Year 4: States of Matter Knowledge of Kings

Subject Specific Vocabulary		Important facts to know by the end of the topic		Sticky Knowledge about States of matter	
water vapour	Water that is in the form of gas.	**1**	Know some materials change state when they are heated or cooled, and can measure or research the temperature at which this happens	**1**	❑ Solid matter is hard. It has shape and volume. Solids consist of molecules that group tightly and can't move around.
condensation	When water vapour that is around us changes from a gas back to liquid.	**2**	Know the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	**2**	❑ Liquid has not a shape but has a thickness and may be of different colours. There are multiple examples of liquids in the world.
Temperature	The measure of the average heat or thermal energy in a substance	**3**	Know how to group solids, liquids and gases by observing their properties.	**3**	❑ Gases surround us in the air. We can walk through the gas and don't feel it. Molecules of gas move freely. They are spaced apart.
evaporation	When liquid changes into gas, usually when it heats up.	**4**	Know what a fair test is and how to plan a fair test	**4**	❑ A solid changes into a liquid under the process of **melting**.
Water cycle	The continuous movement of water on, above and below the surface of the Earth	**5**	Know how to define freezing and melting processes		
Boiling point	The temperature at which a liquid changes to gas (steam or water vapour)	**6**	Know what water vapour is	**5**	❑ Liquids change into gas under the process of **evaporation**.
melting point	The temperature at which a change occurs from solid state to liquid state.			**6**	❑ A gas turns into a liquid state, and it is condensed. The process is called **condensation**.
solid	A substance that stays the same shape. Its particles do not move.			**7**	❑ The liquid state of matter becomes a solid as a result of **freezing**.
liquid	Liquids will flow as they are made up of loosely packed particles.				
gas	Gaseous matter is made up of matter that is so loose it is always moving.			**8**	❑ If a matter can change back again, it is a **reversible** change. For example, melting and freezing.