*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:**

 *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.