

Knowledge Organiser: Rocks and Soils



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.

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Vocabulary

rock: Is a large mass of stone.

soil: Upper layer of the Earth in which plants grow.

appearance: What something looks like.

texture: How something feels.

sedimentary: Rock formed from layers of sand, stones or mud.

metamorphic: Rock that has changed by heat or pressure.

igneous: Rocks formed by the actions of a volcano.

permeable: Allowing liquids or gases to pass through.

impermeable: Opposite of permeable (waterproof).

sand: Tiny grains of rock, often yellow or brown.

gravel: Small stones mixed with coarse sand.

clay: A sticky kind of earth that can be made into pottery or bricks.

chalk: A white, soft earthy limestone

flint: A hard stone that can be shaped into blades, knives and spears for hunting.

granite: A very hard kind of rock.

sandstone: Sedimentary rock made up of sand or quartz grains and cemented together.

volcano: A mountain with a hole at the top that is formed by molten lava bursting through.

rough: Having an uneven or irregular surface.

smooth: Having an even surface without marks or roughness.

erosion: Is the wearing away of the Earth's surface by wind or water.