

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
Spring 2
Year B**

Etymology - erosion – from French erodere ‘wear or gnaw away’.

**The Pebble in my Pocket
A History of Our Earth
By Meredith Hooper and Chris Coady**

Key Concept: Rocks

Key Question: Why is soil important to the Earth?

Are all rocks the same?

What can a permeable rock do, that an impermeable rock can't?

N.C. LINKS: Rocks - Pupils should be taught to:

- 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.
- Recognise that soils are made from rocks and organic matter.

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.

Unit Overview:

- Comparing physical properties of a selection of rocks.
- Rock formation and fossil formation.
- Recognize that soil is made from rocks and organic matter.

Vocabulary:

Igneous rock, sedimentary rock, metamorphic rock, magma, lava, sediment, permeable, impermeable, fossilisation, palaeontology, erosion.

New Knowledge Progression:

- 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.
- 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.

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, bending, twisting and stretching (applying a force).
- Some materials can be found naturally; others have to be made.

Building on Prior learning when A follows B:

- 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.

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.

- 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.

Key Skills (Disciplinary)

- Suggest their own ideas on a concept and compare these with what they observe / find out.
- Use observations to suggest what to do next.
- Discuss ideas and develop descriptions from their observations using relevant scientific language and vocabulary.
- Observe and record relationships between structure and function or between different parts of a processes.
- Observe and record changes / stages over time.

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.

- Make a simple guide to local living things.
- Use guides or simple keys to classify / identify [animals, flowering plants and non-flowering plants].
- Use their observations to identify and classify.
- Begin to give reasons for these similarities and differences.
- 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.
- Choose / select a relevant question that can be answered [by research or experiment / test].
- Make decisions about which information to use from a wide range of sources and make decisions about how to present their research.
- Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.
- Make some decisions about an idea within a group *(e.g. I think we should find out by testing...)*
- Increasingly support, listen to and acknowledge others in the group.

Sequence of Lessons:

1. LO – To compare and group together different types of rock.
2. LO – To understand how different rocks are formed.
3. LO – To investigate different properties of rocks and group them.
4. LO – To understand and explain how fossils are formed.
5. LO – To explain how soil is formed.
6. LO - To investigate and compare different types of soils.

Enhancements:

End of Unit Outcome: Rock Museum and fossil making.

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.

The Manchester Museum

Make a rock museum and create a display of all the different types of rocks. Show another class the rock museum and explain what they have learnt about rocks. Children will make their own fossil mould.