

Study notes for geography topic - Formation of earth

Hi guys, we all get curious whenever we talk about how earth was formed. So, today we are going about the formation of earth. Let's unfold some interesting facts about it.

The earth formed about 4.6 billion years ago. The earth's structure is divided into different layers namely, crust, mantle, and core. We will discuss some of the important facts about all these layers.

Layers of earth

The Crust: The thinnest layer of the earth is about 40 km average depth. There are two types of Crust. Continental and oceanic Crust. Oceanic Crust can be found Below the continental Crust is generally harder and deeper. E.g. Basalt. Continental Crust contains granite type rocks and sediments. The outer layer of the earth Crust is known as lithosphere.

The continents are composed of lighter silicate, silica + aluminium is called Sial. The oceans have the heavier silicates, silica + magnesium is called Sima.

Mohorovicic discontinuity: It forms the boundary between the Crust and the asthenosphere (upper part of Mantle).

The Mantle: It extends from Moho's discontinuity to the depth of 2,900km. It is composed of silicate rocks that are rich in Iron and Magnesium. It is made up mainly of Iron and some Nickel, so it is called Nife.

Asthenosphere: The upper portion of the mantle is called the Asthenosphere. It lies just below the lithosphere.

The Outer Core: It lies between 2900 km and 5100 km below the earth surface. The outer core is composed of Iron mixed with Nickel. Temperature is about 4400° C.

The Inner Core: It is 5100 km below the earth's surface. The solid inner core is too hot to hold a permanent magnetic field. All the earth's layers are separated by certain boundaries which are as follows.

Discontinuities

Conrad Discontinuity: Transition zone between SIAL and SIMA.

Mohorovicic Discontinuity: Transition zone between the Crust and Mantle.

Repetti Discontinuity: Transition zone between Outer mantle and Inner mantle.

Gutenberg Discontinuity: Transition zone between Mantle and Core.

Lehmann Discontinuity: Transition zone between Outer core and Inner core.

After discussing the formation of earth, we will further discuss the elements and the materials found on earth, their types and their uses. So, stay tuned for more such interesting blogs.