**Earth Science - 3rd Hour Exam Review – Concept List**

* Half-lives describe the time it takes for ½ of a sample to decay.
	+ Examples of radioisotopes: Carbon 14, Uranium, etc.
	+ Isotopes all have different half-lives
* Soil horizons are layers we see in the soil that have different characteristics
	+ A – horizon 🡪 dark rich organic matter
	+ B – horizon 🡪 lighter but has some nutrients leached from the A-horizon
	+ C – horizon 🡪 broken bits of the parent material
* Geological Time Scale is based on the life found in the different rock layers.
	+ Eons / Eras / Periods / Epochs
		- Eons – Precambrian Time [Hadean / Archean / Proterozoic] / Phanerozoic
	+ Dinosaurs were the life found in Mesozoic rock
	+ We are in the Cenozoic
* Relative ages of rock tells us when rocks formed in relation to each other.
	+ Six Laws help us determine the relative ages of rock
		- Cross-cutting / Inclusions / Unconformities
			* Unconformities - represents gaps in geological time
				+ Angular Unconformities – tilted rock layers are truncated and lateral layers on top
				+ Disconformities – between sedimentary rock layers
				+ Nonconformities - between metamorphic and igneous rocks
* Seafloor spreading is evidence for plate tectonics.
	+ Iceland is located on the MAR which is a place where we observe SFS on land.
	+ Convection currents is the mechanism that causes SFS.
		- Radioactivity from Earth’s core drives these convection currents.
* Different types of plate boundaries are found along tectonic plates
	+ Divergent – caused by tension force, we see volcanic activity, ridges, minor earthquakes
	+ Convergent – caused by compressional forces, we see large mountains, volcanoes, Major Earthquakes
		- Subduction zones (the denser plate goes under the other plate) are found at these boundaries
	+ Transform – caused by shear forces, we see major earthquakes.
* Wind is created as a result of uneven heating of the Earth’s surfaces. This creates differences in pressure. Wind blows from high to low pressure.
* Atmosphere describes the protective layers of gas that surrounds the Earth. Temperature fluctuates as you increase in altitude in the atmosphere.
	+ Troposphere = temp decreases with height, Stratosphere = increase, Mesosphere = decreases, Thermosphere = increase.
* Weather is the state of the atmosphere over a short period of time. The troposphere contains air masses (cP, cT, mT, mP) that move and create our weather. The edge of these masses are called fronts.
	+ Cold – can bring severe weather, like T-storms, we would see cumulus clouds and cumulonimbus clouds
	+ Warm - bring mild to moderate rain, stratus clouds
	+ Occluded – when a cold front chases a warm front. Storms at first followed by steady rain.
	+ Stationary – when neither front advances, you get lasting rain and drizzle for days.