

Year 3 - Rocks and Soils

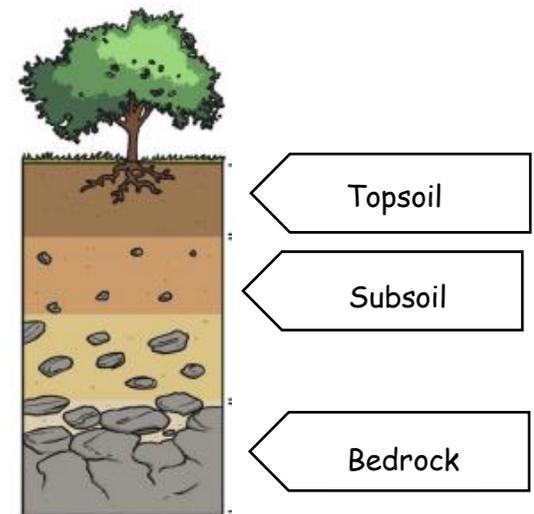
<u>Key Vocabulary</u>	
Rock	Made up of different minerals and form the Earth's crust (outer layer)
Mineral	Solid chemical substances that occur naturally
Fossil	The remains or impressions of a prehistoric plant or animal embedded in rock
Fossilisation	The process by which fossils are made
Palaeontology	The study of fossils
Igneous	Lava or magma that has turned from liquid to solid forming a rock
Metamorphic	An igneous or sedimentary rock that has been changed by extreme pressure or heat
Sedimentary	Rock that has been formed by layers of sediment being pressed down and sticking together at the bottom of rivers or oceans.
Magma	Molten (liquid) rock that remains underground.
Lava	Molten rock which flows out of a volcano (ranges from 700 to 1200 degrees centigrade)
Erosion	When water, wind or ice wears away a rock
Permeable	Allows liquid to pass through or be absorbed
Impermeable	Does not allow liquid to be passed through

<u>Key Objectives</u>
<ul style="list-style-type: none"> To compare and group rocks based on their appearance and simple physical properties To describe how fossils are formed To recognise that soils are made from rocks and organic matter To explore and compare different soils To investigate what happens when rocks are rubbed together or what changes occur when they are in water

<u>Soil Type</u>	<u>Properties</u>
Sandy	A dry soil which drains easily and has lots of air in it
Clay	Sticky and doesn't have much air in it. It can hold a lot of water and cracks when it is dry
Loam	10-30% clay and 25-50% sand. It holds a small amount of water and has plenty of air in it. This soil has lots of humus (dead plant and animal matter). Most plants grow well in this soil

<u>Soil</u>
<ul style="list-style-type: none"> Soil forms less than 10% of land Soil contains the water and nutrients needed for plants to grow Soil can be damaged by erosion and pollution

<u>Igneous</u>	<u>Sedimentary</u>	<u>Metamorphic</u>
Obsidian Granite Pumice Basalt	Chalk Limestone Sandstone Shale	Marble Gneiss Quartzite Slate
		



Types of Fossils

Body Fossils

The fossilised remains of a plant or animal.



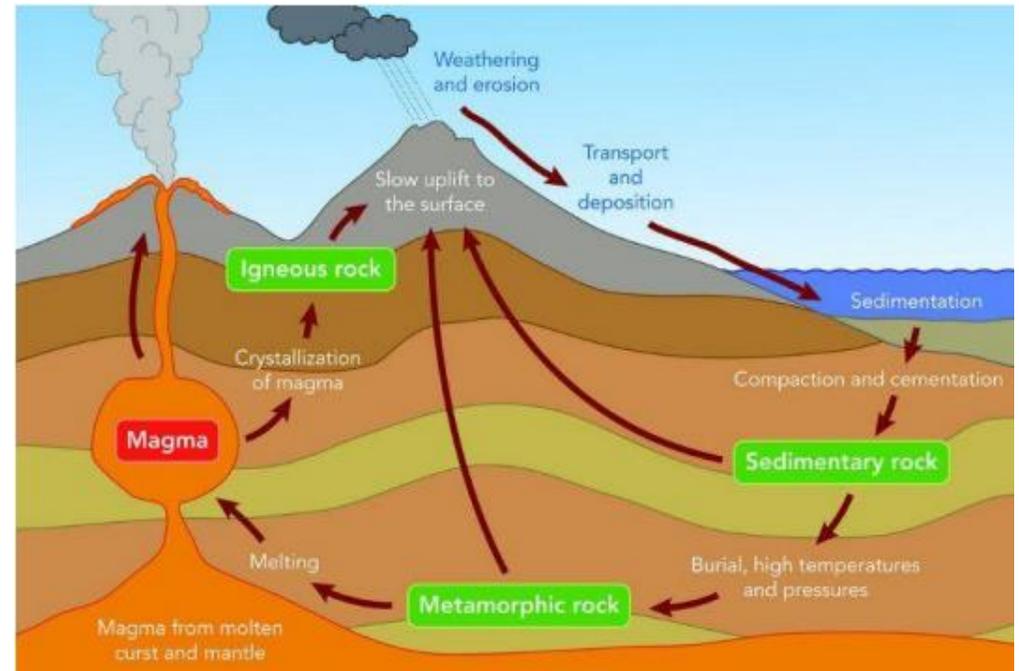
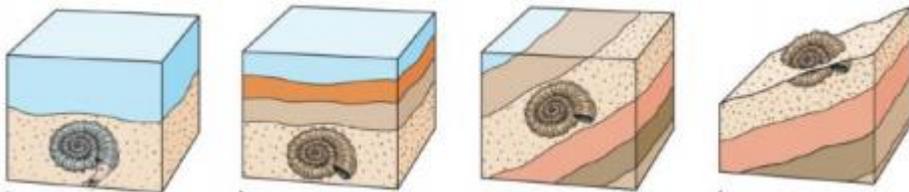
Trace Fossils

Fossilised records of an animal's behaviour, for example a footprint.



How are fossils made?

- An animal skeleton or trace is buried under small particles of rock, called sediment
- As more layers of sediment build on top, the sediment around the object begins to compact and turn to rock
- As water seeps through the sedimentary rock, any bones or organic matter are gradually dissolved
- Minerals in the water replace the bone or organic matter, leaving a rock replica of the original. This is called a fossil
- Weathering and erosion may eventually expose the fossil



Mary Anning (1799 - 1847)

- An English fossil collector, dealer, and palaeontologist
- Became known for the important finds she made in Jurassic marine fossil beds in the cliffs along the English Channel at Lyme Regis in the county of Dorset
- In 1823 Mary was the first to discover the complete skeleton of a *Plesiosaurus*, meaning 'near to reptile'

