NAME _____ DATE _____ CLASS _____

MAKING CONNECTIONS

Chapter

Geology

What's the Difference?

You've learned that moving plates are responsible for raising mountain ranges on land and creating huge, deep trenches in the oceans. Both of these surface features are created by tremendous compression forces at convergent plate boundaries. Plate collisions cause mountains to rise. Subduction causes trenches to form and volcanic mountains to rise.

From sloping hills to lofty, rugged peaks, mountains stand as evidence of the shifting of Earth's crust. Sharing the same origin, however, does not make all mountains the same. Young mountains are usually taller and more rugged than older ones. Subjected to erosion for millions of years, older mountains lose height and ruggedness.

Plot the information listed below and take a tour from the lowest points on Earth to the highest points.

- On a sheet of paper, arrange the following data from lowest to highest elevations. ASL stands for "above sea level." BSL stands for "below sea level." Remember, the greater the number BSL, the lower on Earth's surface it is.
- Draw a heavy horizontal line across the middle of a sheet of graph paper to represent sea level. Points below the line represent below sea level. Points above the line are above sea level. Use the graph paper to make a bar graph. Label the vertical axis "Elevation." Label the horizontal axis "Location." The axes of your graph should form a "T." Beginning with the lowest point in the data list, plot the depths and heights for the locations listed. Label each bar at its bottom with the name of the location. *NOTE:* Mauna Kea has 2 sets of data.

Location	Elevation	Location	Elevation
Venice, Italy	0.0 km ASL	Mariana Trench	11.5 km BSL
Japan Trench	10.6 km BSL	Nassau	0.2 km ASL
Mt. Kilimanjaro	5.9 km ASL	Mt. Everest	8.5 km ASL
Tonga Trench	10.8 km BSL	Great Salt Lake	1.3 km ASL
Mt. McKinley	6.2 km ASL	Top of the Grand Canyon	2.2 km ASL
Mt. Fujiyama	3.8 km ASL	Gulf of Mexico	5.3 km BSL
Denver, Colorado	1.6 km ASL	Mauna Kea	5.0 km BSL
Mt. Vesuvius	1.3 km ASL	Mauna Kea	4.2 km ASL

Thinking About Geology Connections

1. What is the difference between the highest point you plotted and the lowest?

_____

2. What is the total height of Mauna Kea? _____

3. Which mountain is higher from base to crest, Everest or Mauna Kea? _____

4. What would happen to Nassau if the polar ice caps melted to the point that sea level rises 0.5 km?

How would this affect the Tonga Trench? _____

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