

Cross-A-Clue

Write the answers to the numbered clues on the lines provided. These answers will give you the words to fill in on the crossword diagram below. The crossword contains letter clues to help you place the word or words correctly.

1. Sudden movement or shaking of the earth's crust _____
2. Giant sea wave _____
3. Place where lava reaches the earth's surface _____
4. Scale used to measure the amount of energy an earthquake releases

5. Scientist who studies earthquakes _____

6. Hot liquid rock beneath the earth's surface _____
7. Type of wave, often called an L wave _____
8. Magma that has reached the earth's surface _____
9. Very large crater resulting from the collapse of its walls _____
10. Type of volcano built up of alternating layers of rock particles and lava

11. Opening in a volcano from which lava erupts _____
12. Primary wave _____
13. Volcanic rock particles ranging in diameter from 0.25 mm to less than 5 mm

14. Point beneath the earth's surface where the rocks break and move during an
earthquake _____
15. Small volcanic bomb about the size of a golf ball _____
16. Point directly above the focus of an earthquake on the earth's surface

17. Funnel-shaped pit at the top of a volcanic core _____
18. Gently sloping, dome-shaped volcano composed almost entirely of quiet lava flows

By analyzing the mineral makeup of lava, geologists can determine the chemical composition of the magma from which the lava formed.

-One type of lava is dark-colored and contains a lot of water. This lava is rich in the elements Fe and Mg. When this type of lava cools, BASALT is formed.

-Another type of lava is light in color. This lava, which contains little water, is rich in the elements Si and Al. These elements account for the light color. When this type of lava cools, it forms RYOLITE, which is similar to GRANITE.

-Another type of lava contains large amounts of gases such as steam and carbon dioxide. When this lava hardens, it forms rocks with many holes in them. PUMICE is an excellent example of this type of lava. Remember it actually floats.

-Lighter lava causes explosive eruptions. Because this type is composed of the element Si, which tends to harden the vent of volcanoes. This lava when hard makes up the rock
RYOLITE