



# ROCKS

## KNOWLEDGE ORGANISER



### Overview

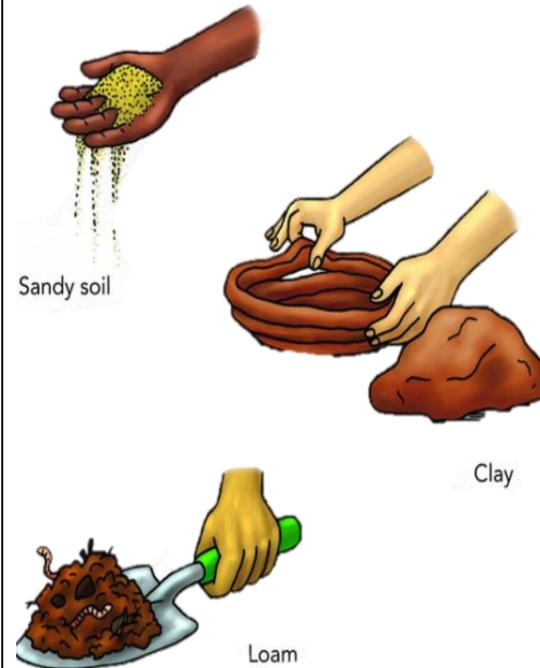


-Rocks are solid objects that are made up of one or more minerals.

-Soil is made of very fine rock particles that have mixed with water, air and particles from dead animals and plants. There are also three types of soil.

-Fossils are formed when things that have once lived are trapped within rock.

### Soil



-Soil is a combination of a range of materials, including ground up pieces of rock, particles from dead plants and animals, air and soil.

-Sandy soil is dry soil with lots of air found in it.

-Clay soil is sticky and doesn't have much air in it. Clay soil often contains a lot of water.

-Loam soil is somewhere between the two. It has some water in it and has a bit of air in it.

### Classifications of Rocks



#### Sedimentary

-These rocks are formed when small particles of mineral are washed down rivers or other bodies of water.

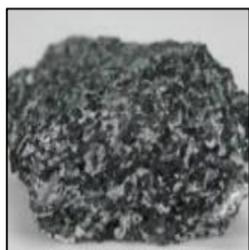
-They become squashed at the bottom of lakes or and are formed over millions of years as sediment is squashed on top. They are porous (let water through) and can be easily worn down.



#### Igneous

-Igneous rocks are formed from magma, a hot underground liquid.

-Sometimes, magma cools under the earth's surface and forms rocks. Other times, magma flows out in volcanic eruptions as lava. Many igneous rocks are non-porous.



#### Metamorphic

-These rocks are formed when rock becomes warm enough to bend and mould, but not enough to become a liquid.

-Metamorphic rocks can sometimes form interesting shapes. Normally metamorphic rocks are non-porous.



#### Meteorite (not formed on Earth)

-Meteorites are rocks that have landed on Earth from space.

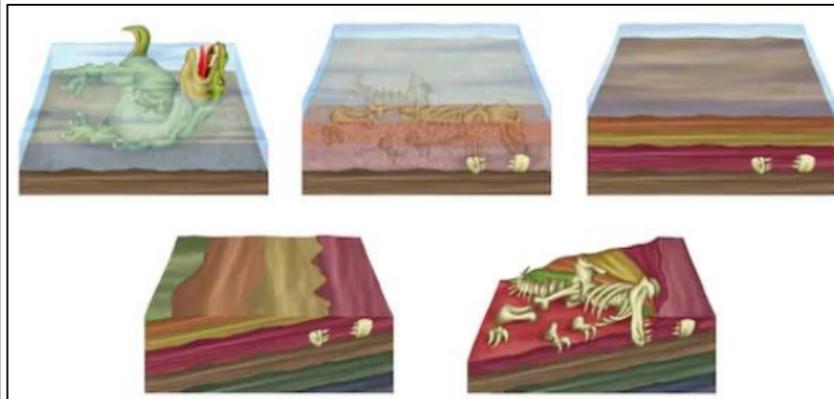
-These rocks were not formed on Earth.

-This means that scientists are able to study planets without ever actually going there.

### Fossils

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

1. After an animal dies, the soft parts of its body rot away (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 into rock.

**Sedimentary Rocks****Metamorphic Rocks****Igneous Rocks**

Sandstone

Chalk

Limestone

Marble

Slate

Gneiss

Phyllite

Basalt

Granite

Pumice

**Vocabulary**

decaying

gradually being destroyed by a natural **process**

permeable

if a substance is permeable, something such as water or gas can pass through it or soak into it.

igneous

rocks that are formed by volcanic action or intense heat

porous

Something that is porous has many small holes in it, which water and air can pass through

magma

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

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

metamorphic

rocks that have had their original structure changed by pressure and heat

soil

the substance on the surface of the earth in which plants grow

mineral

something that is formed naturally in rocks and in the earth.

surface

the flat top part of something or the outside of it

molten

Molten rock, metal, or glass has been heated to a very high temperature and has become a hot, thick liquid

volcano

a mountain from which hot melted rock, gas, steam, and ash from inside the Earth sometimes burst.

paleontology

the study of fossils as a guide to the history of life on Earth

weathered

affected by the weather