Frogwell School Year 3 Knowledge Organiser Term 1 <u>Rocks and Soils</u>

Working Scientifically

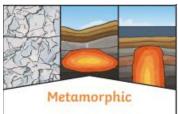
- Ask questions about rocks and carry out practical enquires and fair tests to answer them.
- Make careful observations of rock samples.
- Gather, record and present data in different ways to show our answers.
- Use scientific language and evidence to explain what we are finding out about Rocks.
- Use our results to draw simple conclusions about how rocks are formed and used in the world around us.

| KEY VOCABULARY TO LEARN | | | | |
|-------------------------|---|--|--|--|
| rocks | Rocks are made up of grains that are packed together. | | | |
| mineral | Minerals are solid chemical substances that occur naturally e.g. diamond, quartz. Each grain that makes up the rock is made from a mineral. | | | |
| fossils | The remains or impression of a prehistoric plant or animal embedded in a rock. | | | |
| soil | Soil is a mixture of tiny particles of rocks, organic matter from animals and plants, as well as air and water. | | | |
| molten rock | A rock that has been reduced to liquid through heating. | | | |
| magma | Liquid rock inside a volcano. | | | |
| lava | Liquid rock that flows out of a volcano. Fresh lave glows red hot to white hot when it flows. | | | |
| permeable | Allowing liquids to pass through it. | | | |
| impermeable | Does not allow liquids to pass through it. | | | |
| sediment | Natural solid material that is moved and dropped off in a new place by water or wind e.g. sand. | | | |

Types of rock and how they are formed

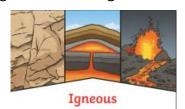
Metamorphic rocks – formed when other rocks are changed due to heat or pressure.

E.g. slate and marble.



Igneous rocks –formed when magma or lava from volcanoes cools. Most are very hard.

E.g. basalt and granite.



Sedimentary rocks –formed by layers of sediment being pressed down hard and stickling together.

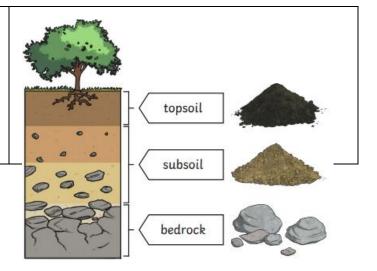
E.g. sandstone, coal and chalk.



<u>Soil</u>

Soil is the uppermost layer of the Earth. It is a mixture of different things:

- minerals (the minerals in soil come from finely broken- down rock)
- air
- water
- organic matter (including living and dead plants and animals)



Fossils

Fossilisation – the process by which fossils are made. Palaeontology – the study of fossils. Erosion –when water, wind or ice wears away land.

| Fossilisation | | | | | | |
|------------------------|---|--------------------------|--|---|--|--|
| covered with sediments | More layers of rock cover it. Only hard parts of the creature remain, e.g. bones, shells and teeth. | sediment might enter the | | As erosion and weathering take place, eventually the fossil becomes exposed. | | |
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Ammonites found near Yeovil in Somerset.

Mary Anning – a famous fossil hunter from Lyme Regis.

