

National Junior School

Science Focus:

Rocks

Year 3

Spring

What? (Key Knowledge)

Types of Rocks

There are three main types of rock

- Sedimentary
- Metamorphic
- Igneous

Sedimentary

Sedimentary rocks are formed from particles of sand, shells, pebbles, and other fragments of material. Together, all these particles are called sediment. Gradually, the sediment accumulates into layers and over a long period of time hardens into rock.

Metamorphic

Metamorphic rocks are formed under the surface of the earth from the metamorphosis (change) that occurs due to intense heat and pressure (squeezing).

Igneous

Igneous rock is formed when magma cools and solidifies, it may do this above or below the Earth's surface.

How to spot each type of rock

Sedimentary

- Usually crumbly and allow water through them
- Made of layers and stuck together with mineral crystals
- They can contain fossils within their layers

Metamorphic

- Usually hard
- May contain tiny crystals or fossils

Igneous

- Very hard
- Contain crystals

How fossils are formed

How are fossils formed?

- An animal dies, its skeleton settles on the sea floor and is buried by sediment.
- The sediment surrounding the skeleton thickens and begins to turn to stone.
- The skeleton dissolves and a mould is formed.
- Minerals crystallise inside the mould and a cast is formed.
- The fossil is exposed on the Earth's surface.

How is soil made

What is soil made from?

- Minerals (small stone fragments: clay, silt or sand)
- Organic Matter (decaying plants and animals)
- Water (which the nutrients in the minerals and the organic matter dissolve into)
- Air (which fills the gaps between the mineral and organic matter parts).

Types of soil

Sandy soil is pale in colour with lots of small air gaps. Water drains through sandy soil easily so it usually feels quite dry.
Clay soil is an orange or blue-ish sticky soil with very few air gaps. Water does not drain through it easily. When it rains, puddles stay on top of clay soil for a long time.
Chalky soil is a light brown soil. Water drains through it quickly.
Peat is different from other soils because it does not contain any rock particles. It is made from very old decayed plants and is dark, crumbly and rich in nutrients (chemicals plants need to grow).

What? (Key Vocabulary)

Spelling

Definition/Sentence

Erosion

The gradual wearing away of something.

Magma

Hot fluid below or within the earth's crust from which lava and other igneous rock is formed on cooling.

Tectonic plates

A layer under the ground made up of large, moving pieces called plates. All of Earth's land and water sit on these plates.

Solidify

To become solid or hard.

Dissolve

To become part of a liquid

Diagrams and Symbols



Sedimentary

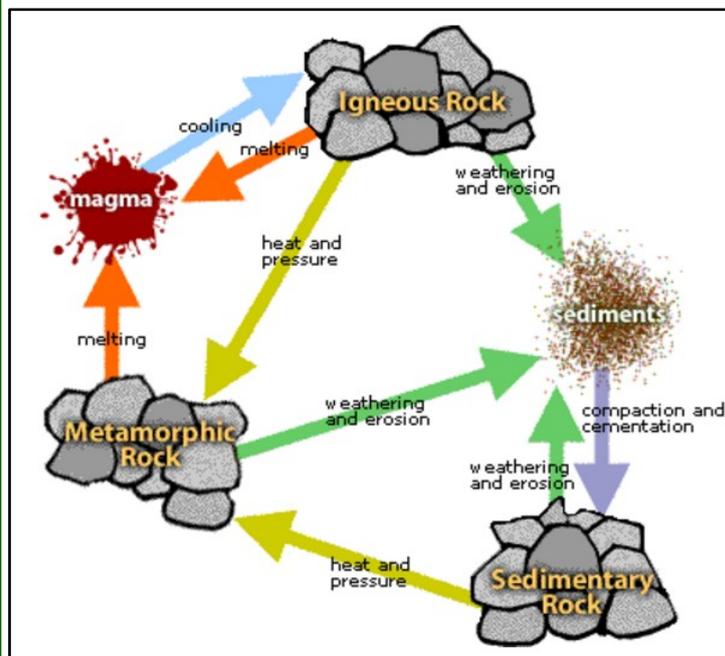


Metamorphic



Igneous

The Rock Cycle



Prior Learning

- *distinguish between an object and the material from which it is made
- *identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- *describe the simple physical properties of a variety of everyday materials
- *compare and group together a variety of everyday materials on the basis of their simple physical properties.

