

Earthquake and Volcano Distribution

Problem

What is the worldwide pattern of volcano and earthquake distribution?

Materials

World map showing longitude and latitude

4 different colored pencils

Procedure

1. Use the information in the table below to plot the location of each earthquake. Use one of the colored pencils to label on the attached world map each earthquake location with a circled letter "E".
2. Do the same thing for the volcano locations. Use a different colored pencil and a circled letter "V".
3. Use a third colored pencil to lightly shade the areas where earthquakes are found (shade for a few centimeters around each circled "E").
4. Use a fourth colored pencil to lightly shade the areas where volcanoes are found (shade for a few centimeters around each circled "V").

Observations (use complete sentences)

1. Are earthquakes scattered randomly over the surface of the Earth or are they concentrated in definite zones?
2. Are volcanoes scattered randomly over the surface of the Earth or are they concentrated in definite zones?
3. Are most earthquakes and volcanoes located near the edges or near the center of the continents?
4. Are there any active volcanoes near your home? Has an earthquake occurred near your home?

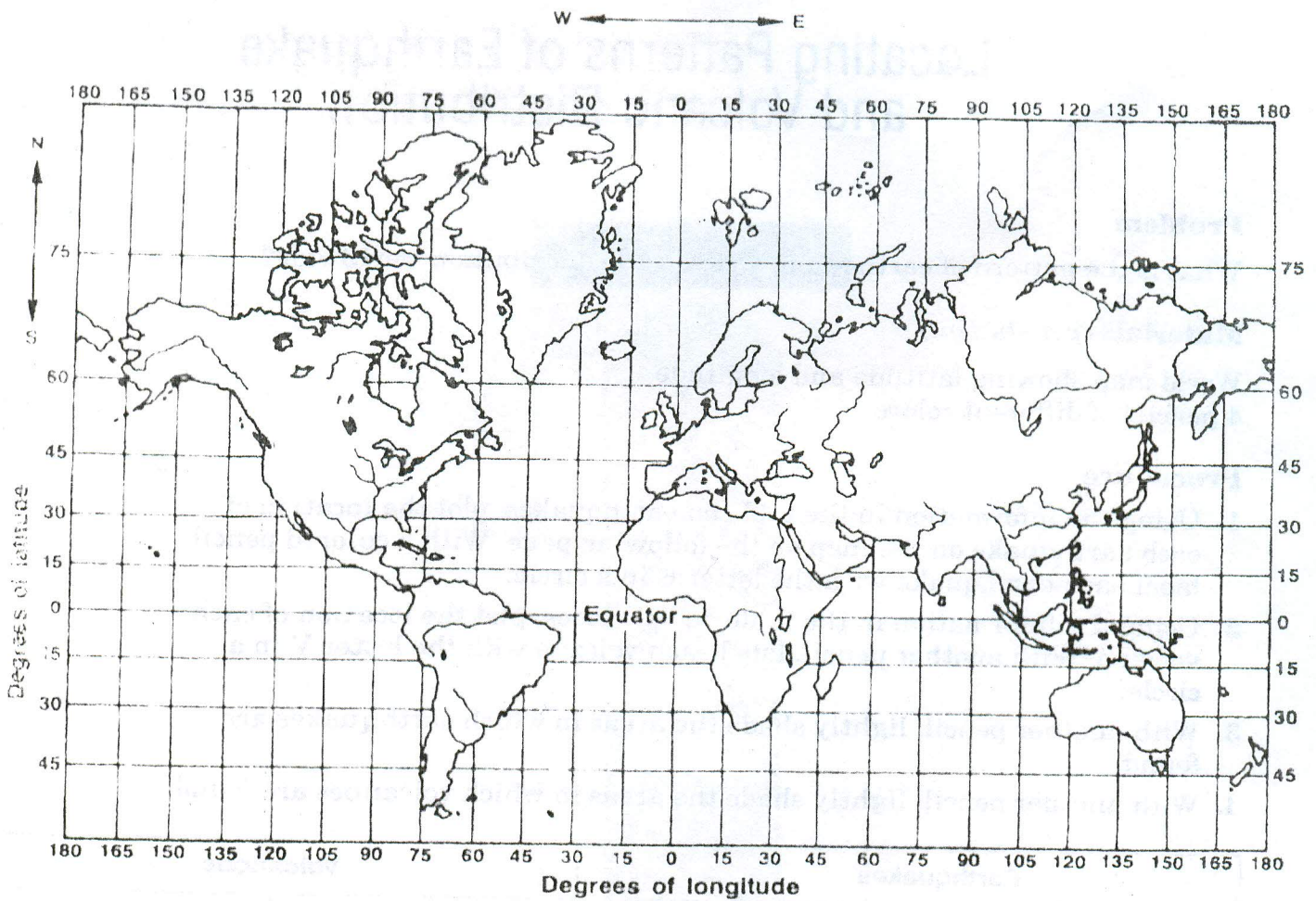
Analysis

1. Describe any patterns that you found in the distribution of earthquakes and volcanoes.

2. What relationship exists between the locations of earthquakes and of volcanoes?

3. **On your own:** on the attached map of Utah, mark any volcanoes and the location of at least 3 RECENT (within the last week) earthquakes. Try googling "recent earthquakes in Utah"

Observations



1. Are earthquakes scattered randomly over the surface of the earth or are they concentrated in definite zones? _____

2. Are volcanoes scattered randomly or concentrated in definite zones? _____

3. Are most earthquakes and volcanoes located near the edges or near the center of continents? _____

4. Are there any active volcanoes located near your home? _____
Has an earthquake occurred near your home? _____

Data

EARTHQUAKES		VOLCANOES	
Longitude	Latitude	Longitude	Latitude
120°W	40°N	150°W	60°N
110°E	5°S	70°W	35°S
77°W	4°S	120°W	45°N
88°E	23°N	61°W	15°N
121°E	14°S	105°W	20°N
34°E	7°N	75°W	0°
74°W	44°N	122°W	40°N
70°W	30°S	30°E	40°N
10°E	45°N	60°E	30°N
85°W	13°N	160°E	55°N
125°E	23°N	37°E	3°S
30°E	35°N	145°E	40°N
140°E	35°N	120°E	10°S
12°E	46°N	14°E	41°N
75°E	28°N	105°E	5°S
150°W	61°N	35°E	15°N
68°W	47°S	70°W	30°S

