

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Per.: \_\_\_\_\_

LAB# \_\_\_\_\_

### **Patterns of Crustal Activity**

**Task:** On the next page, you will find four lists. Each list contains data about crustal activity including earthquakes, volcanoes, mountains, and trenches. Please plot the locations of these crustal features on the world map provided. Use an “E” for all earthquakes, a “V” for volcanoes, an “M” for mountains, and a “T” for trenches. When you have completed this task move on to the questions below.

#### **Questions:**

1. Are major crustal features like earthquakes, volcanoes, mountains, and trenches found randomly on Earth’s surface, or is there a pattern? Explain your answer.

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2. Compare your map with the “World Plates” map on page four. This map shows the lithospheric, or tectonic, plates found on Earth’s surface. What is the relationship between the locations of crustal features on Earth and the locations of plate boundaries?

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Please refer to the plates map of your Earth Science Reference Tables to answer the following questions.

3. What type of plate boundary is found at the Peru-Chile Trench? \_\_\_\_\_

4. What type of plate boundary is found in California? \_\_\_\_\_

5. What type of plate boundary runs through the Atlantic Ocean? \_\_\_\_\_

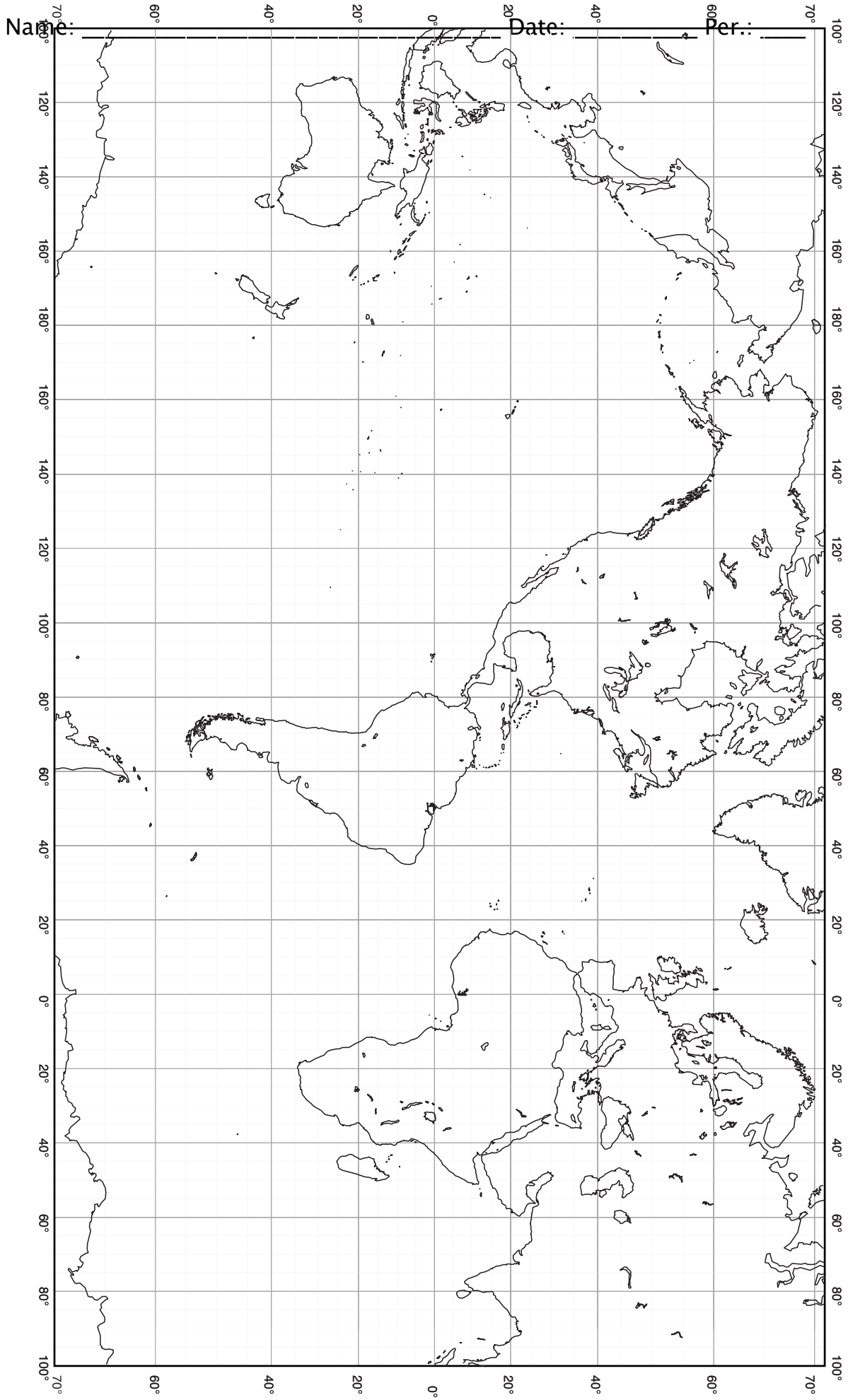
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Highest Magnitude Earthquakes Ever Recorded			
Latitude	Longitude	Magnitude	Year
38°S	73°W	9.5	1960
61°N	148°W	9.2	1964
3°N	95°E	9.1	2004
53°N	159°E	9.0	1952
1°N	82°W	8.8	1906
51°N	178°E	8.7	1965
36°N	11°W	8.7	1755
2°N	97°E	8.7	2005
51°N	176°W	8.6	1957
28°N	96°E	8.6	1950

Deadliest Volcanic Eruptions			
Latitude	Longitude	Volcano	Casualties
6°S	105°E	Krakatoa	36,000
14°N	61°W	Mount Pelee	30,000+
5°S	75°W	Nevado Del Ruiz	23,000
40°N	14°E	Mount Vesuvius (79AD)	20,000
37°N	15°E	Mount Etna	20,000
8°S	118°E	Tambora	12,000+
64°N	19°W	Mount Skaptar	10,000
8°S	112°E	Mount Kelud	5,000
7°S	108°E	Galunggung	4,000
9°S	148°E	Mount Lamington	3,000+
3°S	35°E	Lake Nyos	1700
46°N	122°W	Mt. St. Helen's	57

Some of the World's Tallest Mountains			
Latitude	Longitude	Mountain	Elevation (m)
6°S	105°E	Everest	8,848
14°N	61°W	K-2	8,611
5°S	75°W	Muztag Ata	7,546
9°S	148°E	Nowshak	7,485
40°N	14°E	Aconcagua	6,962
37°N	15°E	Ojos Del Salado	6,880
8°S	118°E	Huascaran	6,768
64°N	19°W	McKinley	6,194
8°S	112°E	Kilimanjaro	5,895
7°S	108°E	Ranier	4,393

Some of the World's Deepest Trenches			
Latitude	Longitude	Trench	Depth (m)
11°N	142°E	Mariana	10,911
14°N	124°E	Philippine	10,850
46°N	153°E	Kuril-Kamchatka	10,500
30°S	180°E	Kermadec	10,047
19°S	117°W	Tonga	9,900
35°N	143°E	Japan	9,000
19°N	66°W	Milwaukee Deep	8,605
19°S	65°E	Puerto Rico	8,400
Spans the west coast of S. America		Peru-Chile	8,065
19°N	82°W	Cayman	7,686



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# WORLD PLATES

