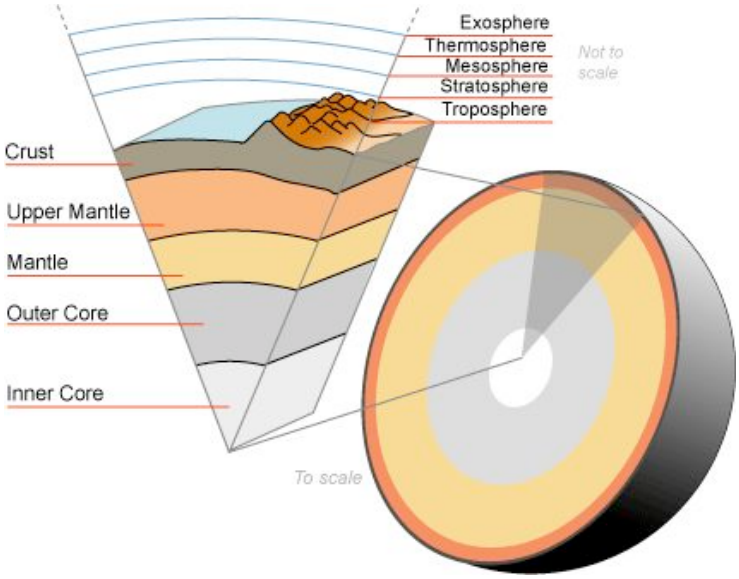
6th Grade Chapter 4 Review

Earth's Layers



Earth's inner core is dense ball of solid metal.

Earth's mantle is a layer of hot rock.

To study Earth's interior, geologists often rely on indirect methods, such as evidence from seismic waves.

Pressure increases from Earth's surface toward the center of Earth.

The outermost layer of Earth is called the crust. The layer below the crust is the mantle, then the lithosphere, next the aesthenosphere, after that the outer core and last the inner core.

Oceanic crust near the mid-ocean ridge is younger than oceanic crust farther away from the ridge.

Plate Tectonics

According to Wegener's hypothesis of continental drift, earth's surface is made up of fifteen major landmasses and the continents were once joined together in a single landmass.

Pangaea is the name of the supercontinent that existed millions of years ago.

Most geologists rejected Alfred Wegener's idea of continental drift because Wegener could not identify a force that could move the continents.

Along the Mid-Atlantic ridge, the North American plate and the Eurasian plate are moving apart at a very slow rate.

Any trace of an ancient organism that has been preserved in rock is called a fossil.

Scientists used sonar technology in the mid-1900s to map the mid-ocean ridge.

In sea-floor spreading, molten material rises from the mantle and erupts along mid-ocean ridges.

Mid-ocean ridges are found in all of Earth's oceans.

Old oceanic crust is more dense than new oceanic crust because it is cool.

The geological theory that states that pieces of Earth's lithosphere are in constant, slow motion is the theory of plate tectonics.

A place where two plates slip past each other, moving in opposite directions, is known as a sliding boundary or transform boundary.

A rift valley forms at a spreading plate or divergent boundary.

A collision between two pieces of continental crust at a colliding boundary produces a mountain range.

If subduction occurs faster than oceanic crust can be created, an ocean will shrink.

Alfred Wegener provided evidence from landforms, fossils, and climate in support of his theory of the continental drift.

Boundaries

Holes drilled several kilometers into Earth's crust provide direct evidence about Earth's interior in the form of rock samples.

Geologists obtain indirect evidence about Earth's interior by recording and studying seismic waves.

Heat Transfer

When you touch a hot pot or pan, energy moves from the pot to your hand. This is called heat transfer.

The transfer of energy through empty space is called radiation.

When the heat source is removed from a fluid, convection currents in the fluid will eventually stop.

Scientists think that convection currents flow in Earth's mantle.

The transfer of heat by the movement of heated fluid is called convection.

Mantle material rises in convection currents because heated materials become less dense.