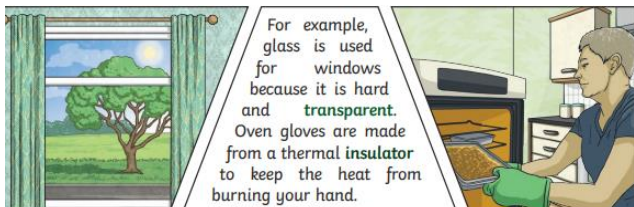


St Matthias CE Primary School Knowledge Organiser



Key Knowledge

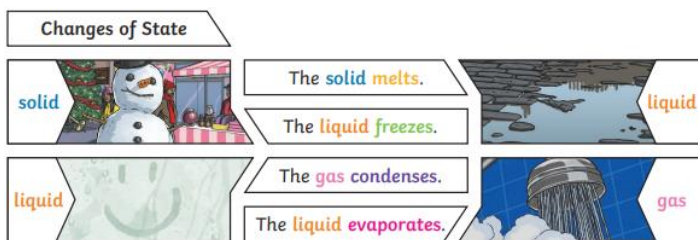
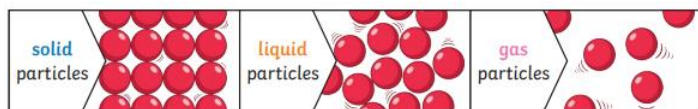
Different materials are used for particular jobs based on their **properties**: electrical conductivity, flexibility, hardness, insulators, magnetism, solubility, thermal conductivity & transparency.



Materials can be grouped based on their properties using more complex vocabulary.



States of Matter- Solid, Liquid or Gas?



Reversible and Irreversible changes.

Reversible Changes	Irreversible Changes
Melting chocolate	Burning wood
Freezing water	Baking a cake
Dissolving sugar in water	A candle melting

Irreversible changes often result in a **product** being made from the old materials (**reactants**).



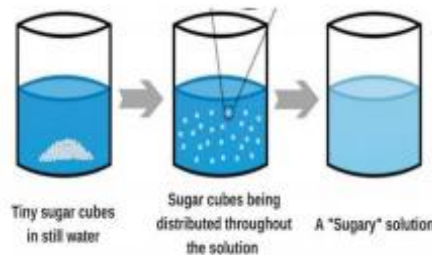
Key knowledge

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

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

**Dissolving**- Sometimes when a solid (**solute**) is mixed with a liquid (**solvent**) it will dissolve to form a **solution** e.g. dissolving sugar in hot tea.

The solid seems to disappear in the solution but it is still there it has just become part of the liquid. A **soluble** material **can dissolve** however an **insoluble** material **cannot dissolve**.



Key vocabulary

- Solid**- having a firm shape or form that can be measured in length, width, and height.
- Liquid**- flows to take the shape of the container.
- Gas**- fills the shape of the container and takes the shape and volume of the container.
- Transparent**- you can see through it as light is let through.
- Conductor**- a material that heat (**thermal**) or electricity (**electrical**) can pass through.
- Filtering**- a process used to remove dirt or other solids from liquids or gases.
- Melting**- Heating a solid turns it into a liquid.
- Freezing**- Cooling a liquid turns it into a solid.
- Evaporation**- a change of state from a liquid into gas.
- Condensing**- Cooling a gas turns it into a liquid.

Useful Websites

<https://www.bbc.co.uk/bitesize/topics/zryycdm>