Name: _____

Date: _____ Period: _____

Review: Earthquakes

Directions: Carefully read over the checklist of items that you need to know for the "Earthquakes" test. Be sure to attend extra help if you have any questions.

EARTH'S INTERIOR

- ☐ Terms to Know: lithosphere, Moho, asthenosphere, mantle, outer core, inner core
- ☐ Earth Science Reference Tables: Inferred Properties of Earth's Interior
- ☐ Earth's interior is known through the study of seismic waves
- ☐ Continental Crust - granitic, thicker and has a density of 2.7 g/cm^3
- ☐ Oceanic Crust - basaltic, thinner and has a density of 3.0 g/cm^3
- ☐ Asthenosphere is where convection current take place due to density differences
- ☐ Outer Core is liquid… seriously!
- ☐ Inner Core is solid and made up of iron [Fe] and Nickel [Ni]

EARTHQUAKES

- ☐ Terms to Know: earthquake, fault, epicenter, focus, seismograph
- ☐ P-wave - compressional wave, fastest wave and travel through solids, liquids and gases
- ☐ S-wave - shear wave, slower wave and travel through solids only
- ☐ Shadow Zone - area in which seismic waves are not detected due to the liquid outer core

LOCATING EPICENTERS

- ☐ Mercalli Scale - qualitative intensity scale based on an earthquakes effects to an area
- ☐ Richter Scale - quantitative measurement of energy released during an earthquake [logarithmic]
- ☐ Three [3] seismic stations are needed to locate an earthquakes epicenter
- ☐ Earth Science Reference Tables: Earthquake P-Wave and S-Wave Travel Time
- ☐ Know the steps to locate an epicenter:
    1. Find the arrival time difference between the p-wave and s-wave
    2. Use scrap paper to mark the time difference [ESRT]
    3. Slide the scrap paper until it fits perfectly between the S-wave & P-wave lines
    4. Look straight down for the "Epicenter Distance"
    5. Draw a circle from the seismograph station for the distance [safety compass]
    6. Repeat steps 1-5 for two additional seismograms
    7. Find the intersecting point and mark it with an "X"

EARTHQUAKES AND HAZARDS

- ☐ In an earthquake → drop and take cover
- ☐ Tsunami - long high sea wave caused by an underwater earthquake
- ☐ In a tsunami → run to higher ground