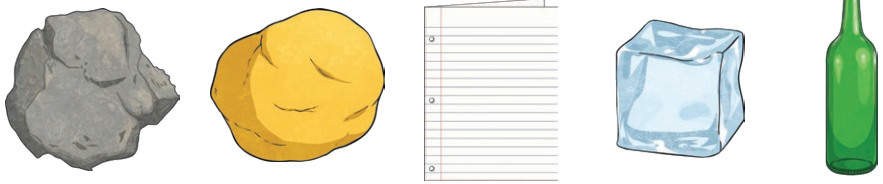
Key Vocabulary Overview	
matter	the substance everything is made up of
solid	a material with a fixed shape/volume
liquid	a material with a fixed volume but no fixed shape
gas	a material with no fixed shape/volume
volume	how much space a material takes up
states of matter	the states that a material can exist in
oobleck	a material that has unusual properties
flow	to move continuously in one direction
freezing	changing from a liquid to a solid
melting	changing from a solid to a liquid
melting point	the temperature at which a material changes from a solid to a liquid
boiling	when a material is heated to cause it to turn from a liquid into a gas
condensation	changing from a gas to a liquid
evaporation	changing from a liquid to a gas
precipitation	water that falls back to land from the atmosphere
water vapour	water as a gas
atmosphere	the layer of gases around the Earth
water cycle	the process by which water moves between the oceans, atmosphere and land
global warming	the slow increase in temperature across the planet
temperature	a measure of how hot or cold something is
thermometer	used for measuring temperature
stopwatch	used to measure the passage of time
beaker	a transparent container
petri dish	a shallow dish
observation	something you notice during an enquiry
variable	something that could change or be changed during an enquiry
data	the information you collect in your enquiry
conclusion	what you have found out from your enquiry
evaluation	how well the enquiry worked and how it could be improved

Matter can exist in one of three different states: **solid**, **liquid** and **gas**.

Solid

When materials are in a **solid** state, they have a fixed shape and fixed **volume**. Having a fixed shape means that they do not change shape without being made to.

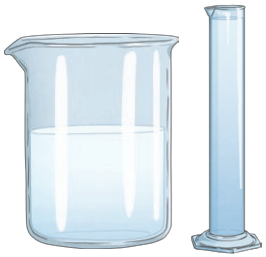


Liquid

Liquid materials have a fixed **volume**, meaning they always take up the same amount of space. However, they don't have a fixed shape. This means they take the shape of whatever container they are in. Without a container, they would just spread out.

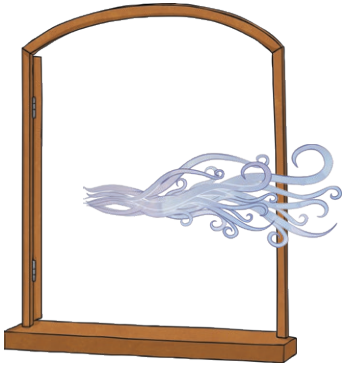
Volume

The **volume** of a material is how much space it takes up. Objects may have the same **volume** but take up a different shape of space.



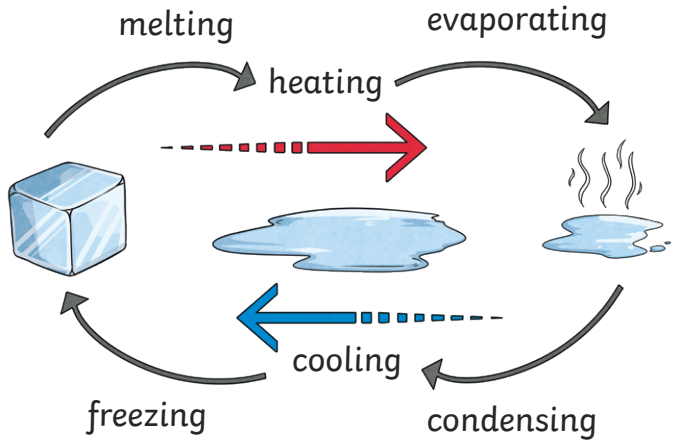
Gas

Gases have no fixed shape and no fixed **volume**. They expand to fill whatever container they are in. A collection of different **gases** make up the air we breathe.



Changing States

Some materials can change their **state of matter** between a **solid**, **liquid** and **gas**. Some materials can change state through the following processes: **melting**, **evaporating** or **boiling**, **condensing**, **freezing**.



Condensation

Some **gases** can change state to a **liquid** when they are cooled. This process is called **condensation**.

The Water Cycle

Water is constantly recycled as part of the **water cycle**.

- Water **evaporates** from the surface of the oceans.
- Once water from the surface of the ocean has **evaporated** into **water vapour**, it rises up into the **atmosphere**.
- The **atmosphere** is colder than the surface of the Earth, which causes the **water vapour** to **condense** back into water droplets that gather to form clouds.
- When the droplets are heavy enough, they fall back to Earth. This is known as **precipitation**. **Precipitation** can be in the form of rain, sleet, snow or hail.
- When rain has fallen back to Earth, most of it collects together in streams, and rivers. This water makes its way to the ocean, where the **water cycle** begins all over again.

Evaporation and Boiling

Liquid can be turned into **gases** through two different processes: **evaporation** and **boiling**. **Boiling** happens when a **liquid** is heated and turns into a **gas**, whereas **evaporation** occurs only on the surface of the **liquid**.