Topic: Rocks and Soils	Strand: Physics	Year 3

Working Scientifically							
Ask relevant questions	**Set up** simple enquiries	**Make** careful observations	**Gather, record** and **classify data**	**Record** & **report** findings	**Use results** to draw simple conclusions	**Identify** differences and similarities or changes	**Use scientific evidence** to answer questions & support findings

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
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 is called lava
sediment	Natural solid material that is moved and dropped off in a new place by water or wind, e.g. sand
permeable	Allows liquids to pass through it
impermeable	Does not allow liquids to pass through it.
erosion	When water wind wears away rocks and soils this is called erosion
fossils	The bones or other remains of living things are sometimes preserved in rocks as fossils.
chalky soil	Soil that is light brown in colour, that water drains through quickly
Petrologist	Someone who studies rocks
clay soil	Clay soil is usually sticky and has small particles. They contain very few air gaps and water does not drain through it easily
classify	To sort into groups dependent upon characteristics.
absorbent	A material that soaks up a liquid.
appearance	What something looks like.

What I should already know

How to compare and group together a variety of everyday materials on the basis of their simple physical properties.
How to find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

What I will Investigate

What are the differences in types of rocks
How do fossils form?
What is soil?

What I will know by the end of the unit

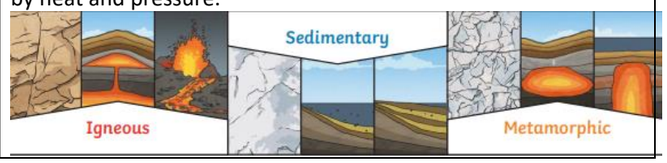
We need to name the three different types of rock

Types of rock
There are three main types of rock in the Earth's crust. These are sedimentary, igneous and metamorphic.

Sedimentary rocks are made from layers of mud and sand, called sediment that have settled in water and have been squashed over a long time to form rock.

Igneous rocks are made from cooled magma or lava.

Metamorphic rocks are formed when existing rocks are changed by heat and pressure.

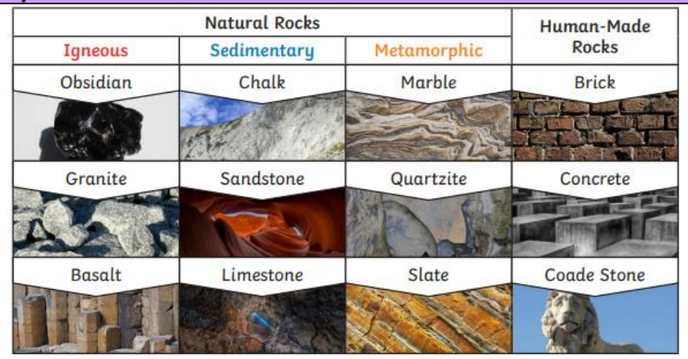


Useful links

https://www.bbc.co.uk/bitesize/topics/z9bbkqt
https://www.dkfindout.com/uk/earth/rocks-and-minerals/
https://www.coolkidfacts.com/rocks-and-minerals/

What I will know by the end of the unit

We need to be able to compare and group together different kinds of rocks on the basis of their appearance and simple physical properties



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).

We need to know how fossils are formed when things that have lived are trapped within rock.

What is a fossil?
A fossil is the preserved remains or impressions of a living organism such as a plant, animal, or insect. Some fossils are very old. Studying fossils helps scientists to learn about the past history of life on Earth.

Where are fossils found?
Fossils are found all over the world. Most fossils are found in sedimentary rock such as shale, limestone, and sandstone

We need to know that soils are made from rocks and organic matter

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