Theale Primary School

Science

Topic: Rocks

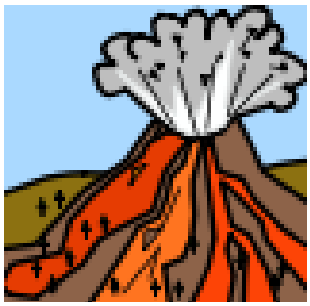
Year: 3

Key Knowledge

What are the different types of **rocks**?

There are 3 types of **rocks** that are formed **naturally**:

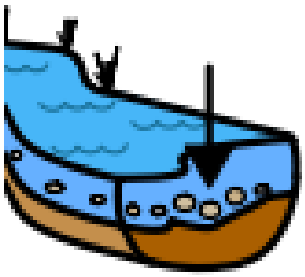
Igneous



When **molten magma** cools, **igneous rocks** are formed. It either cools and forms **rocks** under the earth's **surface** or flows out of erupting **volcanoes** as lava. Examples include granite and basalt.

This type of rock is generally strong, hard-wearing and **non-porous.**

Sedimentary



When rocks are **weathered,** tiny pieces end up at the bottom of lakes, seas and rivers. This is called **sediment.**

Over millions of years, layers of **sediment** build up forming **sedimentary rocks.** Examples include limestone and chalk.

Sedimentary rocks are **porous** and wear down easily.

Metamorphic

When some **igneous** and **sedimentary** rocks are heated and squeezed, they form **metamorphic rocks.**

Examples include slate and marble.

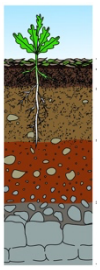
Metamorphic rocks are strong.

Bricks and concrete are not **rocks** because they are **man-made.**

What are **fossils?**

- **Fossils** are the preserved remains of **prehistoric** life.
- Fossils form when a plant or animal dies, and the body is covered up by **sediment** over tens of thousands of years.
- Some **fossils** are formed when the tough bones and teeth in animals, and the woody part of plants are **preserved** by **mineralisation** (turned to stone).
- Other **fossils** are made from **imprints** in **surrounding sedimentary rock** such as footprints or shell **imprints.**
- **Fossils** tell us about the Earth and about life that existed hundreds of thousands and millions of years ago.

What is **soil**?



- **Soil** contains pieces of rock, **minerals, decaying** plants and animals, and water.
- When **rock** is broken down, small **grains** of **sand, silt or clay** are formed.
- Soil forms layers. On top is **leaf litter** and growing plants. Going deeper, the size of the grains or pieces of rock increases.

Investigate

Identify and draw different types of **rocks.**

Why are different **rocks** used for different purposes?

Sort rocks based on appearance, (rough or smooth, **grains** or **crystals**); how strong or hard they are and how easily they break down.

Make models to explore how cast and mould fossils form.

Investigate the composition of **soil.**

Key Vocabulary

bedrock	The solid rock in the ground which supports all the soil above it.
igneous	**Rocks** that are formed by solidification of magma.
imprint	A mark or outline made by the pressure of one object on another.
leaf litter	Decaying leaves.
magma	**Molten** rock formed in very hot conditions inside the Earth.
man-made	Things that are created by people.
metamorphic	**Rocks** that have had their original structure changed by **pressure** and heat.
mineral	Inorganic substances formed naturally in **rocks** and in the Earth.
mineralised	Turned to rock.
molten	Has become a hot, thick liquid when heated to a very high temperature (e.g. rock, metal or glass).
permeable	If a substance is permeable, something such as water or gas can pass through it or soak into it.
porous	Something that is porous has many small holes in it, which water and air can pass through.
rock	A solid mass made up of **minerals**. Rock forms much of the Earth's outer layer (crust), including cliffs and mountains.
sediment	Solid material that settles at the bottom of a liquid; soil and pieces of **rock** that have been transported and deposited by water, ice, or wind.
soil	The substance on the surface of the Earth in which plants grow.
volcano	A mountain from which hot **molten** rock (lava) sometimes bursts (erupts).
weathered	Affected by the weather