

Key Knowledge

Solid

A solid keeps its shape and has a fixed volume.
. solids like can be poured, but when poured they form a heap and they do not keep a level surface when tipped.

Liquid

. A liquid has a fixed volume but changes in shape to fit the container.
. A liquid can be poured and keeps a level, horizontal surface.

Gas

A gas fills all available space; it has no fixed shape or volume.

Changing states

. this describes the changes that happen when a solid changes to a liquid or a liquid changes to a gas or a solid.
. .

The Water Cycle 1

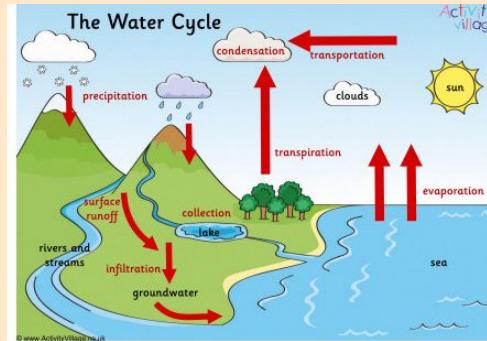
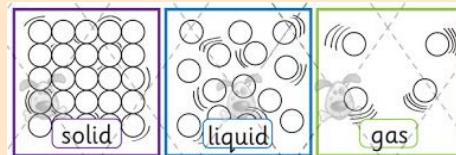
. Water at the surface of seas, rivers etc. evaporates into water vapour (a gas).
. This rises, cools and condenses back into a liquid forming clouds.

The Water Cycle 2

. When too much water has condensed, the water droplets in the cloud get too heavy and fall back down as rain, snow or sleet

Key Diagrams

Particles in solids, liquids and gases



Important Scientists

Gertrude Elion

Gertrude developed medicines to treat gout, shingles, malaria and blood cancer

1928 - 1999

Dorothy Hodgkin

Dorothy is famous for working out the structure of the antibiotic penicillin, Vitamin B12 and insulin.

1910 - 1994

Investigate

Group materials according to their state so whether they are a solid, liquid or a gas.

Research the temperature at which materials change state, for example, when iron melts or when oxygen condenses into a liquid. This will involve research using secondary sources.

Set up investigations to explore changing the rate of evaporation e.g. washing, puddles, handprints on paper towels, liquids in containers.

Observe water evaporating and condensing e.g. on cups of icy water and hot water.

Key Vocabulary

Boiling point

The temperature at which something changes from a liquid to a gas

Condensation

This is when a gas changes to a liquid caused by cooling

Evaporation

This is when a liquid changes to a gas and is caused by heating

Freezing

This is when a liquid changes to a solid and is caused by cooling

Gas

A gas can move around freely and will fill the space in a container. Gases are all around us in the air that we breathe.

Liquid

A liquid is something that will flow, it fits the shape of a container it is put in

Melting

This is when a solid changes to a liquid and is caused by heating

Melting point

The temperature at which a solid changes into a liquid

Precipitation

When water falls as rain, sleet or snow

Solid

Something which does not change shape on its own. It can be described as rigid

State change

This is when a solid changes to a liquid, or a liquid changes to a solid, or when a liquid changes to a gas

Temperature

This describes how much heat is in something

Water cycle

This describes how water evaporates from the surface of the earth, rises into the atmosphere, cools and condenses into rain or snow in the clouds, and falls again to the surface of the earth as precipitation