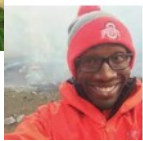


Scientist



Mary Anning
(Fossilist)



Christopher Jackson
(geologist)

Skills

I'm performing comparative and fair tests like a geologist.



I'm using scientific evidence to answer questions like a volcanologist.



Careers

Geologist (studies the Earth and what it is made of, including rocks)

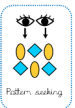
Volcanologist (studies volcanoes)

Enquiries



How does adding different amounts of sand to soil affect how quickly the water drains through it?

How does a tumbling change a rock over time?



Is there a pattern in where we find volcanoes on planet Earth?

Can you use the identification key to find out the name of each of the rocks in your collection?

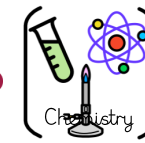


Who was Mary Anning and what did she discover?

Y3 ROCKS



Main idea



Children should be able to compare and group together different kinds of rocks based on their appearance and physical properties. To recognise that soils are made from rocks and organic matter. Finally, to understand that fossils are formed when living things are trapped within rock.

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

Key Learning

- There are three types of rock that are formed naturally: Igneous, Sedimentary and Metamorphic.
- Igneous rocks are formed when molten magma cools. It is a strong, hard-wearing and non-porous rock. Examples: granite and basalt.
- Little pieces of rocks that have been weathered can be found at the bottom of lakes, seas and rivers, this is called sediment. Over millions of years, layers of sediment build up to form sedimentary rocks. Examples: limestone and chalk.
- Metamorphic rocks are formed when some igneous and sedimentary rocks are heated and pressured. Examples: slate and marble.
- Fossils are usually formed when a living thing dies and the body is covered by sediment over tens of thousands of years. Other fossils are made from imprints in surrounding sedimentary rocks.
- Caves are formed when water permeates through the base rock and erodes some of the rock away.
- Soil is made from pieces of rock, minerals, decaying plants and water. There are layers of soil: above the soil ie leaf litter and recently decaying plants, as the soil becomes deeper, the rock grains become larger until bedrock is reached.

What you should already know

Soil contains nutrients and these help plants to grow.

Magma is molten rock that is formed in very hot conditions inside the earth.

Absorb means to soak up or take in.

Why some materials are used for certain purposes because of their properties.

What comes next?

Year 4 – observe that some materials change state when they are heated.

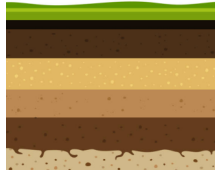
Key vocabulary

- | | |
|---------------|---------------|
| Absorb | Palaeontology |
| Bedrock | Permeable |
| Decaying | Porous |
| Erosion | Sediment |
| Fossilisation | |
| Igneous | |
| Imprint | |
| Lava | |
| Magma | |
| Metamorphic | |
| Mineral | |
| Molten | |

Year 3: Rocks



Absorb: soak up or take in.



Bedrock: the solid rock in the ground which supports all the soil above it.



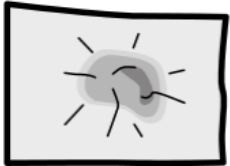
Erosion: when water, wind or ice wears away land.



Fossilisation: the process by which fossils are made.



Igneous: rocks that are formed by volcanic action or intense heat.



Imprint: a mark or outline made by the pressure of one object on another.



Lava: molten rock that comes out of the ground.



Magma: molten rock that is formed in very hot conditions inside the earth.



Metamorphic: rocks that have had their original structure changed by pressure and heat.



Mineral: something that is formed naturally in rocks and in the earth.



Molten: molten rock, metal, or glass has been heated to a very high temperature and has become a hot, thick liquid.



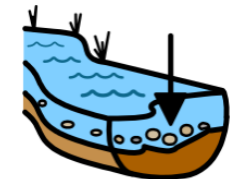
Palaeontology: the study of fossils as a guide to the history of life on Earth.



Permeable: allows liquids to pass through it.



Porous: something that is porous has many holes in it, which water and air can pass through.

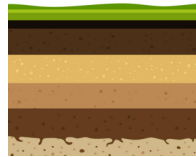


Sediment: solid material that settles at the bottom of a liquid, especially earth pieces of rock that have been carried along and then left somewhere by water, ice or wind.

Year 3: Rocks



Absorb



Bedrock



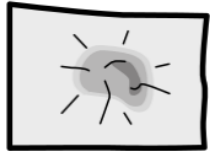
Erosion



Fossilisation



Igneous



Imprint



Lava



Magma



Metamorphic



Mineral



Molten



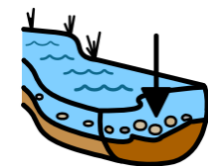
Palaeontology



Permeable



Porous



Sediment