**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_**

**Student Page**

# Title: Location of Earthquakes and Volcanoes

**Introduction:** For thousands of years we have known of the existence of volcanoes and earthquakes. Pioneered by Alfred Wegner, the plate tectonic theory has been thought to cause earthquakes and volcanoes. In this activity you will prove the validity of the plate tectonic theory in relation to the location of earthquakes and volcanoes.

**Prediction/Hypothesis:** How do you think the location of earthquakes and volcanoes relate to the location of plate boundaries?

**Procedures:**

1. Map the volcanoes with a blue pencil by marking its location with a “v” on your world map.
2. Map the earthquakes with a red pencil by marking its location with an “e” on your world map.
3. Compare your map with your plate tectonic map to answer questions 1-8.

**Data:**

|  |  |  |
| --- | --- | --- |
| **Name of Volcano** | **Latitude** | **Longitude** |
| Mauna Loa | 19 N | 156 W |
| Volcano Arenal | 10 N | 85 W |
| Volcano Canlaon | 10 S | 123 E |
| Mt. St. Helens | 46 N | 122 W |
| Mount Vesuvius | 41 N | 14 E |
| Miyake | 34 N | 140 E |
| Krakatau | 6 S | 105 E |
| Askja | 65 N | 16 E |

**Earthquakes**

|  |  |
| --- | --- |
| **Latitude** | **Longitude** |
| 50 S | 170 W |
| 48 S | 75 W |
| 67 N | 14 W |
| 35 N | 142 E |
| 5 S | 160 E |
| 58 N | 142 W |
| **Latitude** | **Longitude** |
| 7 N | 77 W |
| 25 N | 128 E |
| 31 S | 70 E |
| 22 N | 80 E |
| 35 S | 65 E |
| 43 S | 97 E |
| 79 N | 7 E |

**Conclusion:**

1. Describe the pattern of earthquakes and volcanoes on Earth.
2. Why do we find earthquakes and volcanoes on tectonic plate boundaries?
3. What part of the United States is most likely to experience earthquakes and volcanoes (tectonic activity)? Why?
4. What two plates cause the Volcano Arenal?
5. What two plates cause the volcano Krakatau?
6. Which volcano is not located near any plate tectonic boundaries? How do you think that volcano formed?
7. Do you think the location of volcanoes and earthquakes supports the theory to plate tectonics? Why or why not?
8. Name another explanation (besides plate tectonics) that may be the cause of this pattern of earthquakes and volcanoes.



