Year Three Rocks

Autumn 1

Dr Lisa White is one of only a few women of colour geologists. She has made it part of her career to educate and nuture a passion for science in all students.

There are three types of naturally occurring rock:

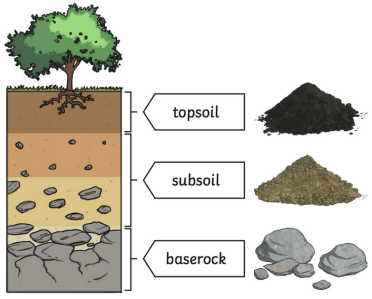
IGNEOUS

METAMORPHIC

SEDIMENTARY

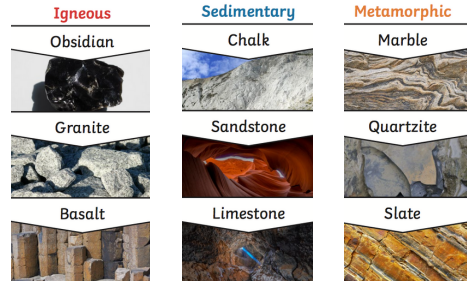
There are also some Human-Made Rocks, such as:

BRICK, CONCRETE** and **COADE STONE



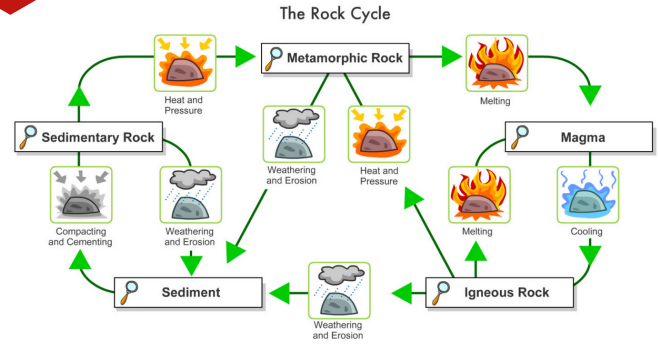
Soil is the uppermost layer of the Earth. It is a mixture of different things:
- minerals (from broken down rock)
- organic matter
- water
- air

There are different types of igneous, sedimentary and metamorphic rocks. You can usually sort these rocks according to their properties.



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

The three naturally occurring rock types are created over time. They all go through a process of heating, cooling, compacting and erosion over time.



Glossary

Erosion - when water, wind or ice wears away the land

Fossilisation - the process by which fossils are made

Igneous rock - rock that has been formed from magma or lava

Impermeable - does not allow liquids to pass through it

Lava - hot molten or semi-fluid rock that comes out of the ground

Magma - molten rock that remains underground

Metamorphic rock - rock that started out as igneous or sedimentary rock but changed due to being exposed to extreme heat or pressure

Permeable - allows liquid to pass through it

Sediment - natural solid material that is moved and dropped off in a new place by water or wind e.g. sand

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

How Fossils Were Formed

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.