Weston Turville CE School – Science Knowledge Organiser					
Topic: The World We Live In	Year: 4 Autumn 2		St	and: Materials – States of Matter	
What Should I Already Know?	Main Information			Vocabulary	
Example materials: Wood, plastic, glass, metal, water, rock. Descriptions of materials: Hard, soft, strong, stiff, bendy, shiny,	Solid	Particles are closely packed in a regular pattern. They vibrate on the spat	Matter	Objects that take up space and have mass are called matter. Everything around you is made up of matter.	
transparent, smooth, runny, wet, clear.			Solid	A solid holds its shape and has a fixed volume.	
Uses and suggestions of common materials: Wood can be used for: Doors, tables Plastic can be used for: Pens, rulers Glass can be used for: Windows, glasses etc.	Liquid	Particles are close but random. They can move over each other.	Liquid	A liquid takes up the shape of the container it is in. Liquids can flow or be poured. Liquids are pulled down to the bottom of a container by gravity. Although liquids can change shape, they do not change their volume.	
Different materials can be used for the same thing. The shape of materials can be changed by: bending, squashing, twisting,	Gas	spread out and can move rapidly in all directions.	Gas	A gas can escape from an unsealed container. It fills up the space it is in, and does not have a fixed volume. Gases cannot hold their shape.	
Diagrams			Evaporatio	The changing from a liquid to a gas.	
	Evaporation Heat from the Sun causes water to evaporate. This happens even on cloudy or cold days. The liquid water turns into water vapour when it has evaporated. Condensation The water vapour in the air rises, and as it does so, it cools down. Eventually, it cools enough for the water vapour to condense and form droplets of water. The droplets clump together to form clouds. Precipitation The water droplets become large enough and heavy enough to fall back to the surface of the Earth. These droplets of water fall in the form		Condensati	n The changing from a gas to a liquid.	
The Water Cycle			Temperatu	The degree or intensity of heat present in a substance or object and shown by a thermometer or perceived by touch.	
wind			Celsius	Celsius is a temperature scale. It is used to tell how hot or cold something is. It is often written as °C. Water freezes at 0°C and boils at 100°C.	
precipitation condensation ground collection evaporation run-off and streams			Particles	All materials are made of very tiny particles. These particles are so small that we cannot see them with our eyes, or even with a microscope! The position and behaviour of the particles is different in solids, liquids and gases.	
			Irreversib	e A change is called irreversible if it cannot be changed back again.	
Sea	of rain, sleet, ha	il or snow.	Reversible	A change that can be undone or reversed.	
underground water	Collection When water falls back to Earth as precipitation, the water may fall on oceans, lakes, rivers or on the ground. Water that falls on the ground is either absorbed into the soil or it runs over the ground and collects in the oceans, lakes and rivers.		Melting	When a solid turns into a liquid	
			Freezing	When a liquid turns into a solid.	
			Boils	To become so hot $(100^{\circ}C)$ that water bubbles and then turns into a gas.	
			Container	Something which holds things inside, like a box, jar or tub.	

Weston Turville CE School Primary School– Science Assessment						
Topic: The World We Live In		Year: 4 Autumn 2	Strand: Materials – States of M		ates of Matter	
Question 1: What is the process called when a solid changes to a liquid?	Start of unit:	End of unit:	Question 5: Wh melting points, t	en solids reach their hey become what?	Start of unit:	End of unit:
Evaporation			Gases			
Freezing			Solids			
Melting						

Question 2: Which description heat	_	
describes a gas:	Start of unit:	End of unit:
Particles are spread out and can move		
rapidly in all directions.		
Particles are close but random. They		
can move over each other.		
Particles are closely packed in a regular		
pattern. They vibrate on the spot.		

Condensation

Question 3: What is it called when a liquid changes into a gas?	Start of unit:	End of unit:
Evaporation		
Melting		
Condensation		

Question 4: Which state of matter has a fixed shape?	Start of unit:	End of unit:
Gas		
Liquid		
Solid		

Question 6: Which state of matter is represented by these molecules?	Start of unit:	End of unit:
Solid		
Liquid		
Gas		
Plasma		

Question 7: What is the boiling point of water?	Start of unit:	End of unit:
180°c		
100°c		
78.5°c		

Question 8: How does temperature affect the speed of evaporation?	Start of unit:	End of unit:
The colder the temperature, the quicker		
the rate of evaporation.		
The hotter the temperature, the quicker		
the rate of evaporation.		
Temperature does not affect the rate of		
evaporation.		