**Earth Science and Soil Review**

*Use your reading packet, earth science notes, soil notes, and review packet to answer the following review questions. Most answers can be found in the reading and the notes. The ones only found in the notes are indicated. The ones that say “Outside source” are not completely answered by the notes or reading so you may need to look those up at home. The ones that start with “Describe” will most likely be longer answers. This is a reading guide, note review, and study guide for the test. Work on the questions during class Monday and Tuesday. Anything left after that is homework, due on Wednesday. USE SEPARATE SHEETS OF PAPER! THERE IS NOT ENOUGH ROOM ON HERE TO ANSWER.*

**Earth’s Formation and Structure**

1. Describe how the earth became layered.
2. Describe the layers of the earth.

**Geologic Time Scale** (Also use your geologic time handout)

1. How do scientists know what events occurred in Earth’s past?
2. When did reptiles appear on Earth? Human evolve? Land plants appear? (Give era and period for each.)

**The Lithosphere and Plate Tectonics**

1. What is the lithosphere? What is the theory of plate tectonics?
2. What is subduction?
3. Describe the three types of plate boundaries.

**Volcanoes**

1. How are volcanoes formed? Where are most volcanoes found?
2. Describe the four types of volcanoes.

**Earthquakes**

1. What causes earthquakes? Where do most occur?
2. How is the magnitude of earthquakes measured?
3. Where did the largest earthquake of the 20th century occur? (Outside source)

**Rocks and the Rock Cycle**

1. Describe how each type of rocks is formed.
2. What external processes are important to the rock cycle? Describe each.

**Soil Formation**

1. What are the principal components of soil?
2. Summarize the formation of soil. (Probably in about three steps.)
3. What factors affect soil formation?
4. How do humans affect soil?

**Soil Profile**

1. Describe the horizons of soil.
2. How do grassland (prairie), desert, and rainforest soil profiles differ in terms of composition and productivity?

**Soil Characteristics**

1. Describe the three main types of rock grains that make up soil.
2. Why is the texture of soil important?
3. What type of soil would form into a ball when moist, but not make a ribbon?
4. Describe porosity and explain how it relates to leaching and illuviation. (Notes)
5. What important organisms can be found in soil? (Notes)

**Soil Fertility and pH**

1. Plants get 3 of their essential nutrients from the air. Where do the other 13 come from?
2. Which nutrients are limiting factors for plant growth? Explain.
3. Briefly describe the pH scale.
4. Describe why soil pH is important.
5. What do the numbers assigned to fertilizers represent? (Example: 8-0-24 fertilizer) (Outside source)

**Soil Degradation**

1. What is soil degradation? What are the causes?
2. What role do humans play in soil degradation?
3. What is soil salinization? What effect does it have on plants? (Notes)
4. Describe the types of soil erosion.

**Soil Conservation**

1. Describe the methods of soil conservation.
2. Describe bioremediation.

**Other**

1. Describe the components, process, and product of composting. (Outside source)
2. Review: mitigation, remediation, sustainability, conservation, and preservation (Outside source)
3. Review: any law that relates to soil (Outside source)