Geology 101

Name:

Homework assignment 1
Due in class on by e-mail Monday, October 5, 5 p.m.

Though homework assignments can and should be discussed in a study group, the answers you submit must be in your own words.

1. List a few reasons humans study geology.

2. Describe briefly the principle of uniformitarianism. Does the principle apply today?

3. How does the crust/mantle classification of the Earth differ from the lithosphere/asthenosphere classification?
4. Describe the process of convection, and give an example of where it occurs on or in Earth.

5. Figure 2.18 in the text shows the Geologic Time Scale (actually, all geology textbooks will show this scale). What do the different colored bands on the timescale represent? Hint: you may have to look at a geologic time scale from a different source.

6. What is “Mesosaurus” and how is it significant to the theory of continental drift?
7. What evidence did geologists discover to support the hypothesis of seafloor spreading?

8. Take a look at the New Yorker magazine article titled “The Really Big One” by Kathryn Schulz (July 20, 2015 issue – the article may be read at http://www.newyorker.com/magazine/2015/07/20/the-really-big-one). According to the textbook (page 59), which type of plate boundary is the Cascadia subduction zone? What are the names of the plates involved at this boundary? Which one are we on?

9. Answer the textbook’s question: “What forces drive plate movements?”