



# Year 4 - Spring 1 - Science Knowledge Organiser

## What I already know...

This will be the first time that children have learnt about states of matter in science. It will build upon their knowledge of properties of materials and particles.

## What I will learn...

Describe the properties of solids, liquids and gases.

Explain that melting and freezing are opposite processes that change the state of a material.

Identify the melting and freezing point of several different materials.

Explain that heating causes evaporation and cooling causes condensation.

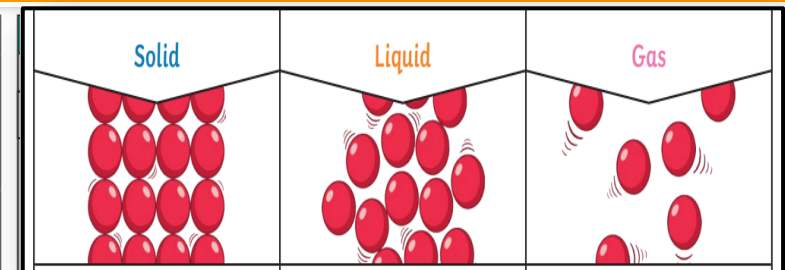
Explain that evaporation and condensation are opposite processes that change the state of a material.

Explain that the higher the temperature, the quicker water evaporates.

Explain what happens to water at the different stages of the water cycle.

Make observations and conclusions.

Key Vocabulary	
<b>states of matter</b>	Materials can be one of three states: <b>solids</b> , <b>liquids</b> or <b>gases</b> . Some materials can change from one state to another and back again.
<b>solids</b>	These are materials that keep their shape unless a force is applied to them. They can be hard, soft or even squashy. <b>Solids</b> take up the same amount of space no matter what has happened to them.
<b>liquids</b>	<b>Liquids</b> take the shape of their container. They can change shape but do not change the amount of space they take up. They can flow or be poured.
<b>gases</b>	<b>Gases</b> can spread out to completely fill the container or room they are in. They do not have any fixed shape but they do have a mass.
<b>water vapour</b>	This is water that takes the form of a <b>gas</b> . When water is boiled, it <b>evaporates</b> into a <b>water vapour</b> .
<b>melt</b>	This is when a <b>solid</b> changes to a <b>liquid</b> .
<b>freeze</b>	<b>Liquid</b> turns to a <b>solid</b> during the <b>freezing</b> process.
<b>evaporate</b>	Turn a <b>liquid</b> into a <b>gas</b> .
<b>condense</b>	Turn a <b>gas</b> into a <b>liquid</b> .
<b>precipitation</b>	<b>Liquid</b> or <b>solid</b> particles that fall from a cloud as rain, sleet, hail or snow.



## Making a difference at The Merton & beyond

Children will be working collaboratively to sort materials into solids, liquids and gases, explain that heating causes melting, and cooling causes freezing, identify the melting and freezing point of water, describe evaporation and condensation .

The learning will link with our English journey and class book 'Charlie & the Chocolate Factory', where children are learning the skills of instructional writing. They will write a set of instructions to create a chocolate lolly, which they will then make using their understanding of melting a solid to become a liquid and setting it to become a solid again linking with reversible and irreversible changes.