



Roby Park Primary School Year 3
Chemistry
Rocks & Soils



What we already know:

- ✓ The role of Mary Anning in paleontology and the discovery of fossils.
- ✓ 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.
- ✓ Why some materials are used for certain purposes because of their properties

We are learning to:

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- Describe in simple terms how fossils are formed when things that have lived are trapped within rock
- Recognise that soils are made from rocks and organic matter.





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Key Vocabulary

Sedimentary - These rocks form under the sea. Rocks are broken into small pieces by wind/water (erosion). They settle as mud, sand, minerals and even remains of living things. Over time, layers pile up and the pressure turns this sediment into rock.

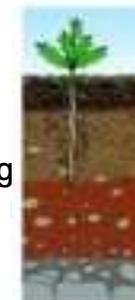
Igneous - Far underground, the temperature is so hot, rock melts into a liquid (molten rock). When the liquid is underground it is called 'magma' and it can cool to form an intrusive rock. When it spills out (volcano), the liquid is called 'lava' and it cools to form extrusive rock.

Metamorphic- When sedimentary or igneous rock is near magma, it heats up and chemicals change in the rock. However, it does not heat up enough to melt it. As it cools it becomes metamorphic rock.

The Power of Five

What is soil?

Soil is made from pieces of rock, minerals, decaying plants and water. When rock is broken down into small grains, soil is formed. There are layers of soil: above the soil is leaf litter and recently decaying as the soil becomes deeper, the rock grains become larger until bedrock is



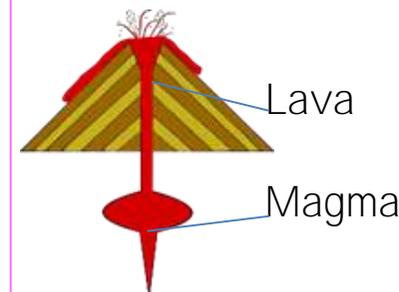
PROPERTIES OF ROCKS

HARD / SOFT - Some rocks need to be cut or split with tools because they are so hard (e.g. granite) but others are soft and can be moulded (e.g. clay).

PERMEABLE / IMPERMEABLE - Permeable rocks allow water to pass through (e.g. pumice) but impermeable rocks do not let water pass through (e.g. marble)

DURABLE - Rocks which are resistant to erosion last longer and are more durable. Buildings are often made with these (e.g. limestone)

DENSITY - If the particles in the rock are tightly packed then it has a high density. These rocks would sink in water (e.g. basalt).



Fossils

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.

Investigate!

Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
Setting up simple practical enquiries, comparative and fair tests.





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3Ws

What is an impression left by a prehistoric plant called?

Where do sedimentary rocks form?

Which rock is not igneous?

- a.) obsidian
- b.) basalt
- c.) marble

VOCABULARY UNSCRAMBLE

g a m a m
molten rock that is formed in very hot conditions inside the earth.

t i d e m e s n
solid material that settles at the bottom of a liquid, especial- ly earth and pieces of rock that have been carried along and then left somewhere by water, ice, or wind.

l i s o
the substance on the surface of the earth in which plants grow.

3 2 1

Name 3 types of rock.

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List 2 properties of soil.

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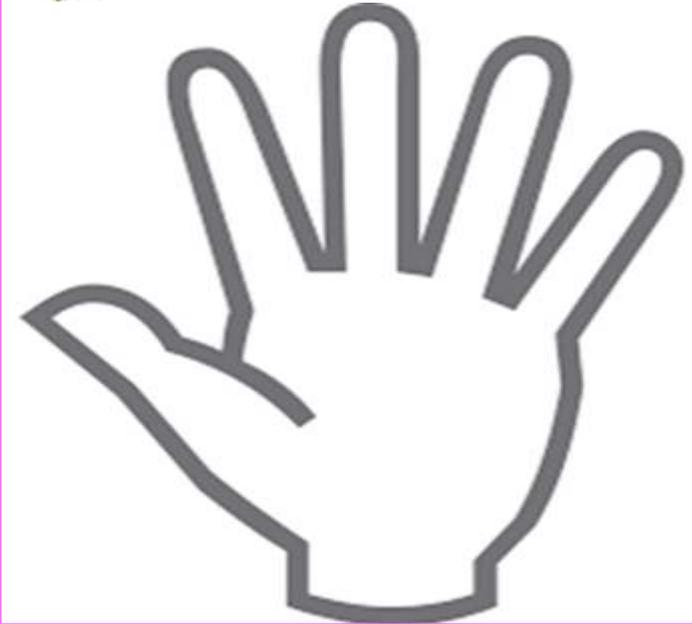
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Recall 1 fact about rocks

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Name 5 properties of rock.



Speedy Pencil. Write as much as you can remember in 5 minutes



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