Name _____


# Lab 7: Seismic Hazards

**Your Mission:** Use the computer program Seismic Eruption to investigate global seismic hazards

**Your Task:**

1. Login to a computer in the computer lab and double click on the icon called **Seismic Eruption** on your desktop. After the program opens, click on the **Start** button, then click on the **Go** button.

2. Choose a region from the world map that interests you. You will be using this region to familiarize yourself with the Seismic Eruption program. Click on the region. Next click on a subset selection if available.

   **Name of the region/subset you chose** _____

3. Now practice using the Seismic Eruption program. You will need to familiarize yourself with special features in order to answer the questions on the following pages. Check off the following boxes after you have practiced using the following features:

| | |
|---|---|
| **Play/Pause/Rewind/F. Forward** | ☐ |
| **Information** | ☐ |
| **Step** | ☐ |
| **EQ cutoff** | ☐ |
| **Control→ Map View/3-D/Cross-Section** | ☐ |
| **Control→ Interactive (3D)** | ☐ |
| **Control → Set up Cross-Section View…** | ☐ |

**Practice Question #1: Briefly describe (3 sentences) the region that you are viewing (use the Information button).**

_____
_

_____
_

_____
_

_____
_

**Practice Question #2: Start date of the data set you viewed** _____

**Stop date of the data set you viewed** _____

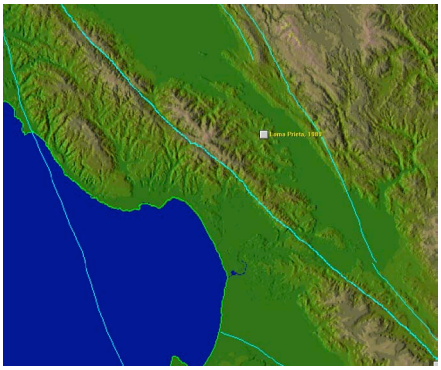
**Practice Question #3: Number of earthquakes that occurred during the above time range.**

_____

**Practice Question #4: Number of volcanoes that occurred during the above time range.**

_____

Now click the **Back** button a few times until you arrive at the original world map selection screen. Use the following scenarios to answer the questions.



## Scenario #1 Loma Prieta Earthquake

Hint: North America group, California group

Hint: View all 3 groups of data

**Q1. What was the magnitude of the Loma Prieta Earthquake?** _____

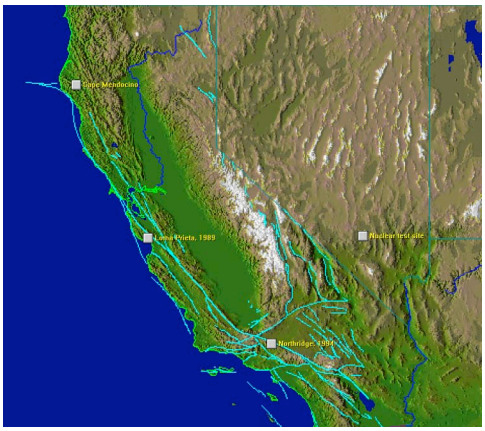
**Q2. What time did the main shock hit?** _____

**Q3. How many aftershocks were there?** _____

**Q4. How long did the aftershocks last?** _____

**Q5. What was special about the main shock compared to the aftershocks?**

_____



## Scenario #2 Recent California Earthquakes

Hint: North America, California group, California

**Q1. What is the time range of this data set?**

_____

**Q2. How many earthquakes were there in total (M2-6)?**_____

**Q3. How many earthquakes greater than M5 were there?** _____

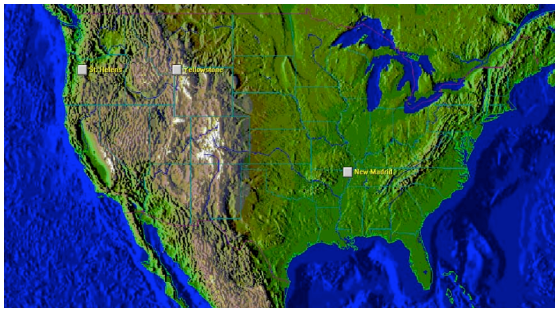
**Q4. How many earthquakes greater than M7 were there?** _____

**Q5. What were the magnitudes of these earthquakes?** _____

**Q6. What is the deepest depth of all the earthquakes in California?** _____

## Scenario #3 United States Earthquakes

Hint: North America Group, United States



**Q1. What is the time range of this data set?**

_____

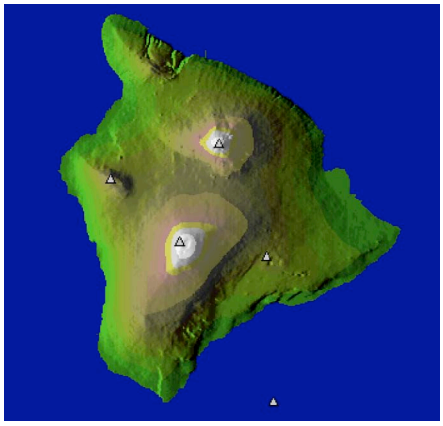
**Q2. Where did the deepest earthquakes occur?** _____

**Q3. How many earthquakes occurred in Texas?** _____

**Q4. How many earthquakes occurred in Alabama?** _____

## Scenario #4 Hawaii Earthquakes

Hint: Pacific Group, Hawaii



**Q1. Which of the Hawaiian Islands is this?**

_____

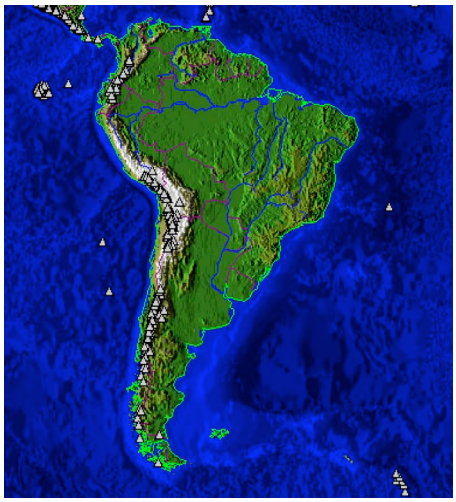
**Q2. What is the time range of this data set?** _____

**Q3. How many volcanoes have been active on the island?** _____

**Q4. How many eruptions?** _____

**Q5. How many earthquakes greater than M6.5?** _____

**Q6. Where did these occur?** _____



**Scenario #5 South America**
Hint: South America

**Q1. What is the time range of this data set?**

_____

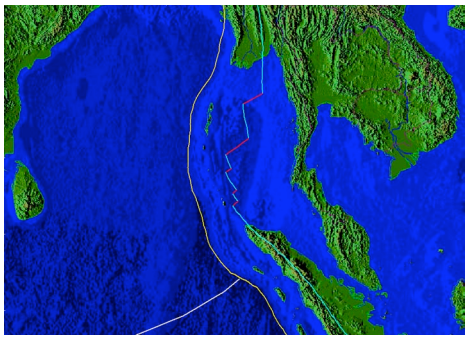
**Q2. Where in South America was the largest earthquake ever recorded? _____**

**Q3. What day did it occur ? _____**

**Q4. What was its magnitude? _____**

**Q5. How many earthquakes in South America have been greater than M7.5? ____**

**Q6. How many great than M8.0? _____**



**Scenario #6 Sumatra**
Hint: Asia, Sumatra 2004

**Q1. What is the time range of this data set?**

_____

**Q2. What was the magnitude of the main shock? _____**

**Q3. In what direction did most of the aftershocks take place? _____**

**Q4. How deep was the main shock located? _____**

**Q5. When viewing a cross-section of the earthquake and aftershocks, do any patterns stand out to you? If so, what?**