

Calcot Schools Knowledge organiser—Science

Topic: Rocks

Phase: Year 3

Strand: Chemistry

Prior knowledge from previous year groups:

Soil contains nutrients and these help plants to grow

The meaning of the word absorb

That magma is molten rock that is formed in very hot conditions inside the earth

What will the children know by the end of the unit?

There are three types of rock formed naturally:

When molten magma cools, igneous rocks are formed

This either cools and forms rocks under the earth's surface or flows out of erupting volcanoes as lava and may mix with other minerals.

Examples include granite and basalt.

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

Sedimentary:

Sometimes little pieces of rock that have weathered can be found at the bottom of lakes, seas and rivers. This is called sediment.

Over millions of years, this sediment builds up forming sedimentary rocks.

Examples include limestone and chalk.

Sedimentary rocks are porous and can easily be worn down.

Metamorphic:

When some igneous and sedimentary rocks are heated and squeezed (pressured), they form metamorphic rock.

Examples include slate and marble.

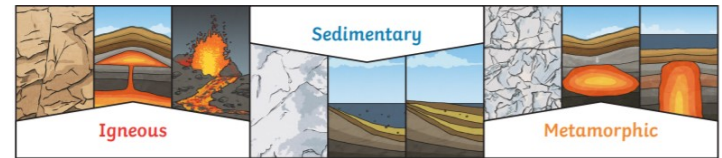
Metamorphic rocks are strong.

Bricks and concrete are not rocks as they are man made.

Vocabulary:

absorb	soak up or take in
bedrock	the solid rock in the ground which supports all the soil above it
decaying	gradually being destroyed by a natural process
grain	A grain of something such as sand or salt is a tiny hard piece of it
igneous	rocks that are formed by volcanic action or intense heat
imprint	a mark or outline made by the pressure of one object on another
leaf litter	decaying leaves
magma	molten rock that is formed in very hot conditions inside the earth
man-made	things are created by people
metamorphic	rocks that have had their original structure changed by pressure and heat
mineral	something that is formed naturally in rocks and in the earth.
molten	Molten rock, metal, or glass has been heated to a very high temperature and has become a hot, thick liquid
natural	things that exist in nature and are not made by people
nutrients	substances that help plants and animals to grow
palaeontology	the study of fossils as a guide to the history of life on Earth
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
prehistoric	the time in history before any information was written down
preserve	to protect from decay
pressure	force that you produce when you press hard on something
properties	the qualities or features that belong to something and make it recognisable
rock	a solid mass made up of minerals . Rock forms much of the earth's outer layer, including cliffs and mountains
sediment	solid material that settles at the bottom of a liquid, especially earth and pieces of rock that have been carried along and then left somewhere by water, ice, or wind
soil	the substance on the surface of the earth in which plants grow
surface	the flat top part of something or the outside of it
surrounding	to be present all around
volcano	a mountain from which hot melted rock, gas , steam, and ash from inside the Earth sometimes burst.
weathered	affected by the weather

Diagrams:



What are fossils?



What is soil?



Investigate!

- Explore the types of rocks you can find in the local environment.
- Explain why rocks are used for different purposes based on their properties.
- Research the different living things whose fossils are found.
- Explore the different kinds of soils, including those you can find in the local environment.
- Compare different types of soils by saying what is similar and what is different using scientific vocabulary.
- Investigate what happens when rocks are rubbed together.
- Investigate what happens to rocks when they are in water.
- Sort different types of rocks based on how rough or smooth they are, whether they have grains or crystals, how permeable they are, how easily they can break down, how strong they are and what they look like.