

States of Matter

Year 4 Spring 2

Sticky Knowledge

How are solids, liquids and gases different?

Solids have a fixed shape and fixed volume. Liquids don't have a fixed shape but a fixed volume. Gas has no fixed shape or volume.

Can states of matter change?

Yes. Some states of matter change when they are heated or cooled e.g. water when cooled turns from a liquid to a solid (ice).

What is a reversible change?

If you can get back the substances you started the reaction with, that's a reversible reaction e.g. melting chocolate to a liquid and cooling it back to a solid.

How do we measure temperature?





To measure temperature, we use a thermometer which uses degrees Celsius as its measurement, °C

What is the water cycle?





The water cycle starts in rivers, lakes and oceans, evaporates and condenses, then falls as precipitation and runs back into rivers, lakes and oceans.



How does temperature affect the water cycle?

Rising global temperatures as a result of climate change are **causing water to evaporate faster**. This is accelerating the water cycle, which could have a significant impact on our seas and on the continents.

- pouring solid** - a solid that can be poured like a liquid

- volume** - the amount of space a solid, liquid or gas takes up

- oobleck** - a material made from corn starch and water

- flow** - to move smoothly and continuously in one direction


Key vocabulary

- solid** - a state of matter with a fixed shape and a fixed volume

- liquid** - a state of matter with no fixed shape but a fixed volume

- gas** - a state of matter with no fixed shape and no fixed volume

- volume** - the amount of space a solid, liquid or a gas takes up

- states of matter** - the different forms that materials can take

- freezing** - the change of state from a liquid to a solid

- melting** - the change of state from a solid to a liquid

- boiling** - the change of state from a liquid to a gas, which happens quickly when heated and creates bubbles of the gas

Key Vocabulary

Vocabulary	Definition
solid	A state of matter that has a fixed shape and fixed volume..
liquid	A state of matter that doesn't have a fixed shape but a fixed volume
gas	A state of matter that has no fixed shape or volume
condensation	the change of state from a gas to a liquid- water vapour appears on the surface
evaporation	the change of state from a liquid to a gas, which happens slowly from the surface of the liquid- water vapor evaporates from the surface
precipitation	- solid or liquid water that falls from the atmosphere, in the form of rain, hail, sleet or snow
Water cycle	the processes which recycle and move water around Earth
Independent variable	What we will change
Dependent variable	What we will measure
Controlled variable	What we will keep the same

The Water Cycle

