

The Dynamic Earth

Activity One

Tracking Volcanoes and Earthquakes

In this activity, you will attempt to distinguish patterns in volcanic and earthquake activity. You will also relate the locations of mountain ranges to these events and to plate boundaries.

MATERIALS

atlas
world map
red pencil

INVESTIGATION

1. Access data on recent volcanic eruptions and earthquakes. Go to the Glencoe Science Web Site at science.glencoe.com to find information on at least 10 recent earthquakes and 10 recent volcanic eruptions. Record the details of each event, including its latitude and longitude in the chart below.
2. On a world map, use small triangles to plot recent volcanic eruptions. Use small circles to plot the epicenters of recent earthquakes.

Volcanoes	Latitude	Longitude	Earthquake Epicenters	Latitude	Longitude

INVESTIGATION, continued

3. Use red triangles to plot the volcanoes and red circles to plot the earthquake epicenters listed in the table below.

Volcanoes	Latitude	Longitude	Earthquake Epicenters	Latitude	Longitude
Mt. Vesuvius	47°N	122°W	Calcutta	23°N	86°E
Mt. Fuji	35°N	138°E	Kobe	35°N	135°E
Mauna Loa	20°N	156°W	New Madrid	36°N	89°W
Katla	64°N	19°W	Lebú	37°S	74°W
Erta Ale	14°N	41°E	Anchorage	61°N	150°W

4. Use a physical map of the world to locate the following mountain chains: Andes, Sierra Nevadas, Himalayas, Atlas, Appalachians. Plot these ranges as small carets (^) on your map. Also label the locations of the Mid-Atlantic Ridge, Aleutian Trench, Peru-Chile Trench, Japan Trench, and Ryukyu Trench.

QUESTIONS FOR DISCUSSION

1. Look at your map. What pattern do you see among volcanic activity, earthquake activity, and the location of major mountain ranges?
2. Are there any exceptions to this pattern? How can they be explained?
3. Write a paragraph that explains the patterns and exceptions you observe.