YEAR 4

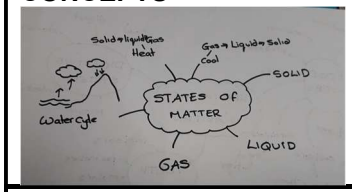
	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
STATES OF MATTER CHEMISTRY& PHYSICS	**The three Prime ELGs of Communication & Language, PSED and Physical Development provide the foundations of which all other learning is built upon.** **Specific:** The Natural World ELG Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. Creating with Materials ELG Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	Distinguish between an object and the material from which it is made Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock Describe the simple physical properties of a variety of everyday materials Compare and group together a variety of everyday materials on the basis of their simple physical properties.	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses Find out how the shapes of solid objects made from some materials can be changed.	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Describe in simple terms how fossils are formed when things that have lived are trapped within rock Recognise that soils are made from rocks and organic matter.	Compare and group materials together, according to whether they are solids, liquids or gases 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) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that some changes result in the formation of new	

						materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda	

STATES OF MATTER
COMPOSITES

Compare and group materials together, according to whether they are solids, liquids or gases
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)
Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

COMPONENTS

	1	2	3	4	5	6	End Point
	What is a solid, liquid and gas?	**How can materials change states?**	**How can I change the state of a substance through heating?**	**What is evaporation?**	**How does the water cycle work?**	**What is a thermal insulator?**	Children test how to make 1 ice cube melt quicker than another using a thermal insulator
CONCEPTS 	MATERIALS AND MATTER	MATERIALS AND MATTER	MATERIALS AND MATTER	MATERIALS AND MATTER	MATERIALS AND MATTER	MATERIALS AND MATTER	Children test how to make 1 ice cube melt quicker than another using a thermal insulator
SKILLS	Compare and group materials together, according to whether they are solids, liquids or gases	Observe that some materials change state when they are heated or cooled	Measure or research the temperature at which some materials change state when they are heated or cooled in degrees Celsius (°C)	Identify evaporation and associate the rate of evaporation with temperature.	Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	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)	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)

KNOWLEDGE Science Knowledge Organiser: States of Matter Year 4 (twinkl.co.uk)	Materials can be a liquid, solid or gas	or cooling	State of matter can be changed by hearting the material	Evaporation occurs when a liquid is heated and becomes a gas	The water cycle occurs when water is heated to form a gas and then cooled to form a liquid again	The change of state can be speeded up by using an insulator	The change of state can be speeded up by using an insulator
LESSON LINK	MTP Term 2	MTP Term 2	MTP Term 2	MTP Term 2	MTP Term 2	MTP Term 2	
PROGRESSIVE VOCABULARY	material state of matter solid liquid gas	material state of matter solid liquid gas temperature heated cooled	state of matter temperature heated cooled degrees	evaporation temperature	evaporation condensation water cycle temperature	state of matter solid liquid gas temperature heated cooled thermal insulator	Articulate and recognise subject specific vocabulary
CURRICULUM EXPERIENCES			Children heat materials and measure what happens and at what temperature – chocolate, water	Children to see how quickly water evaporates in different places		Children to try to melt ice cube	Children to apply their knowledge to being able to change the state of matter for water from solid to liquid.
END POINT	Children to be able to identify states of matter	Children to be able to describe how to change a state of matter	Children to record the temperatures when changes occur	Children to be able to describe evaporation	Children to be able to describe the water cycle.	Children to be able to melt an ice cube as quickly as possible	