

**What should 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 will I 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

If you dig down anywhere on Earth you will find rock. Rocks can be hard, soft, permeable or impermeable, depending on what type of rock it is. Slate, marble, chalk and granite are all different types of rock and all have different uses.

There are three types of naturally occurring rock.

**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.

**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?*

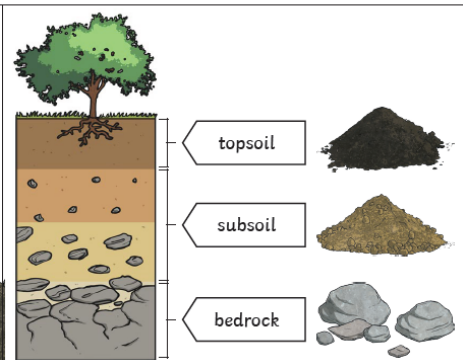
**Key Vocabulary**

igneous rock	Rock that has been formed from magma or lava.
sedimentary rock	Rock that has been formed by layers of sediment being pressed down hard and sticking together. You can see the layers of sediment in the rock.
metamorphic rock	Rock that started out as igneous or sedimentary rock but changed due to being exposed to extreme heat or pressure.
magma	Molten rock that remains underground.
lava	Molten rock that comes out of the ground.
sediment	Natural solid material that is moved and dropped off in a new place by water or wind, eg sand.
permeable	Allows liquid to pass through it.
impermeable	Does not allow liquid to pass through it.
fossilisation	The process by which fossils are made.
palaeontology	The study of fossils.
erosion	When water, wind or ice wears away land.

**Soil**

Soil is the uppermost layer of the Earth. It is a mixture of different things:

- minerals (the minerals in soil come from finely broken-down rock);
- air;
- water;
- organic matter (including living and dead plants and animals).

**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.

