

Carr Head Primary School - Knowledge Organiser

Science

States of matter

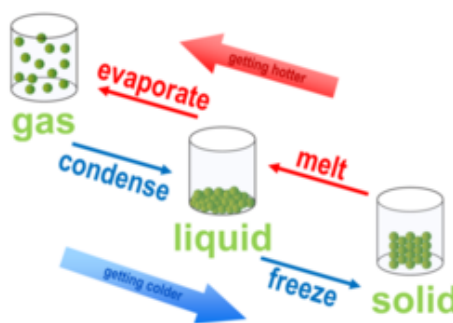
Year 4

Summer Term

Key Knowledge	
What is a solid?	Solids have vibrating particles which are tightly packed together so allowing the solid to maintain its shape.
What is a liquid?	Liquids have particles that are close together but randomly organised. The particles can move around each other. A liquid will take the shape of the container it is in.
What is a gas?	In a gas the particles are spread out. They can move in all directions. If the container is open, the particles in a gas
How do materials change states?	Materials can change shape by being heated or cooled. An example of this is water. When water is heated, the particles move faster and start to spread out until they form a gas—water vapour. When water is cooled, the particles start to slow down and become closely packed together until a solid (ice) is formed.
The Water Cycle	This will be covered in more detail as part of our geography topic on rivers.

Key Vocabulary	
condense	to turn from a gas into a liquid
evaporate	to turn from a liquid into a gas
freeze	a liquid turns into a solid due to a drop in temperature
gas	materials that can spread out to completely fill the room or container they are in. They do not have any fix state.
liquids	materials that take the shape of the containers they are in. They can change shape and can be poured or will flow.
melt	change from a solid to a liquid due to a rise in temperature
particles	tiny amount or small pieces
solids	materials that keep their shape unless a force is applied. The particles are packed close together.
states of matter	materials can be one of 3 states of matter—solids—liquids—gases. Some materials can change from one state to
water vapour	water in a gaseous state

Know how to...	
Working Scientifically	group and classify a variety of different materials
	explore the effect of temperature on certain materials
	find out the temperature at which materials change state
	observe and record evaporation over a period of time
	investigate the effect of temperature on the drying of washing



Robert Boyle