Y3/4 Science Knowledge Organiser – Autumn 1

Rocks

Key Vocabulary	
rock	**Rock** is a solid material made up of one or more type of **mineral**.
igneous	**Igneous rocks** are formed from magma or lava. These can be extrusive or intrusive. Extrusive **igneous rocks** are formed above the Earth's surface, whereas intrusive **igneous rocks** are formed below the Earth's surface.
sedimentary	**Sedimentary rocks** are formed when layers of **sediment** are pressed together over time. You can often see these layers of **sediment** in the **rock**.
metamorphic	**Metamorphic rocks** are formed when **igneous** or **sedimentary rocks** are exposed to extreme heat and pressure.
minerals	**Minerals** are naturally occurring substances found in the Earth. Most **minerals** have a crystal structure. Examples of **minerals** include quartz and gold.

Key Knowledge

There are three types of naturally occurring **rock**.

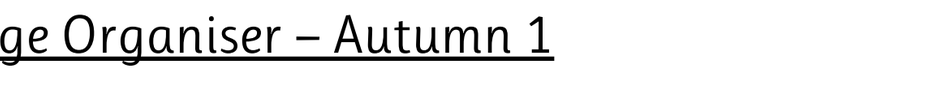


igneous | sedimentary | metamorphic

Rock Properties

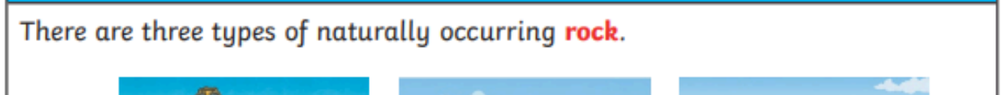
Words you might use to discuss the properties of **rock** include hard, soft, **permeable**, **impermeable**, density, texture, porous, grain size, durable (meaning resistant to **weathering**).

Examples of Rocks



slate | marble | chalk | granite | basalt | sandstone

Types of Soil



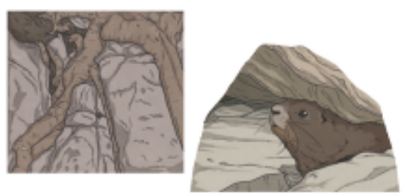
chalky | clay-based | loam | peat | sandy | silt

Key Vocabulary	
permeable	A **permeable** material allows liquid to pass through it.
impermeable	An **impermeable** material does not allow liquid to pass through it.
weathering	**Weathering** is the process whereby **rocks** and **minerals** break down into smaller pieces or wear away over time because of rain, wind, plants or animals.
sediment	**Sediment** is a natural material carried to a new place by wind or water. It is made up of **minerals**, plants and tiny pieces of **rock**. Examples of **sediment** include sand and clay.
fossilisation	**Fossilisation** is the process through which traces or remains of prehistoric living things become preserved.
soil	**Soil** is the top layer of the Earth's surface. It provides nutrients and support for plant life and it is made up of **minerals** (from broken-down **rocks**), air, water and organic matter (living things that are either dead or alive).

Whats Is Soil Made Of?

organic materials
water
rock fragments
air

Types of Weathering



biological – caused by plants or animals

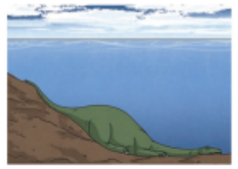


physical – caused by wind, water or ice



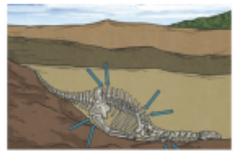
chemical – caused by chemicals in air or water

Fossilisation Process

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2 

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