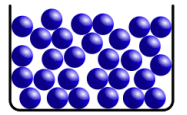


# Science - Year 4 - Chemistry

## States of Matter



### Key Vocabulary



states of matter  
solids  
liquids  
gases  
water vapour  
melt  
freeze  
evaporate  
condense  
precipitation

### Science GOLDEN WORDS:

prediction  
measurements  
conclusion  
explain  
classify

### Key Facts



There are three states of matter.

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.

### Changes of State

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 boiling, melting or freezing point.

If a solid is heated to its melting point, it melts and changes to a liquid. This is because the particles 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.
Evaporation occurs when water turns into water vapour. This happens very quickly when the water is hot, like in a kettle, but it can also happen slowly like a puddle evaporating in the warm air.	Condensation is when water vapour is cooled down and turns into water. You can see this when droplets of water form on a window. The water vapour in the air cools when it touches the cold surface.

### Working Scientifically:

- Set up simple, practical enquiries and comparative and fair tests.
- Make accurate observations and take measurements using standard units, using a range of equipment, e.g. thermometers and data loggers.
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
- Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests.

Our 'States of Matter' knowledge journey:

*\*this is the first time children will meet this topic.*