Earthquakes Guided Notes

Week 2 Day 2

**Earthquake Vocabulary**

**1. Earthquake-** An earthquake is shaking, rolling or sudden shock of the earth’s surface resulting from underground movement between two plates.

**2. After-shocks:** small tremors that occur after a large earthquake. They can happen for days, weeks, months, or even years after an earthquake.

**3. Epicenter:** the place on the crust directly above the focus of the earthquake.

**4. Focus:** the place an earthquake begins inside the Earth.

**5. Liquefaction:** when the shaking from an earthquake causes, usually sandy, ground to behave more like a liquid, causing houses or other objects on it to sink.

6. **Magnitude:** the measurement of the size of the earthquake.

7. **Modified Mercalli Intensity Scale:** a measurement scale for earthquakes based on people’s observations of how the earthquake felt

**8. P waves:** the primary (first) waves from an earthquake

**9. Richter scale:** a measurement scale for earthquakes based on the size of the waves it produces.

**10. S waves:** the secondary waves from an earthquake

**11. Seismic wave: aka shock wave, an invisible wave that travels through rock during an earthquake, moving it**

**12. Seismologist:** a person who studies earthquakes

**13.Seismograph:** an instrument that produces a record of the strength of an earthquake

**14.Surface waves:** waves that move on the surface of the Earth during an earthquake

**15. Tremor:** a small earthquake

**What is an Earthquake?**

* Earthquakes are the shaking, rolling or sudden shock of the earth’s surface. They are the Earth's natural means of releasing stress and create seismic waves.
* The seismic activity of an area refers to the frequency-type and size of earthquakes experienced over a period of time.
* **There are about 20 plates along the surface of the earth that move continuously and slowly past each other. When the plates squeeze or stretch, huge rocks form at their edges and the rocks shift with great force, causing an earthquake.**
* Example: Imagine holding a pencil horizontally. If you were to apply a force to both ends of the pencil by pushing down on them, you would see the pencil bend. After enough force was applied, the pencil would break in the middle, releasing the stress you have put on it.
* **The Earth's crust acts in the same way. As the plates move they put forces on themselves and each other. When the force is large enough, the crust is forced to break. When the break occurs, the stress is released as energy which moves through the Earth in the form of waves, which we feel and call an earthquake**.

**Parts of an Earthquake**

1. **FOCUS-** where an earthquake BEGINS
2. **EPICENTER-** the place on the crust directly above the focus of the earthquake.

**What are plate tectonics?**

* The Earth’s crust is divided into 12 major plates which are moved in various directions.
* This plate motion causes them to collide, pull apart, or scrape against each other.
* Each type of interaction causes a characteristic set of Earth structures or “tectonic” features.
* The word, tectonic, refers to the deformation of the crust as a consequence of plate interaction.