PHYS 122: Life in the Universe
Class Session 5, January 20, 2011

LEARNING OBJECTIVES

1) List the three aspects of Earth's Geology that stand out as being especially important to life on Earth, and explain why they are each important.

2) List the name of the three basic rock types (or classes), and describe how they are physically formed. Expand by explaining which type is likely to hold fossils and why.

3) Describe how the half-life of a radioactive material is measured. Explain two assumptions about the rock being measured that go into deriving its radiometric ages.

Required Textbook readings for class: concentrate on 100-105, but also 106-112 (4.1 & 4.2)

1. Why is volcanism important to life on Earth? What did it lead to?
2. Why is Plate Tectonics important to life on Earth?
3. What has our Earth's Magnetic field done for the Earth's atmosphere?
4. Rocks can be made from any mineral or elements, so what makes igneous, metamorphic & sedimentary different from each other?
5. How do rocks preserve information about the past? (see fig 4.4-4.6)
6. What does it mean for something to be radioactive?
7. If a material's half-life is 10 years, what will be left after 20 years? Explain your answer.
8. Why won't fossils be found in igneous rocks?