Earthquake WebQuest

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**EQ Myths: Common myths about Earthquakes—What’s the REAL truth?**

<http://www.usgs.gov/faq/taxonomy/term/9830>

1. Pick two of the myths listed on the USGS Earthquake Myths page linked above. Which two did you choose?

2. Why did you choose these two?

3. What are the correct answers to the two myths from #1?

**Measuring Earthquakes: How are earthquakes measured and recorded?**

1. Use the USGS Glossary (**http://earthquake.usgs.gov/learn/glossary/**) to define the following terms:

a. Seismograph:

b. Seismogram:

c. Epicenter:

d. Hypocenter (focus):

2. Go the Measuring Earthquakes page (**http://www.usgs.gov/faq/taxonomy/term/9828**). Find the answers to the following questions.

a. Briefly describe how earthquakes are recorded.

b. What is the difference between **intensity** and **magnitude**?

c. **List** the earthquake magnitude classes. How large must an earthquake be to be considered “great”?

d. What was the first instrument to ever record an earthquake? How did it work?

e. Look under the “How much energy is released by an earthquake?” link. What is the atomic bomb equivalent of energy released during a **7.0 quake**? An **8.0 quake**? A **9.0 quake**?

**Earthquake History: On this day in Earthquake History….**

[**http://earthquake.usgs.gov/learn/today/**](http://earthquake.usgs.gov/learn/today/)

1. Look up today’s date. What happened on this day in Earthquake History?

2. Look up your birthday. Summarize what happened in Earthquake History on your birthday (even if it wasn’t the same year).

**Preparing for Earthquakes: When an earthquake strikes, do YOU know what to do?**

[**http://www.usgs.gov/faq/taxonomy/term/9834**](http://www.usgs.gov/faq/taxonomy/term/9834)

1. Go the link above. Briefly list:

a. Three things you should do during an earthquake.

b. Three things you should NOT do during an earthquake.

c. Three things you can do to plan ahead and prepare for an earthquake.

2. Should you always run to a doorway during an earthquake? Why or why not?

3. [**http://www.fema.gov/areyouready/earthquakes.shtm**](http://www.fema.gov/areyouready/earthquakes.shtm)

Are you prepared? Use the article to answer the following questions:

1. What is earthquake magnitude?
2. If an earthquake measures a 4.0 how much more powerful is this earthquake than one that measured 2.0? *(use the example listed with the definition to help you calculate the answer)*

* Answer = \_\_\_\_\_\_ times more powerful

Write down two protective measures (from the many listed here) that you feel are the most important for you to take care of in the following situations:

Before an earthquake I…



During an earthquake I...



After an earthquake I…

**Earthquake Trivia: Did you know…??**

[**http://earthquake.usgs.gov/learn/facts.php**](http://earthquake.usgs.gov/learn/facts.php)

Go to the link above and search out the answers to the following trivia questions.

1. What is the largest recorded earthquake in the world?

2. What is the largest recorded earthquake in the United States?

3. How many detectable earthquakes happen each year? How many actually cause damage?

4. How many earthquakes does southern California have each year?

5. What fault is responsible for creating earthquakes in the central U.S.? Explain why these earthquakes seem much larger in the Midwest compared to those in the West.

6. Which two states have the least number of earthquakes? Which state has the most earthquakes?

7. Can we hear earthquakes? Why or why not?

**California Earthquakes: Shake, rattle, and roll!**

1. Go to **http://earthquake.usgs.gov/earthquakes/states/california/seismicity.php** (California Seismicity Map).

a. What area(s) seem to have the most earthquakes? WHY is this?

b. Which area(s) do not have very many earthquakes?

1. Go to **http://www.usgs.gov/faq/taxonomy/term/9827**.
2. Use this information to explain WHY the location in 1b does not have very many earthquakes.

**North Carolina Earthquakes: Shake, rattle, and roll!**

1. Go to **http://earthquake.usgs.gov/earthquakes/states/north\_carolina/seismicity.php** (California Seismicity Map).

a. What area(s) seem to have the most earthquakes? WHY is this?

b. Which area(s) do not have very many earthquakes?

1. Go to **http://www.usgs.gov/faq/taxonomy/term/9827**
2. Use this information to explain WHY the location in 1b does not have very many earthquakes.