

NAME _____ Date _____ Period _____

Patterns of 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 relationships 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:

Mid-Atlantic Ridge:

continental drift:

plate tectonics:

PROCEDURE:

1. Referring to the Earthquake Location Map provided by your instructor, mark the epicenters on your world map by placing an X in each area where earthquakes have occurred. **IN RED**
Plot 20 earthquakes from the first column and 20 more from the second column
2. Referring to a text book, mark the areas with active volcanoes by placing small circles in the regions where they occur. **IN BLUE**
Plot 10 from each column
3. Referring to the World Map and globes supplied by your instructor, indicate on your map the regions where mountain ranges occur by placing small triangles in the appropriate areas. Be sure to include mountain ranges that are located under the oceans. **IN GREEN**
Sketch these in as best you can.

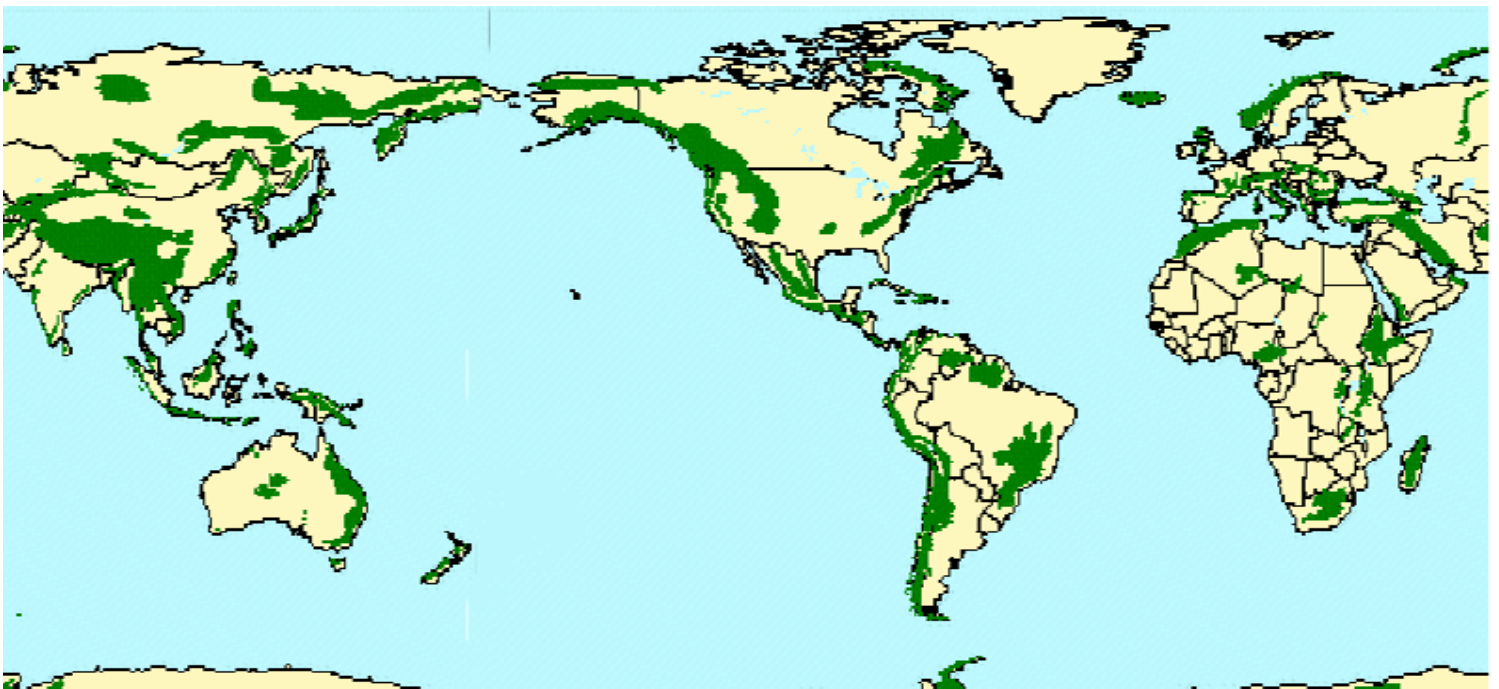
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These are the undersea mountains:



These are the land mountains:



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EARTHQUAKES AROUND THE WORLD

Date	Latitude	Longitude	Date	Latitude	Longitude
1998			1999		
Jan. 04	22.3 S	170.9 E	Jan. 01	4.6 S	153.2 E
Jan. 10	14.4 N	91.5 W	Jan. 28	52.9 N	169.1 W
Jan. 12	31.0 S	71.4 W	Feb. 06	12.9 S	166.7 E
Jan. 12	15.6 S	179.4 W	Mar. 04	28.3 N	57.2 E
Jan. 14	15.7 S	179.3 W	Mar. 04	5.4 N	121.9 E
Jan. 27	22.4 S	179.0 E	Mar. 08	52.1 N	159.5 E
Jan. 30	23.9 S	70.2 W	Mar. 20	51.6 N	177.7 W
Feb. 16	52.6 N	33.7 W	Mar. 28	30.5 N	79.4 E
Feb. 19	4.5 S	129.1 E	Mar. 31	5.8 N	82.6 W
Mar. 14	30.2 N	57.6 E	Apr. 03	16.7 S	72.7 W
Mar. 20	50.0 S	163.1 E	Apr. 05	5.6 S	149.6 E
Mar. 21	79.9 N	1.9 E	Apr. 08	43.6 N	130.4 E
Mar. 25	62.9 S	149.5 E	Apr. 13	21.4 S	176.5 W
Mar. 29	17.6 S	179.1 W	Apr. 20	31.9 S	179.5 W
Apr. 01	0.5 S	99.3 E	May 10	5.2 S	150.9 E
Apr. 01	40.3 S	74.9 W	May 16	4.8 S	153.0 E
Apr. 03	8.2 S	74.2 W	May 17	5.2 S	152.9 E
Apr. 09	12.2 S	67.9 E	Jun. 15	18.4 N	97.4 W
May 03	22.3 N	125.3 E	Jul. 11	15.8 N	88.3 W
May 13	5.2 S	151.7 E	Aug. 01	30.4 S	177.8 W
May 16	22.2 S	179.5 W	Aug. 14	5.9 S	104.7 E
May 21	0.2 N	119.6 E	Aug. 17	40.8 N	29.9 E
May 22	17.7 S	65.4 W	Aug. 20	9.0 N	84.2 W
May 30	37.1 N	70.1 E	Aug. 22	16.1 S	168.0 E
Jun. 01	52.9 N	160.1 E	Sept. 20	23.8 N	121.0 E
Jun. 27	36.9 N	35.3 E	Sept. 20	23.4 N	121.0 E
Jul. 09	38.7 N	28.6 W	Sept. 25	23.7 N	121.2 E
Jul. 09	30.5 S	179.0 W	Sept. 30	16.1 N	96.9 W
Jul. 16	11.0 S	166.2 E	Oct. 13	54.7 N	161.2 W
Jul. 17	3.0 S	141.9 E	Oct. 16	34.6 N	116.3 W
Jul. 29	32.3 S	71.3 W	Nov. 08	36.5 N	71.2 E
Jul. 29	2.7 S	138.9 E	Nov. 12	40.8 N	31.2 E
Aug. 04	0.6 S	80.4 W	Nov. 15	1.3 S	89.0 E
Aug. 20	28.9 N	139.3 E	Nov. 17	6.0 S	148.8 E
Aug. 23	11.7 N	88.0 W	Nov. 19	6.4 S	148.8 E
Sept. 02	5.4 N	126.8 E	Nov. 26	16.4 S	168.2 E
Sept. 03	29.5 S	71.7 W	Nov. 29	1.3 S	89.1 E
Sept. 28	8.2 S	112.4 E	Nov. 30	18.9 S	69.2 W
Oct. 28	0.8 N	126.0 E	Dec. 06	57.5 N	154.6 W
Nov. 09	7.0 S	129.0 E	Dec. 07	57.4 N	154.5 W
Nov. 19	22.6 N	125.8 E	Dec. 10	36.3 S	97.2 W
Nov. 29	2.1 S	124.9 E	Dec. 11	15.8 N	119.8 E
Dec. 06	1.3 N	126.2 E	Dec. 21	6.8 S	105.7 E
Dec. 27	21.6 S	176.4 W	Dec. 29	10.9 S	165.4 E

**ACTIVE AND EXTINCT VOLCANOES
AROUND THE WORLD**

Volcano	Latitude	Longitude	Volcano	Latitude	Longitude
Reventador	0.1 S	77.7 W	Krakatau	6.1 S	105.4 E
Ubinas	16.2 S	70.8 W	Barren I.	12.2 N	93.8 E
Maipo	34.1 S	69.9 W	Santorini	36.4 N	25.4 E
Mt. Burney	52.3 S	73.4 W	Vesuvius	40.8 N	14.4 E
Sao Jorge I	38.6 N	28.0 W	Lanzarote I.	29.0 N	13.7 E
Katla	63.6 N	18.9 W	Paramushiro I.	50.3 N	155.3 E
Beerenberg	71.0 N	8.0 W	Katmai	58.3 N	155.0 W
Erta-Ale	13.6 N	40.6 E	Mt. Rainier	46.9 N	121.8 W
Niragongo	1.5 S	29.2 E	Lassen	40.5 N	121.3 W
Kartala	11.9 S	43.3 E	Tres Virgènes	27.5 N	112.7 W
Mauna Loa	19.5 N	155.9 W	Paricutin	19.5 N	102.1 W
Erebus	77.5 S	168.0 E	Poás	10.2 N	84.2 W
Pagan I.	18.1 N	145.8 E	Kaňaga	51.9 N	177.2 W
Chyulu Hills	2.9 S	38.1 E	Brimstone I.	30.2 S	178.9 E
Saishuto I.	33.4 N	126.5 E	Late I.	18.8 S	174.6 W
Mayon, Luzon	13.3 N	123.7 E	Hunter I.	22.3 S	172.1 E
Makian	0.3 N	127.4 E	Tinakula	10.4 S	165.8 E
Lokon	1.4 N	124.8 E	Pago	5.6 S	150.6 E
Seroea	6.3 S	130.0 E	Fuji	35.4 N	138.2 E
Tambora	8.2 S	118.0 E	St. Helens	46.2 N	122.2 W

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