



Y4 Science – States of Matter

States of Matter

Matter makes up our planet and the whole universe. On Earth, all matter exists in one of three different states; solid, liquid or gas. Matter is made up of particles. Particles is so tiny, we can't see them.

Solid	A solid is a substance that holds its shape.
Liquid	A liquid like water forms a pool and takes the shape of any container it is put in. It flows or runs but it can't be stretched or squeezed.
Gas	A gas can flow, expand and be squeezed. If it is put in an unsealed container it escapes.

Can Matter Change State?

Depending on its temperature, matter can change state. There are ways in which a material can change state such as by heating, cooling, evaporating and condensation.

This can happen because the particles in gases are spread out and have more energy than those in liquids and so can move around much more. The particles in liquids are less spread out and have less energy so move less. The particles in a solid are packed tightly and can barely move at all. We can give energy to the particles by heating them up.

Vocabulary	
Solid	Solids are materials that keep their own shape.
Liquid	Liquids do not have their own shape but can take the shape of a container they are put in.
Gas	Gases have no fixed shape and can move around freely.
Particles	Tiny bits of mater that make up everything in the universe.
Temperature	The degree or intensity of heat present in a substance or object.
Melting	The process of changing a solid into a liquid.
Freezing	The process of changing a liquid into a solid.
Evaporation	The process of changing a liquid into a gas.
Condensation	The process of changing a gas into a liquid.
Reversible	Capable of being reversed so that the previous state is restored
Irreversible	Not capable of being reversed.

