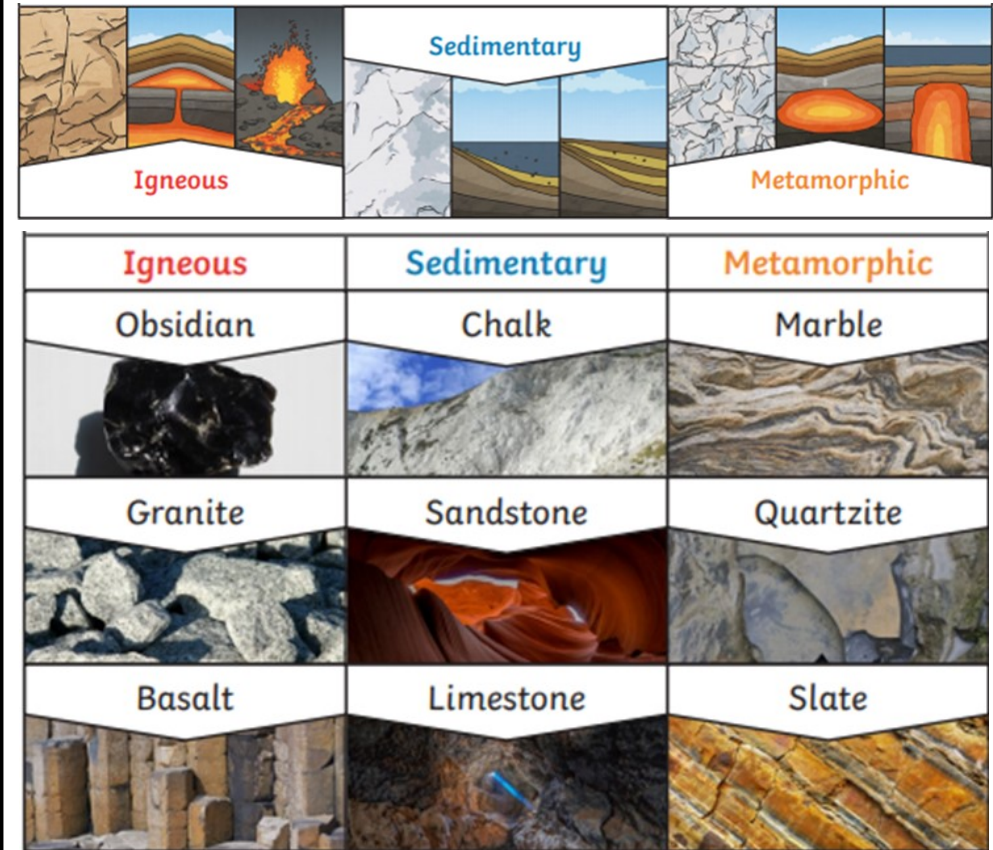


Vocabulary

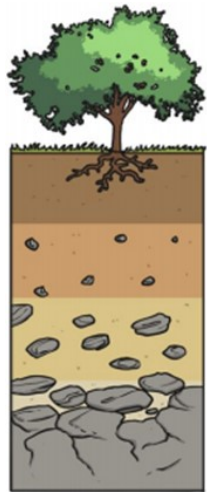
| Word | Meaning |
|---------------|-----------------------------------------------------------------------------------------------------------------|
| decompose | To rot, to decay, to break down into parts or to disintegrate into the earth. |
| erosion | The wearing away of the land by forces such as water, wind, and ice. |
| fossilisation | The process by which fossils are made. |
| igneous | Rocks that are formed from cooled magma or lava. |
| impermeable | Does not allow water to go through it. |
| lava | Molten rock that flows onto the Earth's surface. |
| magma | Molten rock located deep below the Earth's surface. |
| matter | Anything that takes up space is called matter, such as air, water, rocks, and even people. |
| metamorphic | Rocks that have changed as they have been exposed to heat and pressure deep within the Earth's surface. |
| minerals | Substances that are formed naturally in the Earth. Minerals are usually solid and have a crystal structure. |
| palaeontology | The study of plants and animals that lived millions of years ago. |
| particles | Tiny bits of matter that make up everything in the universe. |
| permeable | Allows liquid to pass through it. |
| sediment | Sediment is the natural, solid material which falls to the bottom of oceans and lakes, such as stones and sand. |
| sedimentary | Rocks that are made when sediment settles down in layers and is compressed over time. |

Types of rock

Rocks are solid objects that are made up of one or more minerals. Scientists classify rocks by how they were formed. The three types of natural occurring rock are sedimentary, igneous and metamorphic.



Soil



topsoil

subsoil

baserock



Soil is the uppermost layer of the Earth. It is a combination of different things, including minerals from ground-up pieces of rock, organic matter e.g. particles from dead plants and animals, air and water.

Types of soil

There are three types of soil. The different types of soil are based on what materials go into making it. Different types of broken-down rock and rotting vegetation make different types of soils.

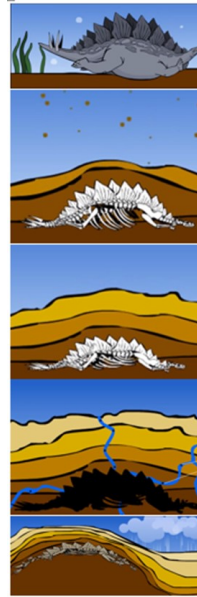
Sandy Soil – dry with lots of air in it.

Clay soil – sticky. It does not have much air in it and contains a lot of water.

Loam soil – Somewhere between the two, it has some water in it and has a bit of air in it.



Fossils



A fossil is the preserved remains of something that was once living. The process in which fossils are formed is called fossilisation. Most living things don't become fossilised – it takes very special conditions.

1. After an animal dies, the soft parts of its body decompose leaving just the hard things like teeth and bones.
2. The remains are buried by sediment.
3. As more layers of sediment build on top, the sediment around the remains begins to harden in to rock.
4. Water seeps through, dissolving the bones. Minerals replace them creating a rock replica of the bone – a fossil! As erosion and weathering take place. Eventually the fossil becomes exposed.

Extending your learning

Five fun things to do to extend your learning at home:

1. **Rock collector:** Collect as many different types of rocks as you can. Write some sentences about each rock (e.g. where you found it, what it feels like, what type of rock you think it is). You could also do rubbings of your rock using a pencil and paper.
2. **Be a soil detective:** Look at the soil in your garden or local area. What is it like? You could collect some samples in bags and label where you found them. You could draw a 'soil potion' with all the soils you have found. Make sure you tell us about what is in your potion!
3. Take some photos of your detective work.
4. Plant seeds in different types of soil to see how well they grow.
5. **Research fossils:** What are fossils? What do different fossils look like? Draw, colour and label 3 different types of fossils and write 3 different sentences about each one.