

Layers of the Earth Notes

The Earth is made of 4 basic layers:

1. Crust
2. Mantle
3. Outer core
4. Inner core

The Crust

- The crust is the outermost layer of the Earth.
- The Earth's rocky outer crust solidified billions of years ago, soon after the Earth formed.
- This crust is not a solid shell. It is broken up into huge, thick plates that drift on top of the soft, underlying mantle.
- It is made of oxygen, silicon, aluminum.

Two Types of Crust

- Continental crust is the crust that makes up the continents. It is thicker and older than oceanic crust.
- Oceanic crust is the crust below the oceans. It is thinner and younger than the continental crust.

The Mantle

- The mantle is the layer of Earth between the crust and the core.
- It contains most of the Earth's mass.
- It has more magnesium and less aluminum and silicon than the crust.
- The mantle is denser than the crust.

The Lithosphere

- The uppermost layer of the mantle is rigid. The crust and this uppermost layer form the lithosphere.
- The tectonic plates are pieces of the lithosphere.

The Core

- The core is located below the mantle in the center of the Earth.
- The outer core is liquid and is made of iron, nickel, sulfur, and oxygen.
- The inner core is solid and is made mainly of iron and nickel.

Convection Currents

- Because the core is so hot, a current of heat flows from the core to the crust.
- These currents are called convection currents.
- Convection currents take place in the mantle.
- Convection currents cool down as they come closer to the surface of the Earth.
- The rising of the current stops and it travels in a horizontal direction along the bottom of the crust.
- When the current cools down more, it falls back towards the core.
- There, the temperature increases and the current rises again. This process goes on and on.