Date: _____

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
- $\hfill\square$ Earth's interior is known through the study of seismic waves
- □ Continental Crust granitic, thicker and has a density of 2.7 g/cm³
- □ Oceanic Crust basaltic, thinner and has a density of 3.0 g/cm³
- \square 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
- $\hfill\square$ 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
- \Box 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

- \Box In an earthquake \rightarrow drop and take cover
- □ Tsunami long high sea wave caused by an underwater earthquake
- \Box In a tsunami \rightarrow run to higher ground