let heat or electricity travel through it.
transparency	A transparent object lets light through so the object can be looked through, for example glass or some plastics.

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.



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.

