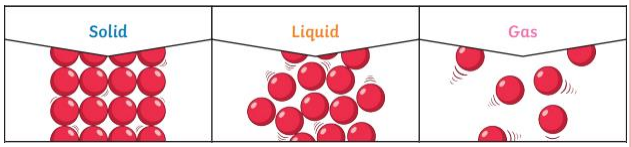
Science Knowledge Organiser

Year: 4 Term: 2 Topic: States of Matter

Prior knowledge/key knowledge

Year 3 prior knowledge.	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.
How do we compare different materials?	Compare and group materials together, according to whether they are solids, liquids or gases.
At what temperatures do materials change state?	Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).
What is the water cycle?	Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. .



Vocabulary

condense	Turn a gas into a liquid.
evaporate	Turn a liquid into a gas.
freeze	Liquid turns to a solid during the freezing process.
gases	Gases 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.
liquids	Liquids 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.
melt	This is when a solid changes to a liquid.
precipitation	Liquid or solid particles that fall from a cloud as rain, sleet, hail or snow
solids	These are materials that keep their shape unless a force is applied to them. They can be hard, soft or even squashy.
states of matter	Materials can be one of three states: solids, liquids or gases. Some materials can change from one state to another and back again

Key skills /investigative focus

Investigative focus	Explore the changing state from solid to liquid by making chocolate shapes. Observe how liquid turns to gas through process of evaporation/liquid turns to solid by cooling.
Key skill	Compare and group materials together, according to whether they are solids, liquids or gases.

Big Questions/Challenging Perceptions

How can you group and classify a variety of materials according to the impact of temperature on them?