

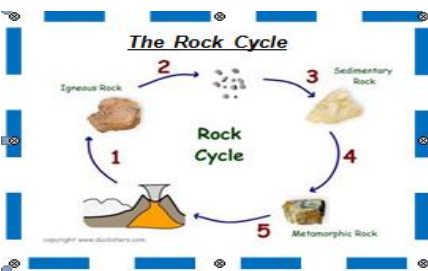
Year 3: The Natural World: Fossils are formed over millions of years and appear in some rocks: Rocks and soils.

Rocks: Are made up of grains that are <u>packed together</u>	Mineral: Are solid chemical substances that occur naturally – examples include: diamond, quartz, gypsum. Each grain that makes up the rock is made from a mineral.	Pressure: Pressure is force that you produce when you press hard on something.	Petrologist: Someone who studies rocks
Magma: Liquid rock inside a volcano	Molten rock: A rock that has been reduced to liquid through heating.	Fossils: <u>the remains or impression of a prehistoric plant or animal embedded in rock</u>	Palaeontologist: A person who studies fossils.
Soil: A mixture of tiny particles of rocks, <u>organic matter from animals and plants, as well as air and water</u>	Weathering: Rocks that have been broken down by the weather, e.g. ice, water, frost, wind, heat	Non-permeable: Not allowing water to pass through it	Permeable: Allowing water to pass through it

What are the three main classifications of rock?	How can rocks be compared and grouped?	What is soil made from?
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Rocks are made of one or more minerals. There are three main classifications based on the way the rock was formed.

- **Metamorphic Rocks** - Metamorphic rocks are formed by great heat and pressure. They are generally found inside the Earth's crust where there is enough heat and pressure to form the rocks. Metamorphic rocks are often made from other types of rock.
- **Igneous Rocks** - Igneous rocks are formed by volcanoes. When a volcano erupts, it spews out hot molten rock called magma or lava. Eventually the magma will cool down and harden, either when it reaches the Earth's surface or somewhere within the crust. This hardened magma or lava is called igneous rock.
- **Sedimentary Rocks** - Sedimentary rocks are formed by years and years of sediment compacting together and becoming hard. Generally, something like a stream or river will carry lots of small pieces of rocks and minerals to a larger body of water. These pieces will settle at the bottom and over a really long time (perhaps millions of years), they will form into solid rock.



How can rocks be compared and grouped?


			
			
			

Rocks can be compared and grouped in many ways. They can be compared by their colour, patterns, textures, hardness and the particles within them.

Igneous	Sedimentary	Metamorphic
 Glassy, smooth surface	 Sand grains or pebble visible	 Sparkly crystals
 Gas bubble holes, like Swiss cheese	 Fossil imprints visible	 Ribbonlike layers or stripes
 Random arrangement of minerals		
		

What is soil made from?

Soil Particle Separation



Soil is the thin layer of material covering the earth's surface and is formed from the weathering of rocks. Soil is formed of fine rock particles mixed with air, water and dead plant and animal matter (organic matter). The texture of the soil depends on how much clay, silt or sand is in it.

What are fossils and how are they formed?

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

Types of Fossils

- Body fossils** - Body fossils are fossils where some portion of the actual organism's body remains as part of the fossil.
- Trace fossils** - Trace fossils are fossils where there isn't any actual part of the original organism, but "traces" of the organism are preserved in rocks and minerals.

Fossils are found all over the world. Most fossils are found in sedimentary rock.

