# Rocks and Soils

**Glossary**

**Chemical Weathering** - The breaking down of rocks by chemicals that react with their minerals

**Classification** - To group things together based on their observed similarities

**Fossil** - The preserved remains, or traces of remains, of ancient plants and animals, which is at least 10,000 years old.

**Igneous rock** - Rocks formed from magma or lava that has cooled and solidified.

**Metamorphic rock** - A type of rock formed when sedimentary or igneous rock is put under intense heat and pressure over a long period of time.

**Minerals Natural** - chemical substances that do not come from animals or plants. Minerals are the building blocks of rocks.

**Physical Weathering** - The breaking down of rocks because of physical processes such as temperature change and the effects of wind or water.

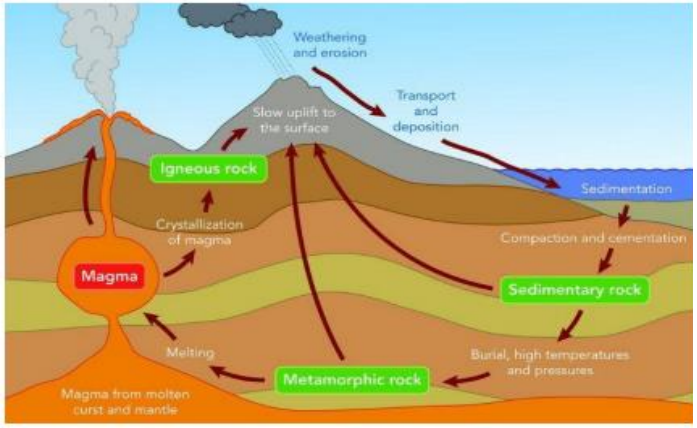
**Porous** - Something that allows water to pass through it.

**Rocks** - Rocks are solid at room temperature. They are made of grains that fit together. Each grain in a piece of rock is made from minerals.

**Sedimentary rock** - Rocks that are formed when small fragments of rock and soil form layers and are compressed over a long period of time.

**Soil** - A mixture of organic matter, minerals, gases, liquids, and organisms.

**The Rock Cycle -** explains how and where rocks are made




| Igneous | Sedimentary | Metamorphic |
|---|---|---|
| Obsidian | Chalk | Marble |
| Granite | Limestone | Gneiss |
| Pumice | Sandstone | Quartzite |
| Basalt | Shale | Slate |

**Soil**

- The combination of organic matter, minerals, gases, liquids, and organisms decide which of the three soil types it will be.
- 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.

**How are Fossils Made?**

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

| Types of Soil | Properties |
|---|---|
| Sandy  | A dry soil which drains easily and has lots of air in it. |
| Clay  | Sticky and does not have much air. It can hold a lot of water. It cracks when it dries. |
| Loam  | 10-30% of clay and 25-50% sand. It holds a bit of water and has plenty of air in it. Loam soils also have a lot of (dead plant and animal matter). Most plants grow well in loam soils. |