



Science Topic : Rocks

Year 3

Term 3

Key Knowledge
I know that earth's crust is made up of rocks and soil
I know that rocks can be classified based on their appearance
I know that rocks can be classified based on their origin
I know that there are three kinds of rocks – igneous, sedimentary and metamorphic.
I know that igneous rocks are volcanic rocks
I know that metamorphic rocks are formed deep within the earth's crust
I know that rocks are eroded by wind, water and changing temperatures
I know that sedimentary rocks are formed by deposition.
I know how fossils are formed
I know that soils are made from rock particles and organic matter

Key Vocabulary	
Rock	A large mass of stone or hardened earth
Appearance	What something looks like
Soil	A part of earth's surface made up of smaller particles of rocks and organic matter
Organic matter	The organic matter in soil comes from plants and animals
Lava	Molten rock from a volcano
Magma	Molten rock within the earth's crust
Crystal	A clear, transparent mineral formed underground
Fossils	Remains or traces of ancient life preserved by natural processes
Igneous	A rock formed by the cooling of molten lava or magma
Metamorphic	Rocks that are formed from transformation (by heat or pressure) of existing rocks
Sedimentary	Rocks formed by layering of sand, stones and mud
Permeable	Allowing liquids or gasses to pass through
Impermeable	Does not allow liquids or gasses to pass through
Gravel	Small stones mixed with coarse sand
Clay	A sticky kind of earth that can be make into pottery or bricks
Flint	A hard rock that can be shaped into sharp objects
Erosion	Wearing away of earth's surface by wind or water

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.



limestone
chalk
sandstone

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 igneous rock. When it spills out (volcano), the liquid is called 'lava'.



obsidian
granite
basalt

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.



marble
quartzite
slate



A fossil is the remains or the impression left by a prehistoric plant or animal embedded in rock.

MAN-MADE ROCKS (ANTHROPIC)

These rocks are made by humans.

CONCRETE - a mixture of water, sand/rock/gravel and cement (chalk & clay)

BRICKS - Clay soil, sand or lime which have been air-dried or fire-hardened.

MOCK ROCK - Victorians made rock gardens and surfaces that looked like rock.



What is soil made from?



AIR - Oxygen, carbon dioxide, nitrogen etc.



ORGANIC MATTER - Living and dead plants and animals.



WATER - Air and water fill the gaps between particles of soil.



MINERALS - Minerals come from broken down rock.

