Our Intent is: To develop inquisitive children who are excited about investigating with curiosity, "How can scientific enquiry explain the world?" Exploring answers by gathering and analysing evidence.

Forton Primary School
Science

Clougha Class
Autumn 1
Year A

Etymology: evaporation - the process of turning from liquid into vapour.

Key Concept: States of Matter

Key Question: What is happening when scientists say the ice caps are melting?
How can some parts of the world have too much water and another country not have enough?


I See Science - States of Matter

N.C. LINKS:

States of Matter Pupils should be taught to:

- Compare and group materials together, according to whether they are solids, liquids or gases.
- Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

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Unit Overview:

Solids, liquids, gases and their properties.

Evaporation, condensation.

The effect of varying temperatures.

Vocabulary:

Subject Specific:

States of matter, solids, liquids, gases, water vapour, melt, freeze, evaporate, condense, precipitation.

Working Scientifically:

Research
Comparative and fair test
Systematic Careful observation
Thermometer Data Gather
Record Classify Labelled diagrams
Keys Bar charts Tables
Conclusion Prediction difference
Similarities
Changes evidence

New Knowledge Progression:

- Compare and group materials together, according to whether they are solids, liquids or gases.
- Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Building on Prior learning KS1:

- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, water, rock, paper and cardboard for particular uses.
- Find out how the shapes of solid objects made from some materials can be changed by squashing,

Building on Prior learning when B follow A:

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.
- Describe in simple terms how fossils are formed when things that have lived are trapped within rock.

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• Solids, liquids and gases can be identified by their observable properties. • Solids have a fixed size and shape (the size and shape can be changed but it remains the same after the action). • Liquids can pour and take the shape of the container in which they are put. • Liquids form a pool not a pile. • Solids in the form of powders can pour as if they were liquids but make a pile not a pool. • Gases fill the container in which they are put. • Gases escape from an unsealed container. • Gases can be made smaller by squeezing/pressure. • Liquids and gases can flow.	bending, twisting and stretching (applying a force). • Some materials can be found naturally; others have to be made.	• Recognise that soils are made from rocks and organic matter • Recognise that rocks and soils can feel and look different. • Recognise that rocks and soils can be different in different places/environments.

Key Skills (Disciplinary)

- Observe and record relationships between structure and function or between different parts of a processes.
- Observe and record changes / stages over time.
- Record similarities as well as differences and / or changes related to simple scientific ideas or processes or more complex groups of objects / living things / events

(e.g. evaporation and condensation, different food chains, different electrical circuits).

- Ask / raise their own relevant questions with increasing confidence and independence that can be explored, observed, tested or investigated further.
- Ask questions such as 'What will happen if…?" or 'What if we changed…?.
- Choose / select a relevant question that can be answered [by research or experiment / test].
- Make a visual representation or a model of something to represent something they have seen or a process that is difficult to see.
- Build on / add to someone else's idea to improve a plan.

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Sequence of Lessons:

1. LO – To compare and group materials according to whether they are solids, liquids or gases.
2. LO – To investigate gases and explain their properties.
3. LO – To investigate materials as they change state.
4. LO – To explain how water changes state.
5. LO – To investigate how water evaporates.
6. LO – To identify and describe the different stages of the water cycle.

Enhancements:
The Science and Industry Museum.

End of Unit Outcome:
Create a PowerPoint on states of matter in groups and present them to the rest of the class.

Oral Assessment:
What is a solid, liquid or gas?
What are solids, liquids and gases and what their properties?
What happens to materials as they change state?
How does water change state?
How does water evaporate?
Can you describe the different stages of the water cycle?