

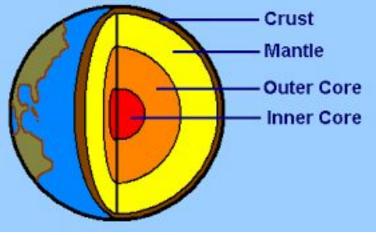
6th Grade Science Key Concepts Earth's Systems, Structures & Processes (6.E.2)

6.E.2.1. The Earth is made up of layers: crust, mantle, outer core, and inner core.

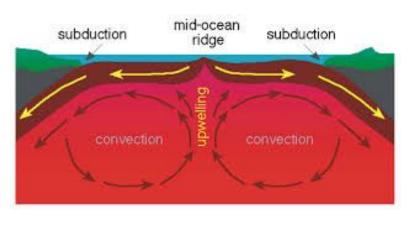
- The surface of the Earth is mostly (71%) covered by water
- The Earth is surrounded by a thin layer of gas called the **atmosphere**
- The Earth is made of rock and is layered
 - The Earth's core is composed mostly of iron. The inner core is solid and the outer core is liquid
 - The Earth's mantle is the thickest layer. It is hot and convective.
 - The Earth's crust is composed of continental plates. Continental plates are made of granite, so they are less dense than oceanic

plates, which are made of dense basalt.

S waves



6.E.2.2 The surface of the earth is made of plates which move. This movement causes earthquakes, mountain formation, volcanoes, and hot spots.



• The Earth's plates move around on very slow large convection currents in the mantle

 Mountains, volcanoes and Earthquakes normally occur at plate boundaries where plates are either colliding (convergent) or pulling apart (divergent)

• Ocean crust is thinner than continental crust and is created at mid-ocean rift zones where convection currents are pushing plates apart creating new crust.

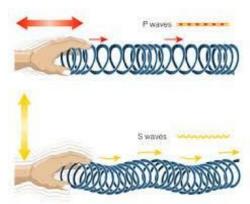
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• Earthquakes create waves that travel through the Earth including P Waves (side to side motion) and S Waves (up and down motion).

6.E.2.3

Parent rock is broken down to form a major component of the soil. Organic material is also an important part of soil.



- **Soil** is mostly made of weathered rock and organic debris.
- The upper layer of the continent is mostly covered with soil.
- Soils differ in their properties including as texture, particle size, pH, fertility and ability to hold moisture.

6.E.2.4

Humans impact the soil and have a role in stewardship of this resource.

- Humans can manage their impact on soil by using techniques like planting vegetative cover, contour plowing, managing land use, and crop rotation
- Soil erosion is a natural process that can be hastened by unplanned or unmanaged land use practices