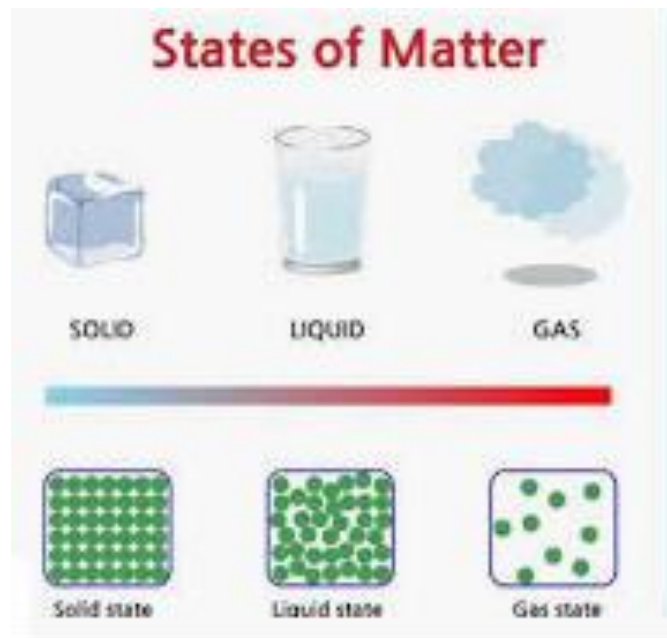


My Knowledge Journal



States of Matter

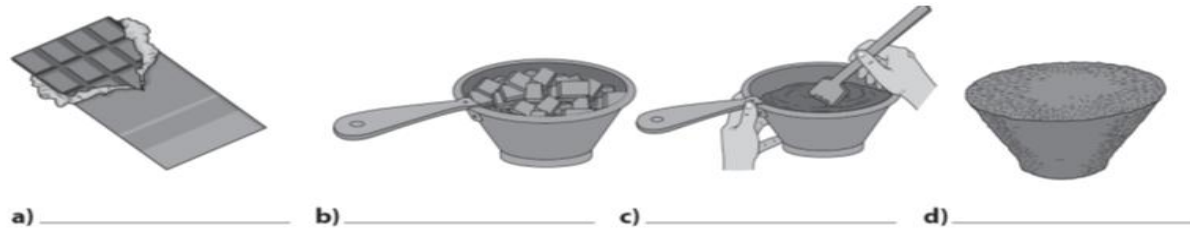
Name: _____

Pre Knowledge Quiz

Q1. Write down the names of:

- a) 2 solids _____
- b) 2 liquids _____
- c) 2 gases _____

Q2. Year 4 melted chocolate. Write down underneath the picture which state the chocolate is in: solid or liquid.



Q3. Year 4 carried out a fair test to find out 'Does temperature affect how fast water evaporates?' They predicted that 'Temperature does not affect how fast water evaporates.' Here are their results. Use them to answer the questions.

Place	Amount of water at beginning, ml	Amount of water at end, ml	Amount of water that evaporated, ml
Windowsill	100	35	
Cupboard	100	85	
Shelf in the shade	100	52	

a) Work out how much water evaporated in each place and write it in the table.

b) Where did the most water evaporate? Why? _____

c) Where did the least water evaporate? Why? _____

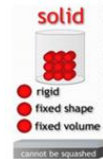
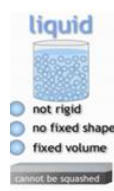
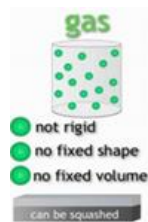
d) Was Class 4's prediction correct? How do you know? _____

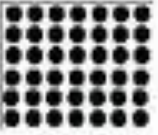













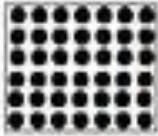

States of Matter Knowledge Organiser

Key Vocabulary

matter	Something which occupies a space.
particle	A minute portion of matter.
liquid	Not rigid no fixed shape and a fixed volume
gas	Not rigid no fixed shape and no fixed volume
density	The degree of compactness of a substance.
property	A quality of something
volume	The amount of space that a substance or object occupies.
compress	Be squeezed or pressed into a smaller space.
expand	To become larger.
physical change	Changing shape but not volume.
temperature	A measurement of how hot or cold something is.
thermometer	A device or instrument used to measure temperature
boiling point	The temperature at which a liquid turns into a gas.
boiling	When a material reaches a temperature when it bubbles and turns into a gas rapidly.
condensing	The process when a gas turns into a liquid.
evaporation	When a liquid turns into a gas, below its boiling point.
freezing	When a liquid turns into a solid.
Freezing point	The same temperature as a material's melting point. This is the temperature at which a liquid turns into a solid.

Key Questions and Facts

What are the states of matter?	There are three states of matter -solids, liquids or gases.
What are the properties of solids?	<ul style="list-style-type: none"> • Particles are close together and vibrate in place • Solids stay in one place and can be held • Solids keep their shape • Solids can be cut or shaped 
Types of solids	<ul style="list-style-type: none"> • Rock • Wood • Brick
What are the properties of liquids?	<ul style="list-style-type: none"> • Particles are close together but can slide past each other • Liquids can flow or be poured easily. They are not easy to hold. • Liquids change their shape depending on the container they are in. • Even when liquids change their shape, they always take up the same amount of space. • Their volume stays the same 
Types of liquids	<ul style="list-style-type: none"> • Water • Cordial • custard
What are the properties of gases?	<ul style="list-style-type: none"> • Particles move independently very fast and collide frequently • Gases are often invisible • Gases do not have a fixed shape • They spread out and change their shape and volume to fill whatever container they are in • Gases can be squashed 
Types of gases	<ul style="list-style-type: none"> • Oxygen • Hydrogen • Helium

STATE	ADD	NEW STATE	EXAMPLE
 SOLID	+  HEAT =	 LIQUID	 MELTING
 LIQUID	+  HEAT =	 GAS	 EVAPORATION
 GAS	+  COLD =	 LIQUID	 CONDENSATION
 LIQUID	+  COLD =	 SOLID	 FREEZING

How to change states of matter?

What should I already know?

- How to describe simple physical properties of everyday materials.
- How to compare and group together a variety of everyday materials.
- How to compare using observations.

My Knowledge Builder

My Previous Knowledge...	
New knowledge ...	
Week 1	<ul style="list-style-type: none">•••
Week 2	<ul style="list-style-type: none">•••

Week 3	<ul style="list-style-type: none">•••
Week 4	<ul style="list-style-type: none">•••
Week 5	<ul style="list-style-type: none">•••
Week 6	<ul style="list-style-type: none">•••

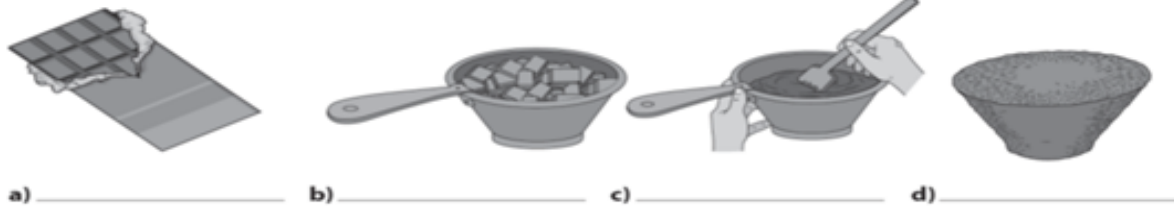
Week 7	<ul style="list-style-type: none">•••
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Post Knowledge Quiz

Q1. Write down the names of:

- a) 2 solids _____
- b) 2 liquids _____
- c) 2 gases _____

Q2. Year 4 melted chocolate. Write down underneath the picture which state the chocolate is in: solid or liquid.



Q3. Year 4 carried out a fair test to find out 'Does temperature affect how fast water evaporates?' They predicted that 'Temperature does not affect how fast water evaporates.' Here are their results. Use them to answer the questions.

Place	Amount of water at beginning, ml	Amount of water at end, ml	Amount of water that evaporated, ml
Windowsill	100	35	
Cupboard	100	85	
Shelf in the shade	100	52	

- a) Work out how much water evaporated in each place and write it in the table.
- b) Where did the most water evaporate? Why? _____
- c) Where did the least water evaporate? Why? _____
- d) Was Class 4's prediction correct? How do you know? _____