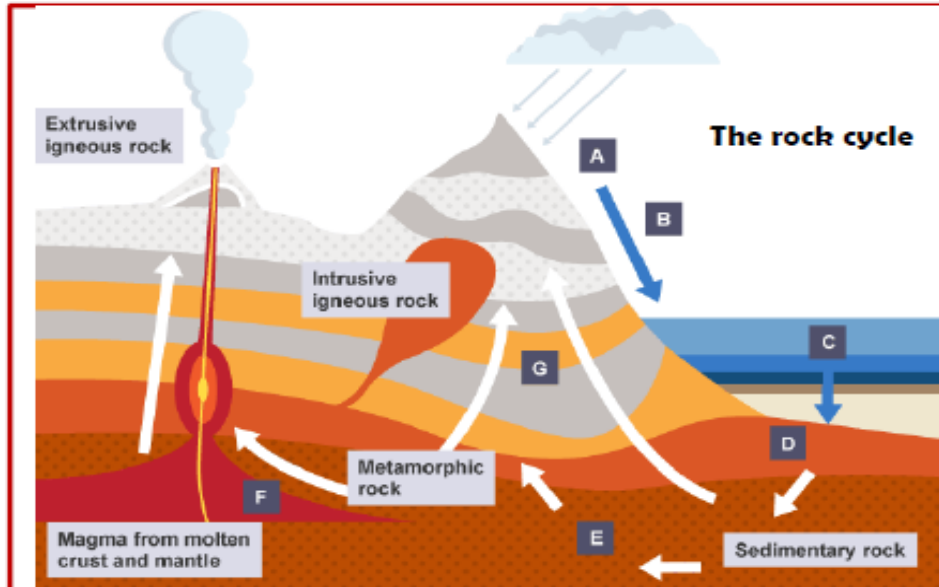


KPI 8CM 1: Describe the structure and composition of the Earth and link this to the rock cycle



- | | | |
|--|--|-------------------------------------|
| A Weathering and erosion | D Compaction and cementation | F Melting |
| B Transportation and deposition | E Burial, high temperatures and pressures | G Slow uplift to the surface |
| C Sedimentation | | |

Letter	Description
A	There are 3 types of weathering (biological, physical and chemical).
B	Rivers and streams transport rock particles to other places.
C	Rock particles form layers.
D	This presses the layers and sticks the particles together, forming sedimentary rock.
E	Rocks underground and are changed into metamorphic rock.
F	Rocks melt and turn into magma. When it cools it forms igneous rocks.
G	Areas of rock can move slowly upwards, this is called uplift.

Types of rocks

Igneous rocks

Igneous rocks are formed from molten rock that has cooled and solidified.

Sedimentary rocks

Sedimentary rocks are formed from the broken remains of other rocks that become joined together.

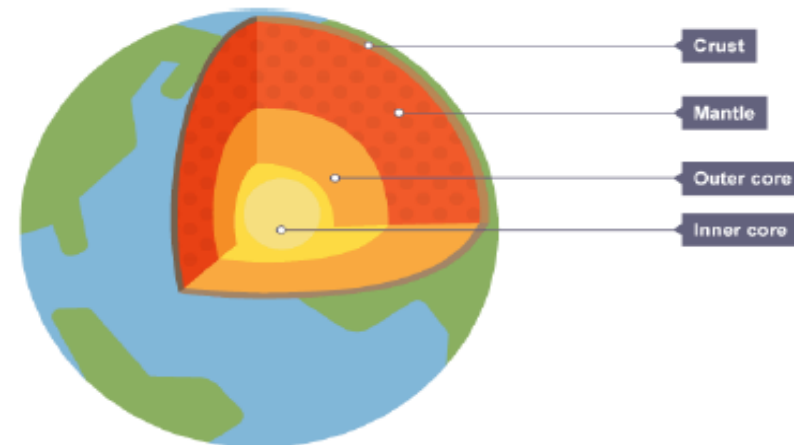
Metamorphic rocks

Metamorphic rocks are formed from other rocks that are changed because of heat or pressure. They are not made from molten rock – rocks that do melt form igneous rocks instead.

Structure of the earth

The Earth is almost a sphere. These are its main layers, starting with the outermost:

- Crust (relatively thin and rocky)
- Mantle (has the properties of a solid, but can flow very slowly)
- Core (made from nickel and iron)



KPI 8CM 2: Explain how carbon is recycled in the atmosphere and link the impact of humans on climate change

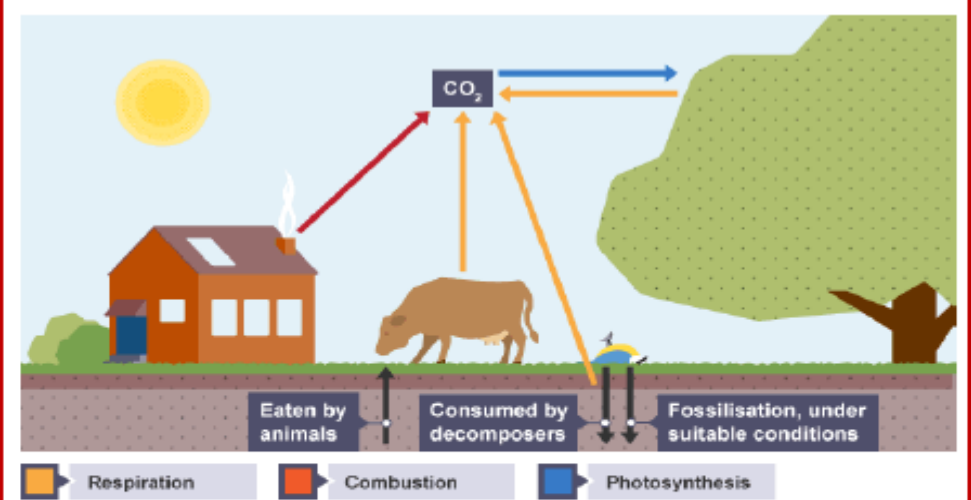
The carbon cycle
 Carbon is being continually recycled on Earth. The processes that release carbon dioxide to the atmosphere include:

- combustion of fossil fuels
- respiration by plants and animals
- Carbon dioxide is taken in from the atmosphere by plants so that they can carry out photosynthesis

Some processes move carbon compounds from place to place, including:

- feeding by animals
- formation of fossil fuels

The model that describes the processes involved is called the carbon cycle:



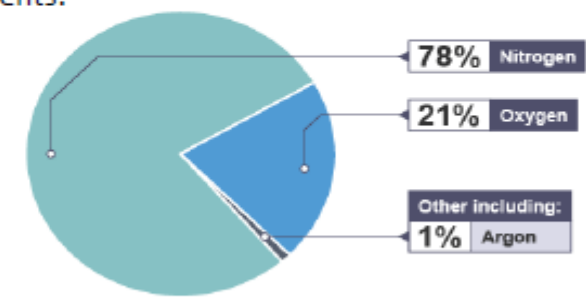
Crude oil, coal and gas are fossil fuels. They were formed over millions of years, from the remains of dead organisms:

- coal was formed from dead trees and other plant material
- crude oil and gas were formed from dead marine organisms

Composition of the atmosphere

The three most abundant gases (the ones with the highest percentages) are all elements:

- 78% nitrogen, N₂
- 21% oxygen, O₂
- 0.9% argon, Ar



Impact of human activity
Global warming
 Extra carbon dioxide in the atmosphere increases the greenhouse effect. More thermal energy is trapped by the atmosphere, causing the planet to become warmer than it would be naturally. This increase in the Earth's temperature is called global warming.

The impact of climate change
 Climate change and its effects as a result of global warming includes:

- Ice melting faster than it can be replaced in the Arctic and Antarctic
- The oceans warming up – their water is expanding and causing sea levels to rise
- Changes in where different species of plants and animals can live

How to reduce human impact on the environment:
 Recycling is an important way to help us achieve sustainable development. We can recycle many resources, including:

- Glass
- Metal
- Paper
- Plastic