

- 2) Transport Conservation (public transportation)
- 3) Building Efficiency (heating/cooling)
- 4) Efficiency in Electricity Production (switch to renewable resources)
- Even if GHG concentrations remained at current levels (ie, emissions cut to zero), warming would NOT reverse
- Concept referred to as committed warming, requires adaptation in agriculture, water management, coastal management, industry, public health

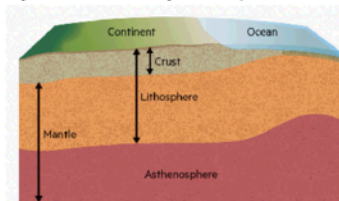
Land:

How Do Mountains Rise & Animals Find Their Way Home?

- How Do We Know Earth's Internal Structure?
 - Direct Evidence:
 - What volcanoes bring up from inside Earth
 - Drilled boreholes and mines
 - "Project Mohole," drilled 600 feet into ocean floor
 - "Kola Superdeep Borehole," drilled 10,000 feet deeper than Mt. Everest rises above sea level
 - One-third of way through Earth's thin outermost layer
 - Indirect Evidence:
 - Infer interior composition from calculations of Earth's density
 - Use energy from earthquakes to construct images of Earth's interior

Earth's Internal Structure:

- Core: iron and nickel metals, solid inner core surrounded by liquid outer core
 - As Earth rotates, liquid outer core generates a magnetic field
 - Aids migration of many animals
 - Establishes magnetosphere: area of space around Earth that shields planet from highly charged particles emitted from Sun
- Mantle: section around Earth's core
 - 84% of Earth's volume
 - Source of volcanic magma
- Crust: Overlays mantle, less dense + more brittle outermost layer, creates the solid surface on which we live
 - Continental vs. Oceanic crust
 - Based on density and chemistry, Oceanic crust is denser
- Earth's layers described by which portions break or bend versus flow



- Lithosphere: rigid outer portion of Earth that extends down to roughly 60–90 miles (100–150 km) – **consists of crust and very top of mantle**