

Volcanic WebQuest Activity

For this activity, type in the URL link below and answer the following questions.

http://en.wikibooks.org/wiki/High_School_Earth_Science/Volcanic_Activity#Lesson_Objectives

1. What is the difference between magma and lava?
2. In very basic terms, explain how volcanoes are formed.
3. Explain how the Pacific Ring of Fire got its name.
4. Why are there volcanoes along the pacific northwest coast of the United States?
5. Why do volcanoes occur where tectonic plates pull apart or diverge?
6. What is a mantle plume?
7. Checking for understanding: Suppose a new volcano suddenly formed in the middle of the United States. How might you explain what caused this volcano?
8. Checking for understanding: Volcanoes have been found on Venus, Mars, and even Jupiter's moon Io. What do you think this indicates to planetary geologists?

Click on [Volcanic Eruptions](#) on the bottom right of the page.

1. What are the two basic types of volcanic eruptions?

2. Checking for understanding: Several hundred years ago, a volcano erupted near the city of Pompeii. Archaeologists have found the remains of people embracing each other, suffocated by ash and rock that covered everything. What type of eruption must have this been?
3. What are pyroclasts?
4. Checking for understanding: Name three liquids that have low viscosity and three that have high viscosity.
5. What is the difference between a magma chamber and a mantle plume?
6. The boiling point of water is 100°C. Why might water make an eruption more explosive?
7. What are three names for non-explosive lava?
8. What factors are considered in predicting volcanic eruptions?
9. Why is predicting volcanoes so important?
10. Checking for understanding: Given that astronomers are far away from the subjects they study, what evidence might they look for to determine the composition of a planet on which a volcano is found?

Click on [Types of Volcanoes](#) on the bottom right of page. All of the following questions are checking for understanding questions.

1. Rank the four types of volcanoes in order from smallest to largest in diameter.
2. What factor is most important in determining the type of volcano formed in a given area?
3. Which type of volcano is most common?
4. Why is it that pahoehoe and a'a lava are more frequent in shield volcanoes than in composite volcanoes?
5. Why do you think that cinder cones are short-lived?
6. Checking for understanding: If supervolcanoes are so big, why do you think it took so long for scientists to discover them?
7. Some people have theorized that if a huge asteroid hits the Earth, the results would be catastrophic. How might an asteroid impact and a supervolcano eruption be similar?