

A world of rock

Rock is the main ingredient in planet Earth. Nearly everything under your feet is rock. It may be buried out of sight, but it's always there. Rocks are full of surprises and secrets. They give us precious gems, gold, and vital resources like iron and glass. Written into rock is a record of Earth's fascinating history, preserved as fossils.



Giant's Causeway

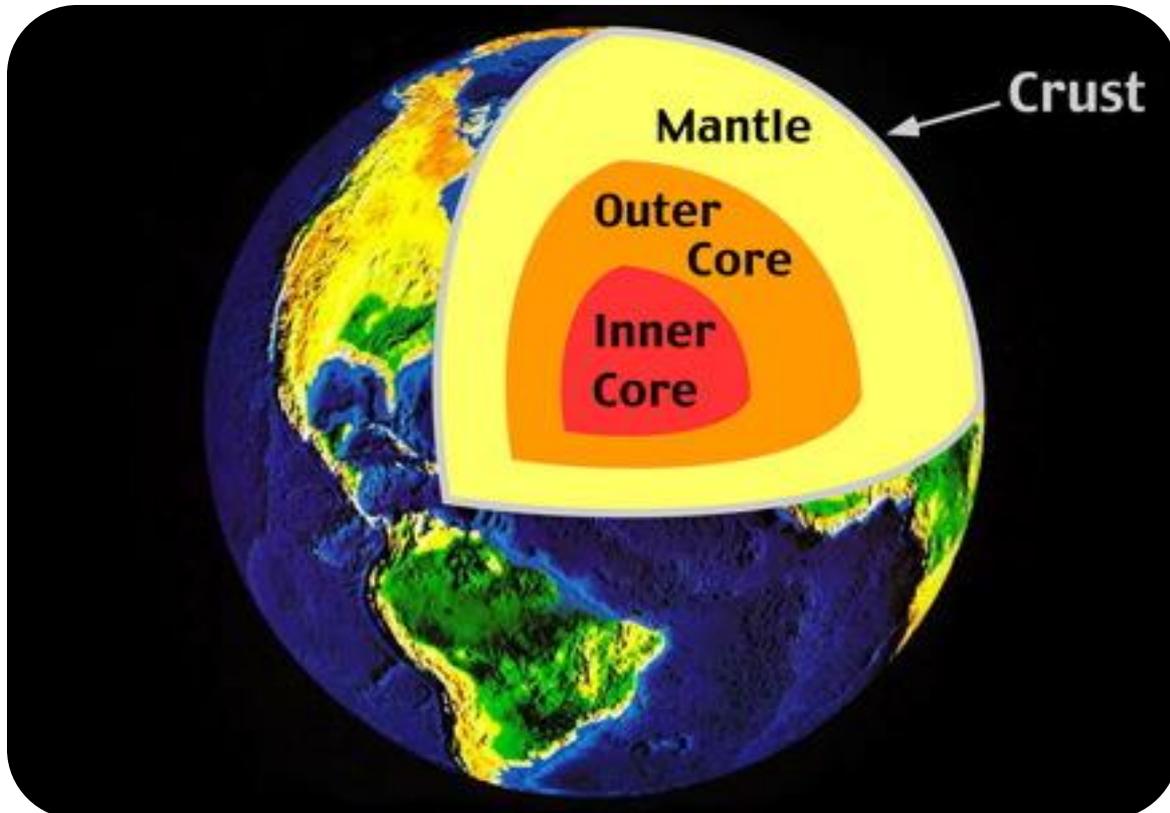
At Giant's Causeway in Northern Ireland, pillars of rock run like stepping stones into the sea. They formed 60 million years ago when lava solidified into a type of rock called basalt.

THIRD ROCK FROM THE SUN

After Earth formed 4.5 billion years ago, it became hot and molten.

The heaviest materials, such as iron, mostly sank to the centre, while lighter materials, such as rock-forming minerals, floated to the top. As a result, Earth

now has a layered structure , like a soft-boiled egg. In the centre is a hot , partly liquit core of iron. Around the core is a deep layer of hot , softish rock (the mantle), and around that is a brittle crust of cold , hardened rock an eggshell.



Inside earth

Planet Earth is a gigantic ball of rock and metal . Most of the metal is in the core , and most of the rock is the outer layers.

What is rock ?

A typical rock is a mixture of solid chemicals called minerals , which are pressed tightly together like jigsaw pieces . If you look closely, you can sometimes see

the separate minerals as grains (small crystals) in a rock . Most rocks are hard and brittle, but some crumble to powder when you rub them .

Malachite-



What is mineral ?

Minerals are naturally occurring solids that are inorganic (not form living things) and usually made of crystals . Ice is a mineral because it fits this definition . So are the tiny , shiny grains in sand, which consist of the minerals quartz. There are thousands of different minerals , including diamond , gold , and salt. Most rocks are made of a limited range , called the rock-forming minerals.

Tourmaline crystals-



What is a crystal ?

A crystal is a solid chemical with a regular, geometrical shape. Crystals typically have smooth, flat faces that meet in sharp edges. They often look shiny or glassy. Their shape comes from the regular arrangement of atoms inside the crystal. In many rocks the crystals are too small to see, but they are there, nevertheless, by the thousand. In rare cases, crystals may grow as large as telegraph poles.

What is fossil ?

A fossil is a relic of a living thing that died thousands, or millions, of years ago. Most fossils are remains of creatures that no longer exist, such as dinosaurs. Hard parts of their bodies, like bones, were buried. Over time, minerals replaced these organic materials, turning them into rock. Some fossils are merely impressions, such as footprints.

Tyrannosaurus skull-

