Rocks and Fossils

Big Idea 10: The diversity of organisms, living and extinct, is the result of evolution
Big Idea 12: Scientific explanations, theories and models are those that best fit the evidence available at a particular time

Our Inspirational Scientists: Inge Lehmann

In this unit, we will build on our knowledge of materials and living things from Key Stage One. We will be learning that rock is a naturally occurring material and explore different types of rock e.g. sandstone, limestone, slate etc. considering which occur naturally in our area. We will consider the different properties and will recognise that rocks can be different shapes and sizes (stones, pebbles, boulders). We will begin to link about how different rocks are formed – making links with our volcanoes unit in Geography and will look at how rocks mixed with plant and animal material (organic matter) form soil. We will also explore the fact that some rocks contain fossils and consider how they are formed.

These are the key skills and knowledge you will gain through this unit:

Scientific Knowledge	• 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.
Working Scientifically	• Make systematic and careful observations and ask question based on these. • Group and classify things using a scientific criteria; • Use straightforward scientific evidence to answer questions or support their findings; • Identify similarities, differences, patterns and changes relating to simple scientific ideas and processes;

Key Vocabulary

rock,
stone,
pebble,
boulder,
grain,
crystals,
layers,
hard,

soft,
texture,
absorb,
fossil,
bone,
flesh,
minerals,
marble,

chalk,
granite,
sandstone,
slate,
soil,
types of soil (e.g. peaty, sandy, chalk, clay)

Developing scientific thinking

This unit supports the following elements in particular:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions, recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

Investigations and Experiments in this unit:

Comparative / fair testing – How do different soil types effect plant growth?
Research – Why is Welsh slate so special?
Observation over time – Do rocks stay the same forever?
Pattern seeking – What types of rocks are found where is Shropshire? The UK? The world?
Identifying, grouping and classifying – How can we classify rocks?
Problem solving – What type of rock is best for different jobs?

Reading Links

Writing Links

Writing description for a rock museum that describes the characteristics of different rock types.

Maths Links

Measure including mass

Other Curriculum Links

Art – Pebble art
Science – The earth's structure
Geography – Geology maps.

Science – Autumn 1 – Willow