

Class Notes: Earth's Interior

Key Terms:

Lithosphere

Asthenosphere

MOHO

EARTH'S INTERIOR

Seismic waves are used to study the interior of the Earth

They show several layers or zones inside Earth
(Similar to X-rays)

The deepest drill hole on Earth is only 12-16 km
Less than 0.2 % of the distance to the core

Layers of the Earth

(See ESRT page 10)

1. Crust

Outer solid layer of Earth, made of mostly of rocks and minerals
Includes soil and eroded rock

Two types of crust:

<u>Oceanic</u>	<u>Continental</u>
Basalt	Granite
more dense	less dense
(3.0 g/cm ³)	(2.7 g/cm ³)
thinner	thicker
darker (Mafic)	lighter (Felsic)

The crust and the uppermost mantle are called the lithosphere

2. Mantle

Middle layer, solid, plastic like (silly putty)
Thickest zone (80 % of Earth's volume)

Moho - boundary between crust & mantle

Asthenosphere - Outer portion of mantle

Liquid rock/Plastic like

Temperature and Melting point are equal, which indicates partial melting

Convection cells in the asthenosphere cause the lithosphere to move around

3. Core

Composed mostly of Iron & Nickel
Most dense layers & Hottest

Outer core is liquid (9.9 - 12.1 g/cm³)

Inner core is solid (12.7 - 13.0 g/cm³)