



### What have we learnt in this topic before and what we will learn this year?

In Year 1 and 2, we learnt in our topic: **Everyday materials (Materials for different uses)**

- To identify and name everyday materials including wood, plastic, glass, wood, metal, water and rock and to describe simple physical properties. We also grouped materials based on these properties.

**In Year 3, we will learn:**

- 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

**In Year 5, we will develop this further and learn about comparing and grouping materials by looking at properties such as hardness and solubility.**

### HOW IS SOIL FORMED?

Soil is a mixture of tiny particles of **rock, dead plants and animals, air and water**. Different soils have different properties depending on their composition.

- Sandy soil is pale coloured and has large particles. These create lots of small air gaps. Water drains through them easily so it usually feels dry.
- Clay soil is usually sticky and has small particles. They contain very few air gaps and water does not drain through it easily.
- Chalky soil is a light brown soil. Water drains through it quickly.
- Peat does not contain any rock particles. It's made from very old decayed plants and is dark, crumbly and rich in nutrients.

### FOCUS SCIENTIST – MARY ANNING - FOSSILS

Mary Anning was born in 1799 to a very poor family and lived on the Jurassic Coast in Dorset . Her father used to take her and her brother to look for stones and fossils on the beach. It was here that she found fossils that she would sell to make money for her and her brother after their father also died. ]



Anning was the first person to find a complete fossil of a Plesiosaurus. She also pioneered the study of fossilised poo!

### COMPARING AND GROUPING ROCKS

There are three types of naturally occurring rock.

Natural Rocks			Human-Made Rocks
Igneous	Sedimentary	Metamorphic	
Obsidian	Chalk	Marble	Brick
Granite	Sandstone	Quartzite	Concrete
Basalt	Limestone	Slate	Coade Stone

Different types of rocks have different properties.

Some rocks are harder than others. For example, granite is a very hard rock. This makes it a good material for building as it doesn't wear away easily.

Marble is another hard rock. It has an attractive texture and colour and it can be cut and polished. Because of this, it is used to make floor tiles and wall tiles. Some statues are made from marble too.

Chalk is a soft rock and wears away easily. This makes it ideal for making chalk sticks to write on blackboards.

### HOW ARE FOSSILS FORMED?

A fossil is the preserved remains or traces of a dead organism. The process by which a fossil is formed is called fossilisation.

It's very rare for living things to become fossilised. Usually after most animals die their bodies just rot away and nothing is left behind. However, under certain special conditions, a fossil can form.

After an animal dies, the soft parts of its body **decompose** leaving the hard parts, like the skeleton, behind. This becomes buried by small particles of rock called **sediment**. As more layers of sediment build up on top, the sediment around the skeleton begins to compact and turn to rock. The bones then start to be dissolved by water seeping through the rock. Minerals in the water replace the bone, leaving a **rock replica** of the original bone called a fossil.

### Key Vocabulary

- rock
- mineral
- fossil
- igneous
- metamorphic
- sedimentary
- sediment
- magma
- lava
- erosion
- organism
- density
- permeable
- impermeable
- durable
- decompose
- chalk
- marble
- granite