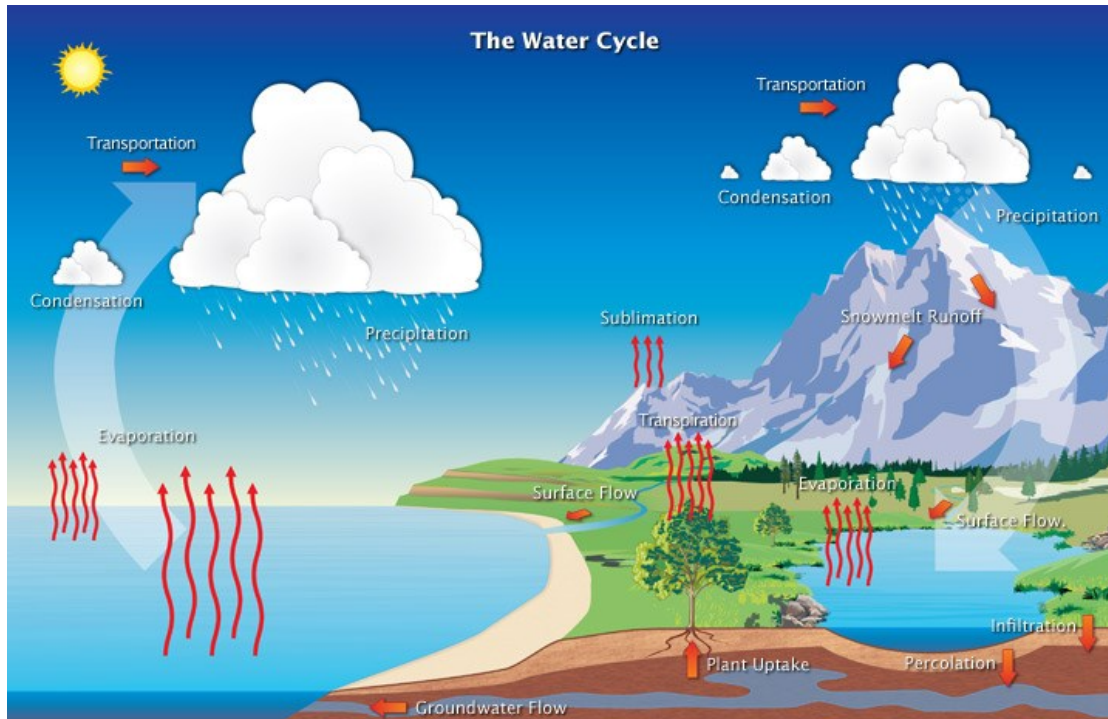


Year 4: States of Matter

WHAT?

THE WATER CYCLE:



Water flows around the world in a continuous process called the water cycle.

Along with evaporation, water on the Earth's surface moves to the air in a process called transpiration in which water turns to a vapour on the surface of leaves on plants.

Rain condenses in clouds and falls to the earth as rain, snow or hail in a process called precipitation.

Water flows across the land in rivers and streams in a process called surface runoff and under the ground as groundwater.

EXTRA INFORMATION:

Things are composed of a material in one of three states of matter: solid, liquid or gas.

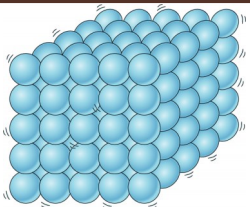
Things are made up of particles (tiny building blocks) and these are organised differently in different states.

Materials can change state when the temperature changes.

There are bonds between the particles in a solid; as the temperature increases these bonds are overcome somewhat as the particles absorb energy and solids change into liquids.

With a further increase in temperature, the particles become even more energetic, and the bonds are entirely overcome so the liquid changes to a gas.

SOLIDS, LIQUIDS & GASES:

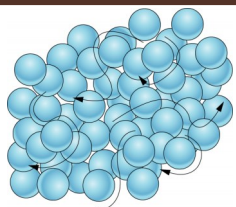


SOLIDS

When solids turn into liquids, this is called evaporation and the reverse process is called freezing.

Particles in solids are held together very closely.

Solids can hold their own shape.

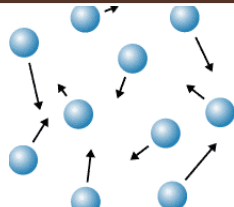


LIQUIDS

When liquids turn into gases, this is called evaporation and the reverse process is called condensation.

The melting point of water is 0°C.

Particles in liquids are close but can move past each other.



GASES

Particles in gases move around quickly with lots of space between them.

Gases fill the space of the container they are in.

The boiling point of water is 100°C.

KEY VOCABULARY:



BOILING POINT: the temperature at which a liquid becomes a gas



BOND: a connection between two surfaces or objects that have been joined together



CONDENSATION: small drops of water which form when water vapour of steam touches a cold surfaces, such as a window.



EVAPORATION: to turn from liquid into gas; pass away in the form of vapour



GAS: a form of matter that is neither a liquid or a solid.



LIQUID: in a form that flows easily and is neither a solid nor a gas.



MELTING POINT: the temperature at which something melts.



PRECIPITATION: rain, snow, sleet, or hail that falls to or condenses on the ground.



REVERSIBLE: capable of being reversed so that the previous state is restored.



SUBLIMATION: when a solid passes into a gas without passing through the liquid state



SURFACE RUN OFF: when there is more water than land can absorb..



THERMOMETER: an instrument for measuring and indicating temperature



TRANSPIRATION: the exhalation of water vapour