**Earth Science Midterm Exam Study Guide**

**This is a list of topics that are on the exam.**

**Intro**:

Branches of Earth Science - know what each branch studies (meteorology, oceanography, astronomy, geology)

Spheres of the Earth- know what each contains- hydrosphere, geosphere, biosphere, atmosphere

The Scientific Method- variables, constant, control, hypothesis, theory

**Astronomy**:

Nebular Hypothesis, Big Bang Theory

Electromagnetic Spectrum

Kepler’s Laws, Hubble’s Law, Red Shift

Earth, Sun, & Moon motions; Seasons

Objects in the universe

**Maps**:

Maps- Latitude & longitude, topographic maps, using scales to determine distance, contour lines

**Plate Tectonics**:

Layers of the Earth- crust, mantle, core, lithosphere, asthenosphere

Plate Tectonics- what is it? What is the evidence? How does it work (what’s the mechanism)?

Plate boundaries & landforms associated with boundaries, mechanisms such as convection & slab-pull

Earthquakes- p & s waves, faults, epicenter v focus, travel-time graph to tell the distance from an earthquake.

Energy for Earth’s system – what are the 2 sources? What is each responsible for creating?

**Soil**:

Parts of the water cycle- precipitation, evaporation, transpiration, infiltration

Rocks- what they are and how they form, specifically the 3 types.

Weathering (chemical & mechanical) and erosion- how do these play a role in soil formation?

What are factors that influence soil formation?

Be able to use a soil texture diagram

Beach erosion and protective structures (groin, seawall, breakwater)