

Pilgrim Primary Academy Knowledge Organiser

Topic: Fire and Ice

Year Group: 4

Strand: Science

What I should already know:

- What everyday materials are used for (including wood, metal, plastic, glass, brick, rock, paper and cardboard).
- Some things can turn into a solid by freezing
- Some things can turn into liquid by heating

What will I know by the end of the unit?

- I will be able to name the 3 states of matters and give examples of each.
- I will be able to compare and group materials together, according to whether they are solids, liquids or gases.
- I know that some materials change state when they are heated or cooled
- I know the role of evaporation and condensation in the water cycle.

Key Knowledge/Facts

Types of Materials

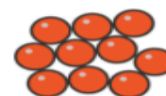
Solids



Stays the same shape
Can be held in your hands
Can be cut into a new shape

Examples - wood, metal, rock, ice

Liquids



Flows and can be poured
Changes shape to its container
Volume never changes

Examples - water, juice, oil

Gases



Often invisible
Always fills its container
Shape & volume change

Examples - oxygen, hydrogen, carbon dioxide

What does changes of state mean?

When a material changes from one material type to another, we say 'it has changed state.'

Key Vocabulary and definitions:

material	The substance that something is made out of e.g. wood, metal and stone.
solid	One of the three states of matter. Solid particles are very close together, meaning solids, such as wood and glass, hold their shape.
liquid	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 around each other.
gas	One of the three states of matter. Gas particles are further apart than solid or liquid particles and they are free to move around.
particle	A tiny amount of something. You can't see them with your eyes.
melting	The process of heating a solid until it changes into a liquid. E.g. ice turning into water.
freezing	When a liquid cools and turns into a solid. E.g. water turning into ice.
evaporating	Changing from a liquid to a gas.
condensing	Changing from a gas to a liquid.

