

Science Knowledge Organiser - Year 3

Unit: What are the different types of rock and fossil and how are they formed?

Key Vocabulary:

erosion	When water, wind or ice wears away the land, we call it erosion .
fossilisation	Fossilisation is the process by which fossils are made.
igneous rock	Igneous rock is rock that has been formed from magma or lava.
impermeable	Things that do not allow liquids to pass through them are known as impermeable .
lava	Lava is molten rock that comes out of the ground.
magma	Magma is molten rock that remains underground.
metamorphic rock	Metamorphic rock started out as igneous or sedimentary rock but changed due to being exposed to extreme heat or pressure.
palaeontology	Palaeontology is the study of fossils.
permeable	Things that allow liquids to pass through them are known as permeable .
sediment	Sediment is natural solid material that is moved and dropped off in a new place by water or wind.
sedimentary rock	Sedimentary rock is rock that has been formed by layers of sediment being pressed down hard and sticking together.

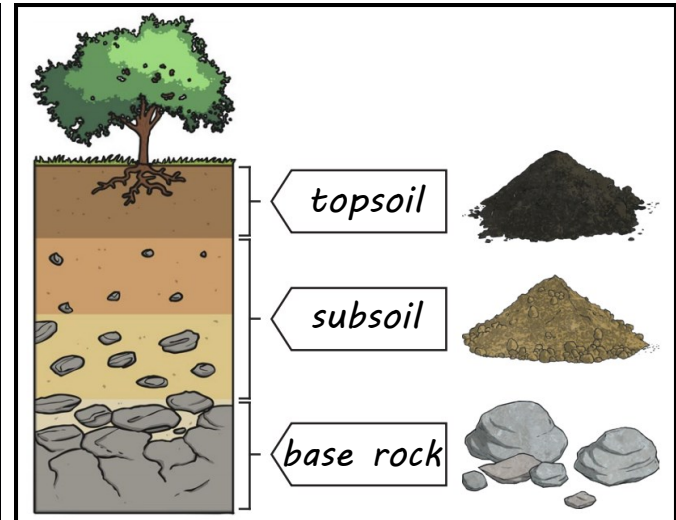
Science Skills:

- Compare and group together different kinds of rocks, on the basis of their appearance and simple physical properties.
- Group together different kinds of rocks on the basis of their 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.
- Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
- Identify differences, similarities or changes in relation to simple scientific ideas and processes.

Key Facts:






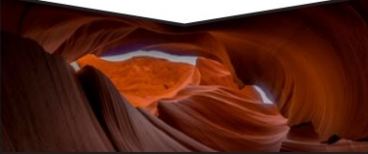



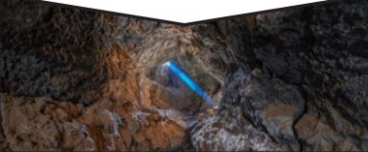
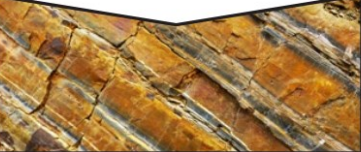

- In **sedimentary rock**, the layers of **sediment** are visible.
- The scientific name for human-made rocks is anthropic rocks. Anthropic rocks are made, modified or moved by humans.
- Soil is the uppermost layer of the Earth. It is a mixture of different things:
 - minerals (the minerals in the soil come from finely broken-down rock);
 - air;
 - water; and
 - organic matter (including living and dead plants and animals).
- We know about dinosaurs due to the discovery of **fossils** and fossilised skeletons.

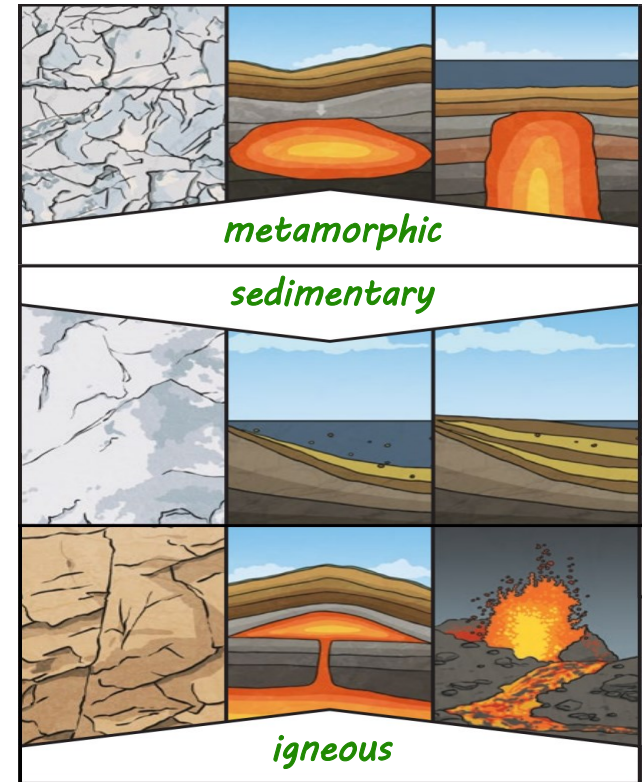
Caves are formed when water **permeates** through the base rock and **erodes** some of the rock away. Over thousands of years, these caves can become very large.



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Natural Rocks			Human-made Rocks
igneous	sedimentary	metamorphic	
obsidian	chalk	marble	brick
			
granite	sandstone	quartzite	concrete
			
basalt	limestone	slate	coade stone
			



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, such as bones, shells and teeth.	Over thousands of years, sediments 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.
