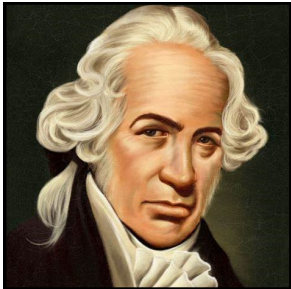
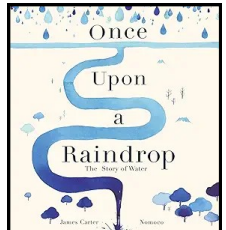
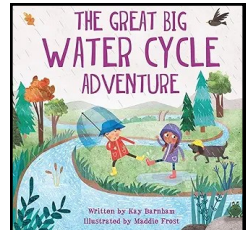
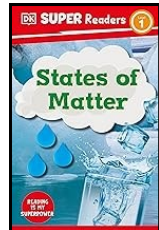
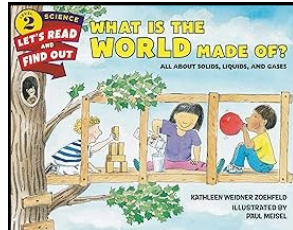


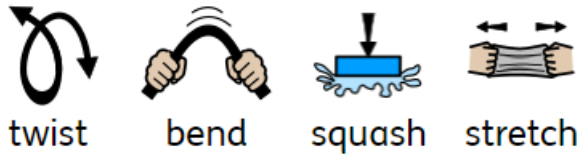
Substantive Knowledge
Materials can be divided into solids, liquids and gases.
Solids hold their shape unless forces to change.
Liquids flow easily but stay in their container because of gravity . The more viscous a liquid, the less runny it is.
Gases move everywhere and are not held in containers by gravity .
Heating causes solids to melt into liquids and liquids to evaporate to gases.
Cooling causes gases to condense to liquids and liquids to freeze into solids.
Different substances change state at different temperatures but the temperatures at which given substances change state is always the same.
The temperature at which a substance melts from a solid to a liquid is the same at which it freezes from a liquid to a solid.
The temperature at which a substance boils from a liquid to a gas is the same at which it condenses from a gas to a liquid.
Liquids evaporate slowly, even below their boiling temperatures.
The water cycle is the process by which water is continuously transferred between the surface of the earth and the atmosphere.
Liquid water evaporates into water vapor, condenses to form clouds, and precipitates back to earth in the form of rain and snow.

Disciplinary Knowledge	
Making systematic and careful observations.	
Gathering, recording, classifying and presenting data in a variety of ways.	
Setting up simple practical enquiries, comparative and fair tests.	
Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.	
Using straightforward scientific evidence to answer questions or to support findings.	
Using results to draw simple conclusions, make predictions, suggest improvements and raise further questions.	
Asking relevant questions and using different types of scientific enquiries to answer them.	

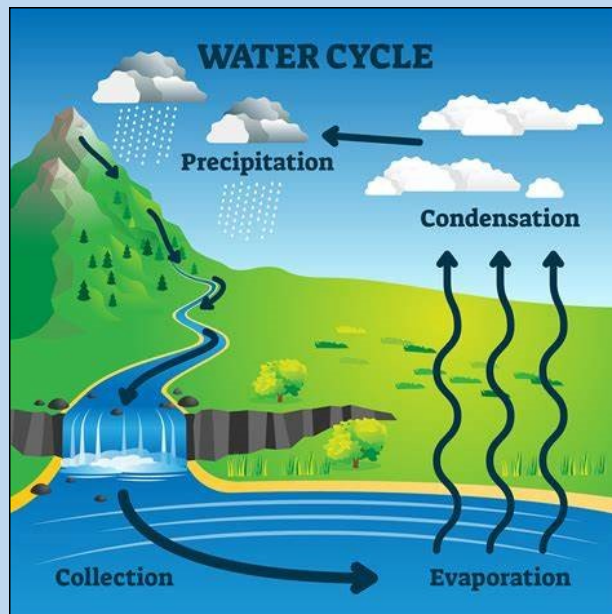
Significant Scientists	
Daniel Fahrenheit (1686-1736)	Dr Fangxian Fang
	
Daniel Fahrenheit was a physicist and maker of scientific instruments. He is best known for inventing the mercury thermometer and developing the Fahrenheit temperature scale, which is still commonly used in the United States.	Dr Fangxian Fang works for the Department of Earth Science and Engineering at Imperial College London. She develops software tools to help manage flooding across the world, predict tsunamis in the future and track pollution to help prevent floods.

Interesting Books			
			

Prior Knowledge



The Water Cycle



Key Vocabulary

state	A distinct form in which matter can exist.
solid	A substance or object that stays the same shape whether it is in a container or not.
liquid	A substance that flows freely.
gas	A substance that will expand to fill a container with no fixed shape or volume.
gravity	A force that attracts a body towards the centre of the earth or other objects with mass.
viscous	Having a thick, sticky consistency between a solid and a liquid.
heating	To raise the temperature.
cooling	To lower the temperature.
melting	When an object changes from a solid to a liquid.
boiling	When an object changes from a liquid to a gas.
evaporate	The process of turning liquid into a gas.
freeze	When a liquid becomes a solid.
condense	When a gas becomes a liquid.

States of Matter

