

Science Focus:

States of Matter

Year 4

Spring Term

Key Knowledge

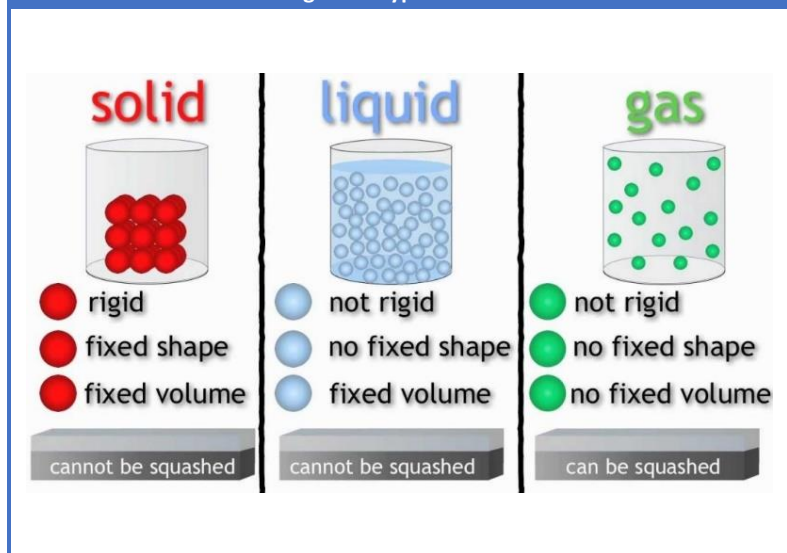
What is matter?

Solids Liquids Gases	All objects are one of these three states of matter. A solid keeps its shape, a liquid takes the space of the container it is in and a gas fills its container.
Changing state	Matter can change from one state to another if it is heated or cooled. If ice (a solid) is heated, it changes to water (a liquid). This change is called melting. If water is heated, it changes to steam (a gas). This change is called boiling.

What happens?

Evaporation	When a liquid is heated, it starts turning into gas (for example steam in a kettle).
Condensation	When a gas is cooled, it turns into a liquid, which creates condensation; you might find this in a bathroom on the window after a hot shower/bath.
Freezing	When a liquid is cooled, it turns into a solid. For example when water is frozen it turns into an ice cube.

Diagram – Types of matter



Key Vocabulary

Spelling	Definition/Functions
Matter	Objects that take up space and have mass are called matter. Everything around you is made up of matter
Solid	A solid holds its shape and has a fixed volume
Liquid	A liquid fills up the shape of the bottom of a container. It forms a pool, not a pile and also has a fixed volume
Gas	A gas can escape from an unsealed container. It fills up the space it is in, and does not have a fixed volume
Particle	A tiny amount of something. You can't see them with your eyes
Molecules	The very tiny particles that make matter
Evaporation	The process of a liquid heating and changing into a gas
Condensation	The process of a gas cooling and changing into a liquid
Freezing	The process of a liquid cooling and changing into a solid
Reversible	Capable of being reversed so that the previous state is restored
Irreversible	Not able to be undone or altered – a chemical change has occurred

Diagram – Changes of states

