



Year 4 Science - States of matter (Chemistry)

Knowledge and skills
Empower
You to
Succeed

Cronton CE Primary School

Keys to
Success

Autumn Term



Vocabulary



Knowledge

solid	liquid	gas
● rigid	● not rigid	● not rigid
● fixed shape	● no fixed shape	● no fixed shape
● fixed volume	● fixed volume	● no fixed volume
cannot be squashed	cannot be squashed	can be squashed

- Solids, liquids and gasses are known as the three states of matter.

- They are all made up of tiny particles.

Solids

- In a solid the particles are close together and held by very strong bonds.

- Particles have low energy and can only vibrate on the spot.

Liquids

- Particles still held close together but further apart than a solid.

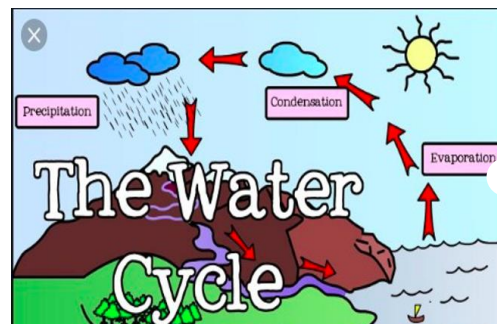
- Bonds holding the particles together are not as strong as a solid and have more energy.

Gas

- Particles much further apart and bonds are weak.

The Water Cycle

1	Evaporation The sun heats up water on the surface of the Earth and turns it into water vapour. The water vapour rises into the air.
2	Condensation Water vapour in the air cools and changes back into tiny drops of liquid water, forming clouds.
3	Precipitation When too much water has condensed the water droplets in the clouds get too heavy and water falls back down to Earth in the form of rain, snow, sleet etc. This is called precipitation.
4	Water returns to the sea Rainwater runs over the land and collects in lakes or rivers which take it back to the sea. The cycle starts all over again



Change of state - when a material changes from one state to another.

Melting - change of state from solid to liquid.

Freezing - change of state from liquid to solid. Freezing point of water is 0 degrees Celsius.

Melting point - temperature at which a solid becomes a liquid.

Boiling point - temperature at which a liquid turns into a gas. Water boils when it is heated to 100 degrees Celsius.

Evaporation - Change from a liquid to a gas at the surface of the liquid.

Condensation - gas changing into a liquid caused by cooling.

Water cycle - never ending process of water moving from the oceans, up into the atmosphere and back to the Earth and oceans.