

Science Knowledge Organiser

Southwold Primary School



Topic: Rocks

Year: 3

Strand: Chemistry

What should I already know?

- Identify and name everyday materials and describe their physical properties.
- Identify and compare the suitability of a variety of everyday materials for particular uses.
- Soil** contains **nutrients** and these help plants to grow.
- The meaning of the word **absorb**.

What will I know by the end of this unit?

- There are **three** types of **rocks** that are formed **naturally**.
- Bricks and concrete are not **rocks** because they are **man-made**.
 - Fossils** are the remains of **prehistoric** life.
 - They are usually formed when a living thing (plant or animal) dies, and the body is covered up or buried 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**.
 - Other **fossils** are made from **imprints** in surrounding
 - That **volcanoes** can erupt bringing out **lava**, molten rock and ash.

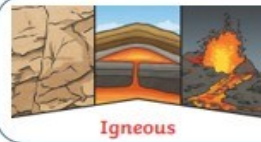
Working Scientifically

- 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.

Explain why **rocks** are used for different purposes based on their **properties**.

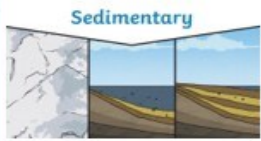
- Investigate which **rocks** are **permeable**.
- Investigate which rocks are hard-wearing.
- Research the different living things whose **fossils** are found.
- Explore different kinds of **soils**.

Three types of rocks



Igneous

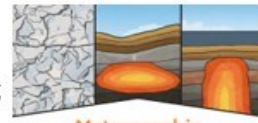
Rock that has been formed by **magma** or lava.



Sedimentary

Rock that has been formed by layers of sediment being pressed down hard and sticking together.

Rock that started as igneous or sedimentary but changed due to being exposed to extreme heat or pressure.



Metamorphic

Fossils in rocks

An animal dies. It gets covered with **sediments**. More layers of rock cover it. Only hard parts of the creature remain, e.g. bones, shells and teeth.



Over thousands of years, **sediment** might enter the mould to make a **cast fossil**. Bones may change to mineral but will stay the same shape. As **erosion** and weathering take place, eventually the fossil becomes exposed.



Vocabulary

absorb	Soak up or take in.
decaying	Gradually being destroyed by a natural process .
igneous	Rocks that are formed from magma or lava.
imprint	A mark or outline made by the pressure of one object on another.
magma	Molten rock that is formed in very hot conditions inside the earth.
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.
paleontology	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.
rock	A solid mass made up of minerals . Rock forms much of the earth's outer layer.
sedimentary	Rocks formed under the sea when parts of rocks get broken down into sediments.
soil	The substance on the surface of the earth in which plants grow.
volcano	A mountain from which hot, melted rock, gas, steam and ash erupts.