

Mapping Earthquake and Volcano Data

Is there a pattern to volcanoes and earthquakes?

Procedure:

1. Use a Vis-à-vis marker to plot the earthquake data on the large, laminated world map.
2. Use a different color Vis-à-vis marker to plot the volcano data on the large, laminated world map.
3. When finished, answer the questions on the back.

Location of the Earthquake		
Name	°Latitude	°Longitude
Hokkaido, Japan	43 N	120W
Central Alaska	64N	156W
Taiwan	23N	120E
Balleny Islands	66S	163E
Java Sea	5S	110E
Fiji	17S	178E
Kamchatka	47N	155E
Irian Jaya, Indonesia	4S	139E
Kobe, Japan	34N	135E
N. Chile	23S	69W
Jalisco, Mexico	20N	103W
San Juan Capistrano, CA	33N	117W
Santa Barbara, CA	34N	119W
Hayward, CA	37N	122W
San Jacinto, CA	33N	116W
Whittier, CA	33N	118W
Northridge, CA	34N	118W
Oakland, CA	37N	122W
Prince William Sound, AK	60N	147W
Port-au-Prince, Haiti	18N	72W
Tangshan, China	39N	118E
Sumatra	0	101E
Kanto, Japan	34N	134E
Chimbote, Peru	9S	78W
Honshu, Japan	35N	138E
Maule, Chile	32N	118W
Central Peru	8S	76W
Java Indonesia	7S	110E
Bengal, India	23N	88E
Managua, Nicaragua	13N	85W
Santa Cruz, Argentina	47S	68W

Location of the Volcano		
Name	°Latitude	°Longitude
Mt. St. Helens	46N	122W
Mt. Rainer	47N	122W
Katmai, AK	58N	155E
Kamchatka, Russia	57N	160E
Paracutin, Mexico	19N	102W
Popocatepetl, Mexico	19N	98W
Mt. Pelee, Martinique	15N	61W
Santa Maria, Guatamala	15N	92W
Cotopaxi, Ecuador	1S	78W
Mt. Fugi, Japan	35N	139E
Mt. Unzen, Japan	32N	130E
Mayon, Phillippines	13N	124E
Krakatoa, Sumatra	6S	105E
KarKar, New Guinea	5S	146E
Mauna Loa, Hawaii	19N	156W
Heimay, Iceland	63N	20W
Redoubt, AK	60N	152W
Baker Volcano, WA	48N	121W
Lassen Volcano, CA	40N	121W
Pintubo, Phillipines	15N	120E
Vesuvius, Italy	40N	14E
Helka, Iceland	63N	19W
Fayal, Azores and Madeira	38N	28W
Galeras, Columbia	0	75W
Aarat, Turkey	39N	44E
Mt. Kilimanjaro, Tanzania	3S	37E
Rajabasa, Indonesia	5S	105E
Opala, Russia	52N	157E
Alaids, Russia	50N	155E
Nevada del Ruiz, Columbia	5 N	75W
Llullaillaco, Chile	24S	68W

Data Analysis:



1. When you are done mapping the volcanoes, have your teacher initial.

2. Observe the pattern of earthquakes and volcanoes over the surface of the Earth. Are they scattered at random or are they concentrated in certain areas? Describe your observations.

3. Explain your observations – why do the earthquakes and volcanoes occur in these areas?



4. Use the reference map to draw the major crustal plates of the Earth on your world map. Label the names of the plates. Have your teacher initial.

5. Observe the pattern of earthquakes and volcanoes in relation to the crustal plates. Are they scattered all over the plates or is there a pattern? Describe your observations.



6. Draw arrows on your map showing the direction of plate movement. Have your teacher initial.

7. Is there a relationship between the direction of movement and pattern of earthquakes? volcanoes? Describe and explain.