

Science – Rocks and Fossils

Knowledge Organiser

Year 3

Term 1

Key Questions

- ★ What is a rock?
- ★ How do rocks change over time?
- ★ Why do rocks change over time?
- ★ How are fossils formed?
- ★ What is soil made of?



What I should already know

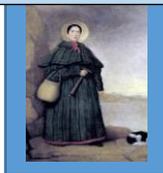
- ★ I have identified and named a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.
- ★ I have described the simple physical properties of a variety of everyday materials.
- ★ I have compared and grouped together a variety of everyday materials on the basis of their simple physical properties.
- ★ I have identified and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.
- ★ I have found out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

What I will know by the end of the unit?

- ★ I will compare and group different kinds of rocks on the basis of appearance and simple physical properties.
- ★ I will describe in simple terms how fossils are formed when things that have lived are trapped within rock.
- ★ I will find out that soils are made from rocks and organic matter.

Key people

Mary Anning (1799 –1847) was an English fossil collector, dealer, and palaeontologist who became known around the world for important finds she made in Jurassic marine fossil beds in the cliffs along the English Channel at Lyme Regis in the county of Dorset in Southwest England.



Inge Lehmann (1888 –1993) was a Danish seismologist and geophysicist. In 1936, she discovered that the Earth has a solid inner core inside a molten outer core.

Scientific Enquiry

During this unit I will:

- ★ ask questions
- ★ make predictions
- ★ record findings



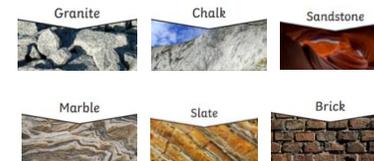
Useful web links:

<https://www.bbc.co.uk/bitesize/topics/z9bbkqt>



Key Vocabulary

Types of rock



Igneous rock – Rock that is created from cooled magma.

Sedimentary rock – Rocks that are formed by the accumulation of mineral and organic matter.

Metamorphic rock – When a rock changes due to temperature or pressure.

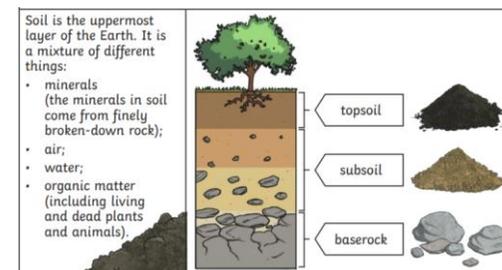
Describing rocks - stone, pebble, boulder, grain, crystals, layers, hard, soft, texture

Erosion – when water, wind or ice wears away rock. This is also known as **weathering**.

Permeable – allows liquid to pass through or be **absorbed**

Impermeable – does not allow liquid to pass through

Soil



Fossilisation

An animal dies. It gets covered with **sediments** which eventually become rock.

More layers of rock cover it. Only hard parts of the creature remain, e.g. bones, shells and teeth.

Over thousands of years, **sediment** might enter the mould to make a **cast fossil**. Bones may change to mineral but will stay the same shape.



Changes in sea level take place over a long period.

As **erosion** and **weathering** take place, eventually the fossil becomes exposed.