

# States of Matter

## Skills

- Record findings using simple scientific language, labelled diagrams and tables.
- Report on findings from enquiries, including oral and written explanations.
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
- Identify differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support findings.

## Key vocabulary

- solid
- liquid
- gas
- freeze
- states of matter
- temperature (degrees Celsius)
- condensation
- evaporation
- melt
- volume
- boiling
- melting point
- independent variable
- dependent variable

## Must—know knowledge:

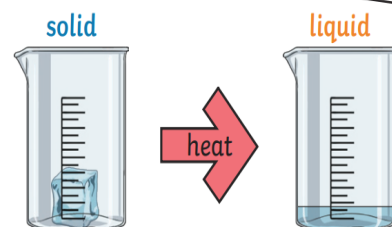
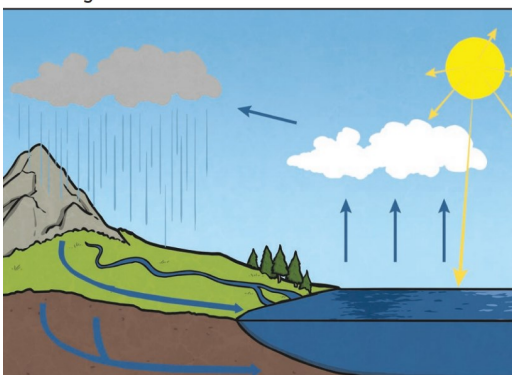
- Compare and group materials together, according to whether they are solids, liquids or gases.
- Observe that some materials change state when they are heated or cooled.
- Measure or research temperature at which this happens in degrees °c.
- Identify the part played by evaporation and condensation in the water cycle.
- Associate the rate of evaporation with temperature.

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.

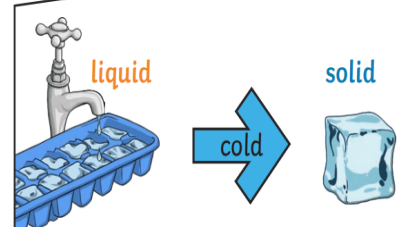
## Working Scientifically:

- To set up a simple fair test to answer a scientific question.
- I can ask relevant scientific questions.

**Condensation** and **evaporation** occur within the water cycle.



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. They can then only move gently on the spot, giving them a **solid** structure.

## Experiment:

Enquiry Question:

*How does the temperature of the water affect the time it takes for ice to melt?*