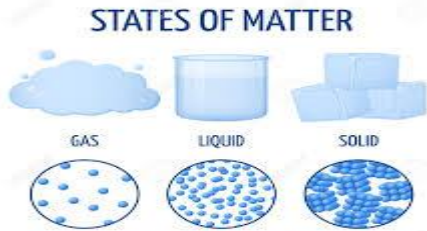


St Mary's C of E Primary School, Writhlington
'Be the BEST you can Be'
Scheme of Work + Knowledge Organiser

States Of Matter



National Curriculum Outcomes

Pupils should be taught to:

- Sort materials into solids, liquids and gases
- Explain that heating causes melting and cooling causes freezing
- Identify the melting and freezing point of water
- Describe evaporation and condensation using practical examples
- Describe the effect of temperature on evaporation referring to their investigation
- Identify the stages of the water cycle
- Predict what will happen in an investigation and make observations

GAS: particles far apart and randomly arranged/move around
LIQUID: particles close but randomly arranged/ move around
SOLID: particles very close together / vibrate around a fixed position

The Learning Journey:

1) LQ - Can I sort and describe different types of materials?

Children will explore, compare and group a variety of different materials into solid, liquids or gasses. Materials will include sand foam, rocks, washing up liquid, water, honey, salt, soil and plastic blocks.

2) LQ - Can I investigate materials as they change state?

Children to discuss and identify materials that change state when they are heated or cooled. They will measure and research at what temperature this occurs.

3) LQ - Can I investigate how water evaporates?

Children will identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

4) LQ - Can I identify and describe the different stages of the water cycle?

Children will investigate the part played by evaporation and condensations in the water cycle and associate the rate of evaporation with temperature.

5) LQ - Can I investigate gasses and explain their properties?

Children will compare and group materials together by investigating gasses and their uses.

6) LQ - Can I explore how water changes state?

Children will investigate how water changes state through experiments and measure at what temperature this happens.

7) LQ - Can I investigate the properties of a solid material?

Children will investigate the different types of solid materials and looks at shape, structure and volume.

8) LQ - Can I explain the behaviour of particles in solids, liquids and gases?

Children will explore and investigate the behaviour of particles in solids, liquids

Wider Curriculum: Class Literacy Topic: The Emperors Egg/DT/Maths

Key Vocabulary:

Matter - Matter is everything around you. There are only three states of matter.

Solids - A solid has very close together particles, is rigid and has a fixed shape and fixed volume.

Liquids - A liquid has close particles but loosely arranged, is not rigid, has no fixed shape but a fixed volume.

Gases - A gas has particles far apart and randomly arranged and that move around, has not fixed shape and no volume.

Melting - If ice (solid) is heated, it changes to water (liquid). This change is called melting.

Boiling - Water boils at 100 °c

Evaporation - Water (liquid) can change to water vapour (gas). This is called evaporation

Water Vapour - When a liquid water evaporates it changed to water vapour (gas).

Condensation - When water vapour (gas) cools it changes to condensation (liquid).

Water Cycle - The continual cycle of water around the world

Run Off - Water that runs from high places to low places due to gravity