

Knowledge organiser

Big idea: Earth



Y7 topic: EARTH STRUCTURE

I have already learned:

In KS2: Natural resources (geography),

This topic links to:

Elements and compounds

Extracting metals (Year 9)

Earth's resources (Year 11)

It is important to study about The Earth's Structure because...

The Earth is our home and it's important to know about where our resources come from. Geologists cannot see directly into the interior of the Earth. They have to rely on various techniques and methods to infer the appearance and physical characteristics of earth's interior. Geologists study rocks because they contain clues about what the Earth was like in the past. We can assemble a historical record of a planet and trace events that occurred long before humans roamed our planet. Our use of rocks and minerals includes as building material, cosmetics, cars, roads, and appliances.

Possible careers involving Earth's Structure are...

Geologist - They study of the Earth's physical structures, rocks and minerals.

Meteorologist - They study and prediction of short-term weather conditions and phenomena.

Cartographer

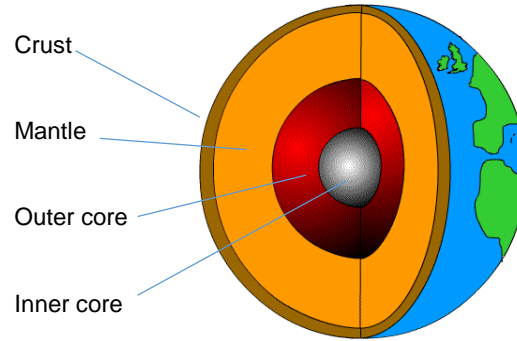
Geotechnical engineer

And many more

KNOWLEDGE ORGANISER
BIG IDEA: EARTH
TOPIC: EARTH STRUCTURE

Key Word	Definition
rock cycle	Processes that lead a rock changing from one type to another.
weathering	The wearing down of a rock by physical, chemical or biological processes.
erosion	Weathering of rock and its movement by water, ice and wind.
minerals	Chemicals that a rock is made from.
sedimentary rocks	These rocks are formed from layers of sediment. These rocks can contain fossils.
igneous rocks	These rocks are formed from cooled magma, with the minerals arranged in crystals.
metamorphic rocks	These rocks are made from existing rocks that are heated and withstand high pressure over long periods of time.
strata	Another term for layers. E.g. the strata in a sedimentary rock.
magma	Molten rock

The layers of the Earth:



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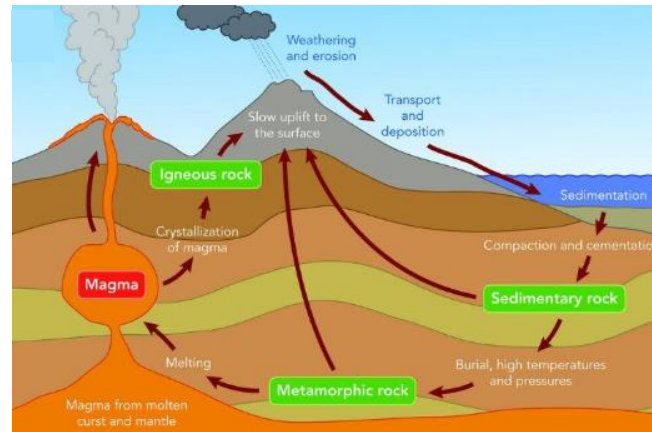
Crust – The outermost layer, it is thin and made out of sections called tectonic plates.

Mantle – A semi liquid, that causes the plates above to move due to convection currents.

Outer core – A liquid layer made out of molten iron and other elements.

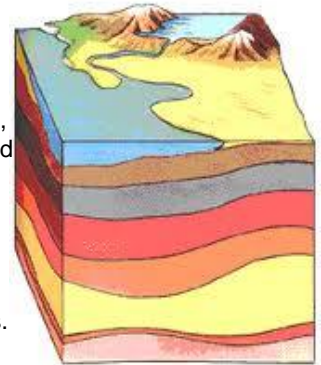
Inner core – The inner most section, it is solid. It is mainly made out of iron and nickel.

The rock cycle:



Sedimentary Rock:

These are formed when **sediment** hardens. Over time, more sediments add to **layer** with their own layers. Over many years, lots of layers are formed. Sedimentary rocks can contain **fossils**.



Examples of sedimentary rock: **Limestone, chalk, sandstone.**

Metamorphic Rock:

Metamorphic rocks, are rocks that have changed due to changes in **heat** and **pressure**.

When **igneous** or **sedimentary** rocks are **heated** or undergo **high pressures**, their structures change, making **metamorphic** rocks.

Examples of metamorphic rock: **Marble, slate** and **schist**.

Igneous Rock:

Igneous rocks have varying sizes of **crystals**. When the **magma** has longer to **cool**, this forms rocks with larger crystals. Examples of igneous rock: **Granite, basalt** and **obsidian**.

