

# Rocks

## Knowledge

### Rocks

I can compare and group together different kinds of rocks on the basis of their appearance and simple physical properties

I can describe in simple terms how fossils are formed when things that have lived are trapped within rock

I can recognise that soils are made from rocks and organic matter.

## Working Scientifically

I can ask relevant questions and use different types of scientific enquiries to answer them

I can make systematic and careful observations

I can gather, record, classify and present data in a variety of ways help in answering questions

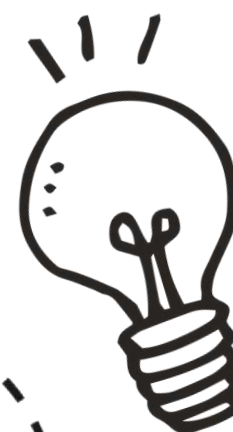
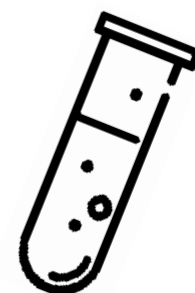
I can identify differences, similarities or changes related to simple scientific ideas and processes

I can use straightforward scientific evidence to answer questions or to support their findings.

Key Vocabulary	
<b>igneous rock</b>	Rock that has been formed from <b>magma</b> or <b>lava</b> .
<b>sedimentary rock</b>	Rock that has been formed by layers of <b>sediment</b> being pressed down hard and sticking together. You can see the layers of <b>sediment</b> in the rock.
<b>metamorphic rock</b>	Rock that started out as <b>igneous</b> or <b>sedimentary rock</b> but changed due to being exposed to extreme heat or pressure.
<b>magma</b>	Molten rock that remains underground.
<b>lava</b>	Molten rock that comes out of the ground is called <b>lava</b> .
<b>sediment</b>	Natural solid material that is moved and dropped off in a new place by water or wind, e.g. sand.
<b>permeable</b>	Allows liquids to pass through it.
<b>impermeable</b>	Does not allow liquids to pass through it.

Key Vocabulary	
<b>fossilisation</b>	The process by which fossils are made.
<b>palaeontology</b>	The study of fossils.
<b>erosion</b>	When water, wind or ice wears away land.

## Hook into a Book



## Activate Prior Knowledge

### EY

- Exploring the natural world around them, making observations.
- Know similarities and differences between the natural world around them.
- Dinosaurs and Fossils

### KS1

- Explore and compare the differences between things that are living, dead, and things that have never been alive
- Identify and compare the suitability of a variety of everyday materials

### KS2

- observe that some materials change state when they are heated or cooled
- Recognise that environments can change and that this can sometimes pose dangers to living things.
- use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- I can demonstrate that dissolving, mixing and changes of state are reversible changes
- explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible
- recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago

Investing in

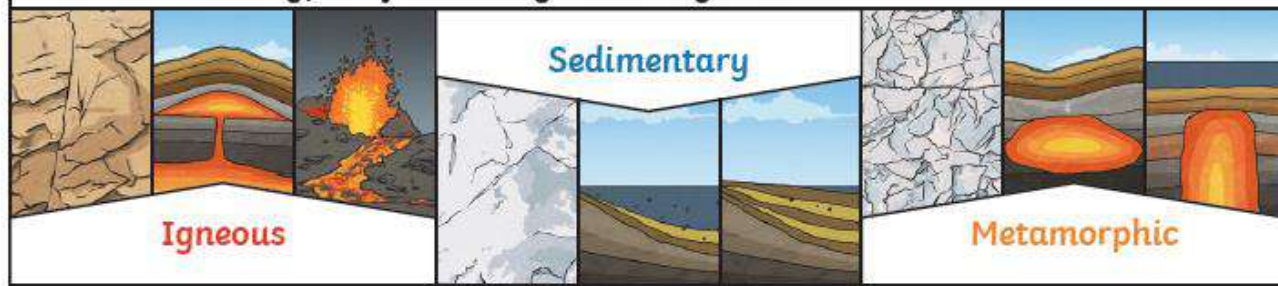
the UNIQUENESS

of each individual

"I Am Fearfully And Wonderfully Made"  
– Psalms 139 v14

## 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

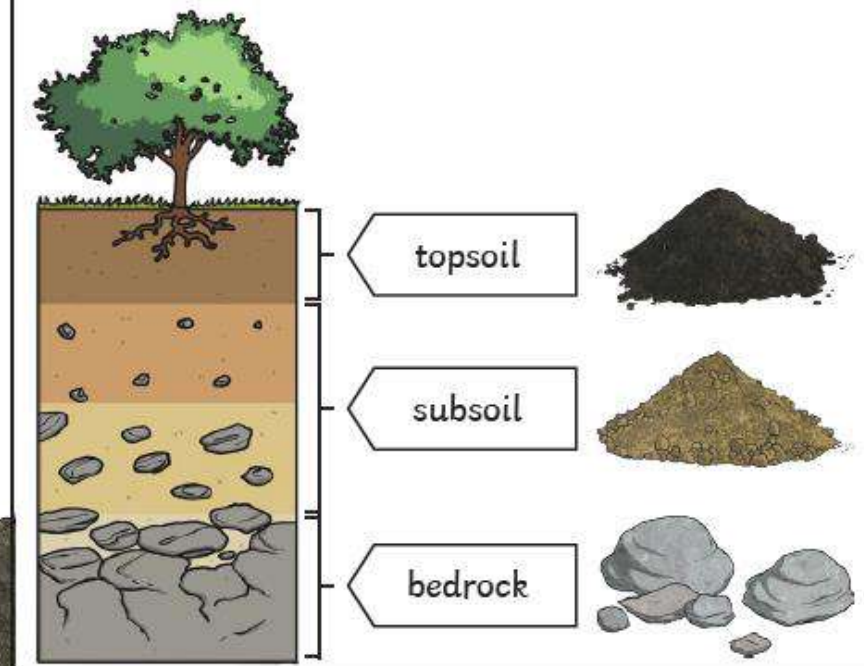
Some words you might use to discuss the properties of a rock:

hard, soft, permeable, impermeable, durable (meaning resistant to weathering), high density, low density. Density measures how 'bulky' the rock is (how tightly packed the molecules are).

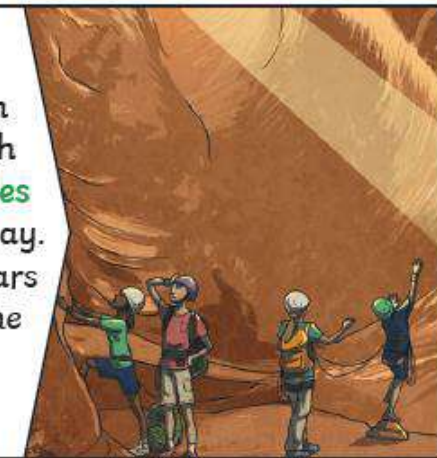
## Soil

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).



Caves are formed when water permeates through the bedrock and erodes some of the rock away. Over thousands of years these caves can become very large.



## 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.

