

The Earth's Interior

1/13/16

4 layers:

Crust
mantle
outer core
inner core

Inner core:

most dense layer = 8 g/cm^3

800 miles thick

hottest layer 9000°F

composition - Solid Iron

pressure is 45 million pounds per square inch.
- 3 million times the air pressure at sea level.

Outer core:

Thickness: 2100-2500 km (1400 miles)

Temp: $4000^\circ - 9000^\circ \text{F}$

Composition: Liquid Nickel & Iron

Creates the earth's magnetic field.

Mantle:

Thickness: 2800-3200 km (1800 miles)

Temp: $1600^\circ - 4000^\circ \text{F}$ / $870 - 2200^\circ \text{C}$

Composition: Iron, magnesium, Aluminum, Silicon,
& oxygen silicate compounds.

- These make up rock called Olivine.

Crust:

Continental crust

- 25 miles
- mostly granite

Oceanic crust

3-8 km (3-5 miles)

- mostly basalt
- average density is about 3 g/cm^3

The crust is made of calcium & sodium
aluminum-silicate compounds.