# St John's Primary School: Science knowledge organisers

Year group: Year 4

Science focus: States of matter



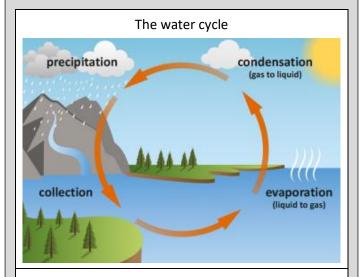
# Key knowledge:

	Grouping materials		
Materials fall	• Solids		
into three	<ul><li>Liquids</li></ul>		
categories	Gasses		
Solids	Solids stay in one place and can be		
Jonas	held.		
	Most solids keep their shape.		
	They do not flow like liquids (Some		
	solids like sand or salt can be		
	poured).		
	Solids always take up the same		
	amount of space.		
	They do not spread out like gases.		
Liquids	Liquids can flow or be poured easily.		
	They are not easy to hold.		
	Liquids change their shape		
	depending on the container they are		
	in.		
Gasses	Gases are often invisible.		
	They do not keep their shape.		
	They spread out and change their		
	shape and volume to fill up		
	whatever container they are in.		
Evaporation	Stages of the water cycle  The sun heats up water on land, in		
Lvaporation	rivers, in lakes and in the sea and		
	turns it into water vapour. The water		
	vapour rises into the air.		
Condensation	Water vapour cools down in the air		
	and changes back into tiny drops of		
	liquid water, forming clouds.		
Precipitation			
	falls back to earth in the form of rain		
	and snow.		
Collection	ction Rain water runs over the land and		
	collects in lakes or rivers, which		
	takes the water back to the sea. The		
	cycle then starts all over again.		

### Key vocabulary:

Temperature	erature How hot or cold an object is	
Degrees	The scale for measuring temperature	
Celsius		

### Diagrams:



#### Changing state of matter

	What	Explanation	Name of process	Example
	Solid to Liquid	When a solid melts it changes to a liquid.	Melting	When an ice cube melts.
	Liquid to Gas	A liquid evaporates into a gas when it is heated.	Evaporation	When water on a roof is warmed up and turns to steam.
	Gas to Liquid	When a gas it cooled it condenses into a liquid.	Condensation	When steam from the shower cools on the mirror it turns to water.
	Liquid to Solid	When a liquid freezes it turns into a solid.	Freezing	When the water in a pond freezes, it turns to ice.

# Possible experiences:

Melting different types of chocolate. Do any melt quicker or slower?

Use melting and freezing to create bath bombs. Create a water cycle in a bowl.

### Key concepts:

Grouping	Observing
Comparing	Identifying