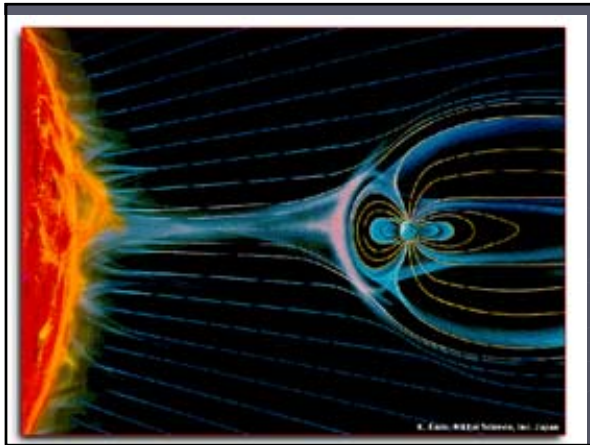


Introduction to Earth Science

Chapter 1

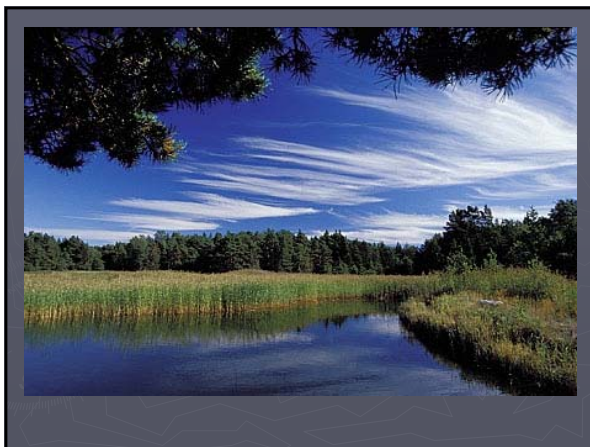
Earth Systems - Branches of Earth Science

- ▶ Can you guess the branches of earth science?
- ▶ Look at each picture. What branch does it represent?



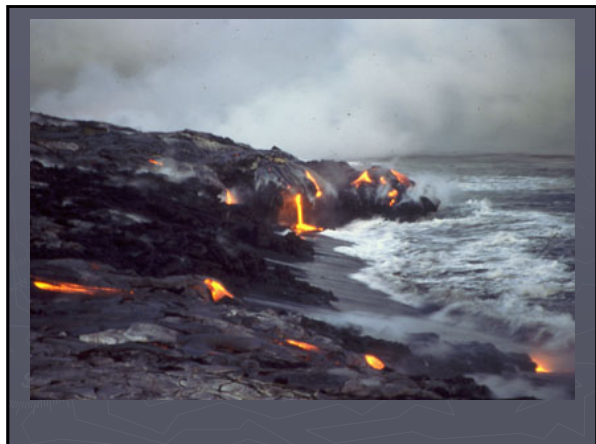
Earth Systems - Branches of Earth Science

- ▶ 1. Astronomy
 - Study of objects beyond earth's atmosphere



Earth Systems - Branches of Earth Science

- ▶ 2. Meteorology
 - Study of the air around the planet
 - Weather
 - Climate



Earth Systems - Branches of Earth Science

- ▶ 3. Geology
 - Study of materials and processes that make up earth
 - Paleontology
 - Seismology
 - Geomorphology
 - Petrology
 - Mineralogy



Earth Systems - Branches of Earth Science

- ▶ Oceanography
 - Study of earth's oceans
 - Physical characteristics
 - ▶ Ocean floor, currents, tides
 - Biological Characteristics
 - ▶ Organisms
 - ▶ Life zones

Earth Systems - Branches of Earth Science

- ▶ Lets review...
- ▶ 1. Astronomy
- ▶ 2. Meteorology
- ▶ 3. Geology
- ▶ 4. Oceanography

Earth's Systems

- ▶ Lithosphere - rock portion of earth
 - Rigid outer shell
 - ▶ Continental crust
 - ▶ Oceanic crust
 - ▶ Upper mantle
- ▶ Asthenosphere
 - Plastic-like – able to flow
 - ▶ Mid to lower mantle
- ▶ Learn More about [Earth's Structure](#)

Earth Systems

- ▶ Hydrosphere – water portion of earth
 - 97% salt water
 - 3% fresh water
 - ▶ 2% of this is locked into polar ice
 - ▶ 1% of earth's fresh water is available to everyone and everything
 - Lakes, rivers, streams, oceans, groundwater
 - Learn more about the [Hydrosphere](#)

Earth Systems

- ▶ Atmosphere – gases surrounding earth
 - Regulates temperature
 - Protects us from harmful radiation
 - Provides oxygen for respiration of all living things
- ▶ What's in air?
 - 78% Nitrogen
 - 21% Oxygen
 - 1% all other gases

Earth Systems

- ▶ Biosphere – all of the organisms of earth and the environments in which they live
 - Existing on surface to deepest oceans

Earth Systems

Draw a concept map that indicates interactions between each earth system.

For example:

Animals(biosphere) -----breathing-----> air(atmosphere)