

Year 4 – Science Sum 1 States of Matter

Key Facts Diagram/Investigations When solids turn into liquids, this is called melting and the reverse process There are three states of matter. is called freezing > When liquids turn into gases, this is called evaporation and the reverse Solid Liquid Gas process is called condensation > When a solid turns into a gas without passing through the liquid state, this is called sublimation State of Matter Property Solid Liquid Gas solid Particles in a gas are Particles in Particles in a liquid are close together and are close together but spread out and can move Fixed No fixed No fixed Shape cannot move. They can can move around each around very quickly in shape shape all directions. only vibrate. other easily. Fixed Fixed No fixed Volume Melting Evaporation volume Ability to Can't be Can't be Can be squash/ compressed compressed compressed compress Solidification Condensation Ability to Can't be Can be Can be poured and poured and poured and pour and it doesn't it does flow it does flow flow flow

Key Learning:	Prior Learning:
To sort and describe materials. To investigate gases and explain their properties. To investigate materials as they change state.	Year 1 - describe the simple physical properties of a variety of everyday materials
To explore how water changes state. To investigate how water evaporates. To identify and describe the different stages of the water cycle	Year 2- find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Subject Specific Vocabulary	
Key word	Definition
bond	joined securely to something else
condensation	turn a gas into a liquid.
evaporation	turn a liquid into a gas
boiling point	the temperature at which a liquid boils and turns to vapour
melting point	the temperature at which a given solid will melt
particle	one of the very small parts of matter: a very small quantity or piece
states of matter	materials can be one of three states: solids, liquids or gases. Some materials can change from one state to another and back again.
Solid	a substance which is firm and stable and has 3 dimensions
liquid	a substance that flows freely but is of constant volume
gas	a substance which will expand freely to fill a whole container and has no fixed shape or volume
thermometer	an instrument for measuring and indicating temperature
sublimation	When a substance changes from a solid to a gas, without going through the liquid change