

Mapping Earthquakes and Volcanoes Worksheet

Post-Activity Questions

1. Look carefully at the marked physiographic ocean chart. Are the locations of earthquakes and volcanoes randomly scattered over the Earth or do they seem to be more concentrated in certain areas? Explain your answer.
2. Which area of the world had the most volcanic activity according to the data provided?
3. Which area of the world had the most earthquake activity according to the data provided?
4. The physiographic chart shows many geologic features of the ocean floor. Write the names of the major geologic features of the ocean floor that are located at or very near the location of the earthquakes and volcanoes that were plotted, i.e., basins, ridges, rises, trenches.
5. Look carefully at the marked chart and assembled puzzle. If the edges of each crustal plate “puzzle” piece represent crustal plate boundaries, describe the relationship between the location of volcanoes and earthquakes and the boundaries of the crustal plates. Be specific.

Challenge Questions:

6. Look carefully at the marked chart and a textbook, if necessary, to answer Questions #6a and #6b.
 - a. Which geologic feature(s) of the ocean floor do you think have been formed by crustal plates moving together?
 - b. Which geologic feature(s) of the ocean floor do you think have been formed by crustal plates moving apart?
7. Obtain a copy of the table containing the combined Richter and Modified Mercalli Scales. Use the table, the Earthquake Data List, the physiographic chart, and the assembled puzzle to answer the questions below.
 - a. According to the Mercalli Scale, how many of the earthquakes listed would have been felt by all people in the area?
 - b. According to the data, how many of the earthquakes would be described as moderate?
 - c. Which tectonic plates were involved in producing the strongest earthquake listed?