

## **Chapter 2 Earth Materials**

- Definition of minerals and rocks
- Three groups of rocks, the subcategories, and descriptions of the rock types
- Layers of the Earth, their order, basic description of

## **Chapter 3**

### **Plate tectonics**

- Early attempts to explain processes on Earth
- Evidence for continental drift and what was needed to turn theory into plate tectonics
- Magnetic reversals, polar wandering, sea floor spreading
- Theory of plate tectonics
- Types of convergent plate boundaries: review all three, cartoons, rocks that form there, how to recognize ancient plate margins of all types

## **Chapter 4 Dating the Earth**

- Neptunism, catastrophism, uniformitarianism, modern uniformitarianism. Definitions of, problems with.
- Early attempts to date the Earth and their problems (Ussher, cooling iron, sedimentation rates, salinity, Kelvin's calculations,
- Principle of superposition, original horizontality, cross-cutting relations, inclusions
- Definition of isotope, half-life, radioactive decay
- Effect of metamorphism on dating rocks
- How to calculate age of rock with data given

## **Chapter 5**

- Definition of stratified rocks, bedding planes
- Definitions of 3 unconformity types
- Where, relative to sea level, conglomerate, sandstone, shale and limestone are deposited.
- Definition of transgression and regression and how to recognize in rock column
- Two kinds of fossils (body and trace)
- Fossil succession
- Supergroup, group, formation, member, bed
- Lithostratigraphic units: Member/Formation/group/Supergroup
- Biostratigraphic units
- Time units (eon, era, period)
- Correlation by:
  - Fossils (Biostratigraphic correlation)
  - Rock type (lithostratigraphic correlation)
  - Age

Don't be surprised to see a cartoon with questions on the principles of relative dating and unconformities.