*Earthquakes and more….Internet Scavenger Hunt!*

Read the questions below, click on the given links, and answer the questions in your notebook.   
\*\*\*Please write the question AND the answer\*\*\*

**Part One:**  
 Answer the following questions about earthquakes using the information on the link below.

Some [Random Earthquake facts!](http://earthquake.usgs.gov/learning/facts.php)

1. What was the magnitude of the strongest earthquake ever in the U.S.?

- Where was it?

2. What is the most earthquake-prone state in the U.S.

- How often do they have a magnitude 7 and magnitude 8 earthquake?

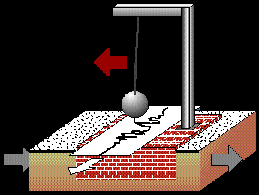
3. Which 2 states have the least number of earthquakes every year?

4. Explain what the [scale](http://www.geo.mtu.edu/UPSeis/magnitude.html) is that help us measure the magnitude of an earthquake:

5. What, when, and where was the largest earthquake recorded in [Minnesota](http://www.mrs.umn.edu/earthquakes/epicenters2.html) over the past 50 years?

**Part Two:**

The difference in P & S waves:

Whenever the plates shift, different types of waves, called “Seismic waves”, travel through the ground much in the same way as throwing a rock into a pond sends waves out in all directions. An earthquake sends out two main types of waves Primary (**P**) waves and Secondary (**S**) waves.

The **P & S** waves are recorded on a machine called a Seismograph and this is called the “Fingerprint of an Earthquake”

1. How do you understand what all the squiggly lines on a [seismogram](http://www.geo.mtu.edu/UPSeis/reading.html) mean?  
   
2. First watch this [quick animation](http://www.classzone.com/books/earth_science/terc/content/visualizations/es1002/es1002page01.cfm?chapter_no=visualization)-  
 What is the [difference](http://sunshine.chpc.utah.edu/labs/seismic/index.htm?ASPIRE_Session=c22ba996abd21f5c930f09a7c174a736) between P & S waves?  
 Take the virtual quiz to see how well you know your seismic waves

3. Sometimes an Earthquake that occurs under the along plate boundaries under the ocean creates a Tsunami.   
 - What is a [Tsunami](http://www.fema.gov/kids/tsunami.htm)?

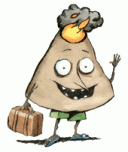
-Do a little research. How many people dies as a result of the earthquake-triggered tsunami that occurred on Dec 26th, 2004 ?

**Part Three:**

*Simulations!*

1. Go to the “[Bridge to Classroom](http://www.eduweb.com/portfolio/bridgetoclassroom/engineeringfor.html)” site and run some tests.   
   - What bridge design was best able to withstand a large earthquake without safety measures?   
     
   - What safety measures did you find worked best?
2. Go to the [Channel 1 News](http://www.channelone.com/news/specials/disaster/swf_quake/) site and try to guess the magnitude of various earthquakes.  
   - Which area has stronger earthquakes- Japan or California?  
     
   - How big was the earthquake in Indonesia in 2004?
3. Go to the “[Volcano Explorer](http://dsc.discovery.com/convergence/pompeii/interactive/interactive.html)” and enter…  
    - Click on “Build your own volcano and watch it erupt”
   1. What is ‘viscosity’?
   2. What combination of gas and viscosity produce a Shield Volcano?
   3. What combination of gas and viscosity produce a Cinder Cone Volcano?
   4. What combination of gas and viscosity produce a ‘Composite’ or ‘Stratovolcano’?

**Part Four:**

[](http://www.mrjopp.com/uploads/5/2/5/3/5253521/volcano_types.ppt) *Volcanoes simplified!*   
1. Click on the happy volcano on the right 🡪   
 Here you will find a powerpoint outlining the three main types of volcanoes.   
 Your job:

1. Write down the names of the three volcano types,
2. Descriptions of what they look like, and
3. What type of magma you find in each.

2. Go to [VolcanoWorld](http://volcano.oregonstate.edu/oldroot/kids/index.html) to look at some pictures of volcanoes.   
 Look through some of the photos and write down the names of your 3 favorite volcanoes.

**Part Five:**

\*\*\*Stop the Disasters!\*\*\*  
 **First**…Take this ‘[Earthquake Survival Quiz](http://www.survival-quiz.com/?page_id=706)’ and write down your final point total.

**Next**…Go to “[Stop Disasters](http://www.stopdisastersgame.org/en/playgame.html)” and launch the game.  
 Try your hand at saving the townspeople during various types of disasters.