

Name: _____

Date: _____ Period: _____

Plate Tectonics

The Physical Setting: Earth Science

Lab Activity: Crustal Activity

INTRODUCTION:

Studies of tectonics have shown that crustal activities are occurring worldwide. Earthquakes, volcanoes, and mountain ranges do not occur randomly. There are special zones in which they occur. In this lab you will look for the relationship between the locations of these crustal activities.

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 -

Continental Drift -

Lithosphere -

Asthenosphere -

Volcano -

Ring of Fire -

Lab Activity: Crustal Activity

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 small “✕” symbol and a pencil, plot all the “World’s Major Earthquakes” onto Map: Crustal Activities.
3. Using a small “▲” symbol and a red colored pencil, plot all the “World’s Active Volcanoes” onto Map: Crustal Activities. 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 1, 1998	40° S	20° W
May 16, 1998	60° N	20° W
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
Dec 12, 1998	10° N	30° 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 11, 1999	45° N	130° E
December 29, 1999	30° N	40° W
December 29, 1999	20° S	10° W
December 30, 1999	40° S	180°

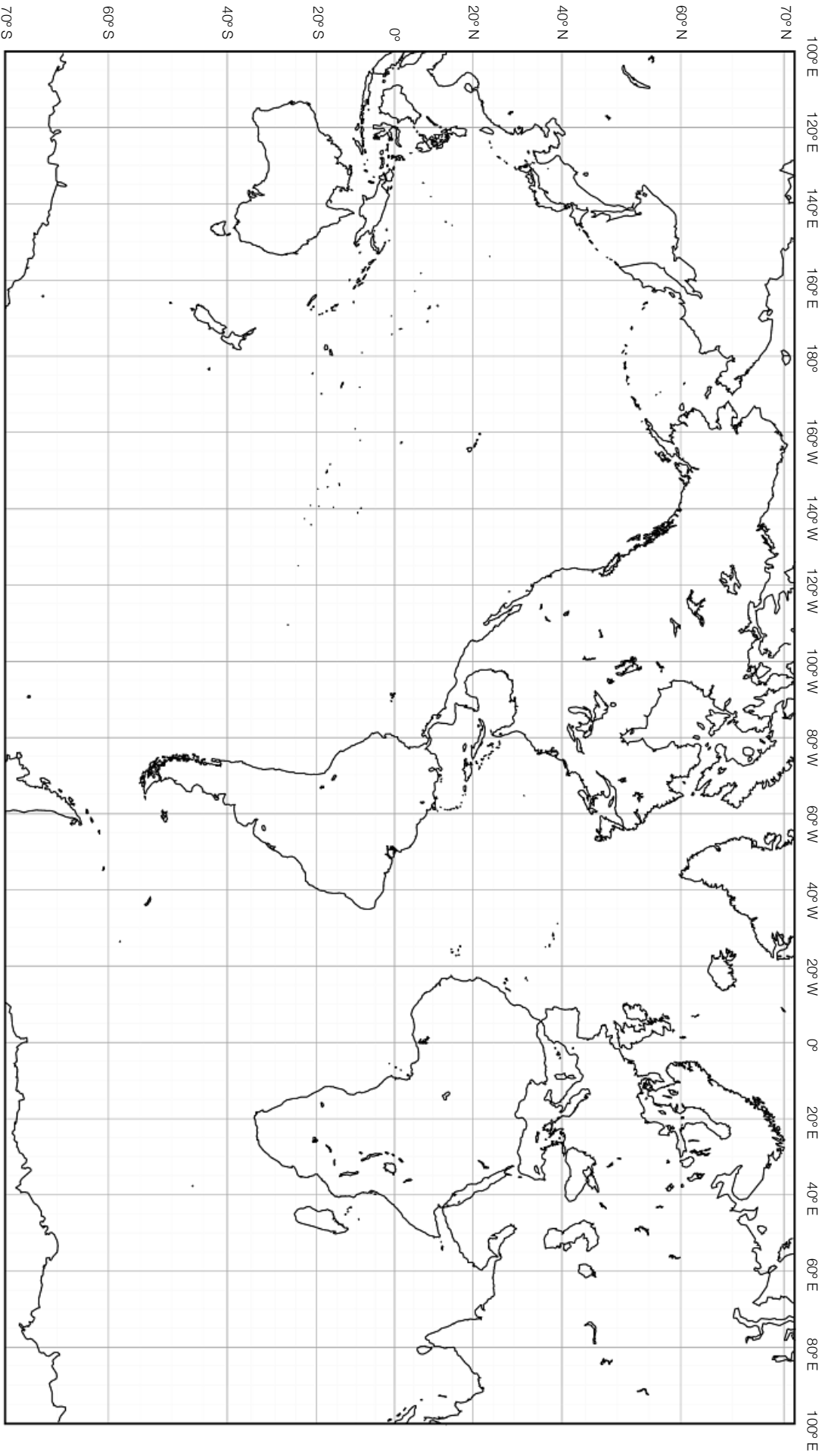
WORLD’S ACTIVE VOLCANOES

Date	Latitude	Longitude
Krakatau	6° S	105° E
Vesuvius	40° N	15° E
Katmai	58° N	155° W
Mt. Rainier	47° N	122° W
Paricutin	20° N	102° W
Eyjafjallajökull	60° N	20° 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
Nevado del Ruiz	5° N	75° W

Map: Crustal Activities

World's Major Earthquakes and Active Volcanoes



Lab Activity: Crustal Activity

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?