



St White's Primary School – Science



What knowledge do I already have?

I can name different materials e.g. glass, plastic and say what material an object has been made from. I can describe simple properties of materials. I know that some materials can be changed by twisting or squeezing them.

What will I know by the end of the unit?

- The 3 states of matter are solid, liquid and gas.
- Some materials change state when they are heated or cooled.
- 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.
- When freezing occurs, the particles in the liquid begin to slow down as they get colder and colder.
- Different materials change state at different temperatures.
- Temperature is measured in degrees Celsius. (°C)
- Evaporation and condensations are important parts of the water cycle.

Years 3
and 4

States of Matter
Spring A

Science

We are scientists.
Scientists ask questions about our world and technology and then explore the answers with the aim of making the world a better place.



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.

Technical vocabulary

Physical properties	hard/soft, shiny/dull, rough/smooth, absorbent/non-absorbent
State	A material can be in one of three states: solid, liquid or gas.
Solid	A solid keeps its shape unless force is applied to it. It can be hard, soft or squishy. Solids take up the same amount of space whatever is done to them.
Liquid	Liquids take the shape of their container. They can change shape but not the amount of space they take up.
Gas	Gases can spread out completely to fill a container or even a room. They do not have a fixed shape.
Heat	To increase temperature
Cool	To decrease temperature
Freeze	Turn a liquid into a solid.
Evaporate	Turn a liquid into a gas.
Melt	Turn a solid into a liquid
Condense	Turn a gas into a liquid
Degrees Celsius	The unit used to measure temperature
Thermometer	A piece of equipment used to measure temperature
Temperature	The measure of how hot or cold something is
Ice	Water in its solid state
Water vapour	Water in its gas state