

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

Plate Tectonics

Date: \_\_\_\_\_ Period: \_\_\_\_\_

Earth Science

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## Lab Activity: Crustal Activity

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### INTRODUCTION:

Earth's crust has been shifting and adjusting for billions of years. Recently scientists discovered that these crustal movements were linked to earthquakes, volcanoes and mountain ranges. It also gave them the ability to define the shapes of all the world's major plates.

### OBJECTIVE:

You will plot the areas in which earthquakes occur most frequently and identify other crustal activities that appear related to these zones.

### VOCABULARY:

Plate Tectonics -

Lithosphere -

Asthenosphere -

Volcano -

Ring of Fire -

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**PROCEDURE:**

1. On the Map: Crustal Activities, darken in the lines that represent the Equator, Prime Meridian, and the International Date Line.
2. Using a “**X**”, plot all the “World’s Major Earthquakes” onto Map: Crustal Activities in pencil.
3. Using a “**▲**” plot all the “World’s Active Volcanoes” onto Map: Crustal Activities in red colored pencil,. Be sure to label the names of all volcanoes.

### WORLD’S MAJOR EARTHQUAKES

Dates	Latitude	Longitude
January 12, 1998	10° S	180°
January 2, 1998	20° S	180°
March 29, 1998	10° S	160° W
April 2, 1998	40° N	140° E
May 1, 1998	50° N	180°
May 21, 1998	1° N	120° E
June 1, 1998	50° N	160° E
July 17, 1998	3° S	140° E
August 4, 1998	1° S	80° W
November 29, 1998	2° S	130° E
Dec 5, 1998	50° N	130° W

Dates	Latitude	Longitude
March 4, 1999	20° N	120° E
March 28, 1999	30° N	130° E
April 13, 1999	50° N	170° W
June 15, 1999	20° N	100° W
September 20, 1999	35° N	120° W
October 13, 1999	60° N	140° W
November 29, 1999	20° S	70° W
December 10, 1999	40° S	75° W
December 12, 1999	30° S	70° W
December 30, 1999	10° S	80° W
December 30, 1999	40° S	180°

### WORLD’S ACTIVE VOLCANOES

Date	Latitude	Longitude
Krakatau	6° S	105° E
Nevado del Ruiz	5° N	75° W
Katmai	58° N	155° W
Mt. Rainier	47° N	122° W
Paricutin	20° N	102° W

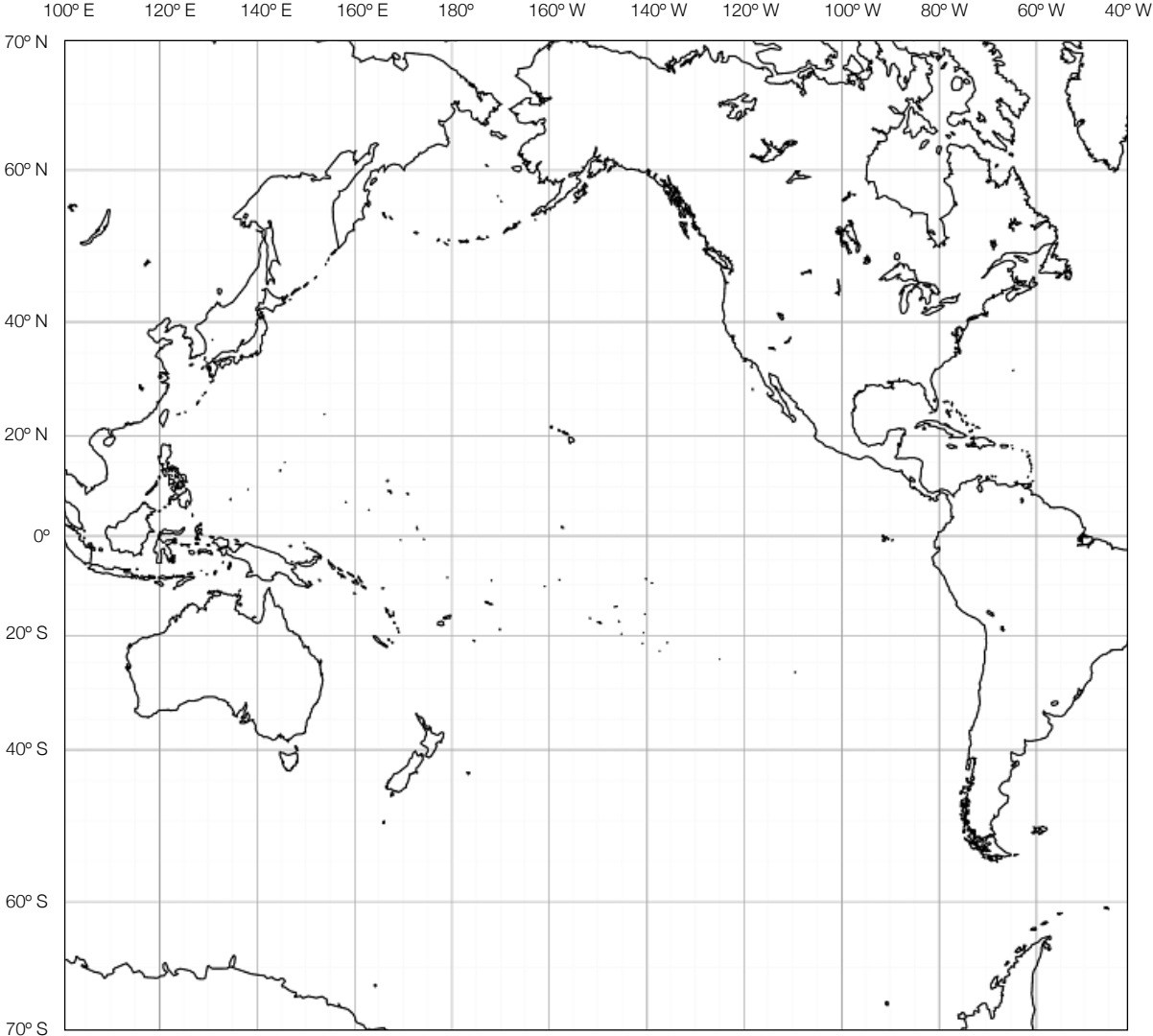
Date	Latitude	Longitude
Fuji	35° N	138° E
Mt. St. Helens	46° N	122° W
Mauna Loa	20° N	156° W
Lokon	1° N	125° E
Tambora	8° S	118° E

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MAP: CRUSTAL ACTIVITIES



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## DISCUSSION QUESTIONS:

1. Describe the pattern of earthquakes on your map?
2. Describe the pattern of volcanoes on your map?
3. What regions of North and South America show the greatest crustal activity?
4. What is the probability of having major earthquakes or volcanoes occur in New York State?
5. Why is the perimeter around the Pacific Ocean referred to as the “Ring of Fire”?

**CONCLUSION:** Compare the patterns of earthquakes, volcanoes, and mountain ranges on Earth?