

Solids, Liquids & Gases Knowledge Organiser

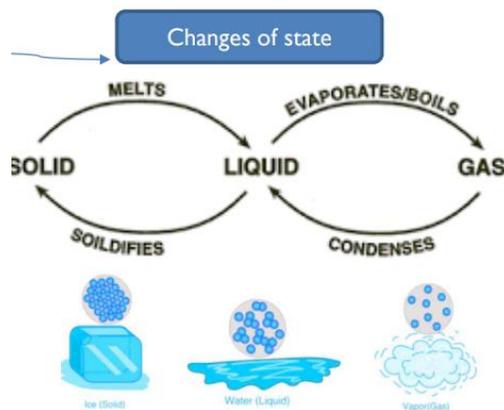
Properties of Materials

	wood: hard, stiff, strong, opaque, can be carved into any shape.		glass: waterproof, transparent, hard, smooth.
	plastic: waterproof, strong, can be made to be flexible or stiff, smooth or rough.		metal: strong, hard, easy to wash.
	paper: lightweight, flexible.		cardboard: strong, light, stiff.
	fabric: soft, flexible, hard-wearing, can be stretchy, warm, absorbent.		rubber: hard-wearing, elastic, flexible, strong.

Key vocabulary	
Viscosity	Viscosity is the property of a liquid that describes how fast or slowly it will flow.
States of matter	Materials can be one of three states: solids, liquids or gases. Some materials can change from one state to another and back again
Solution	A solution is created by dissolving materials in a liquid.
Solid	These are materials that keep their shape unless a force is applied to them. They can be hard, soft or even squashy. Solids take up the same amount of space no matter what has happened to them
Liquid	Liquids take the shape of their container. They can change shape but do not change the amount of space they take up. They can flow or be poured.
Gas	Gases can spread out to completely fill the container or room they are in. They do not have any fixed shape but they do have a mass.
Flexible	Bendable or flexible materials are materials that are able to be bent out of shape or compressed without breaking, and can easily be returned to their original shape.
Fragile	A fragile object is easily damaged or broken
Waterproof	does not let water pass through it
Absorbent	material that soaks up liquid easily

When water and other **liquids** reach a certain temperature, they change state into a **solid** or a **gas**. The temperatures that these changes happen at are called the boiling, **melting** or **freezing** point.

<p>solid → heat → liquid</p> <p>If a solid is heated to its melting point, it melts and changes to a liquid. This is because the particles start to move faster and faster until they are able to move over and around each other.</p>	<p>liquid → cold → solid</p> <p>When freezing occurs, the particles in the liquid begin to slow down as they get colder and colder. They can then only move gently on the spot, giving them a solid structure.</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



There are three states of matter.

Solid	Liquid	Gas
Particles in a solid are close together and cannot move. They can only vibrate.	Particles in a liquid are close together but can move around each other easily.	Particles in a gas are spread out and can move around very quickly in all directions.

