

Assignment 5 - Volcanoes

Due Nov 29 at 11:59pm	Points 100	Questions 10	Available Sep 27 at 2:15pm - Nov 29 at 11:59pm
Time Limit None			

Instructions

Look at this [short Google Earth](https://earth.google.com/earth/d/1c4hd3-FvfGVJd0RKECxxSz5QAC9PEEIE?usp=sharing)  <https://earth.google.com/earth/d/1c4hd3-FvfGVJd0RKECxxSz5QAC9PEEIE?usp=sharing> tour of four volcanoes for this assignment.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	84 minutes	100 out of 100

 Correct answers are hidden.

Score for this quiz: **100** out of 100
Submitted Nov 6 at 5:23pm
This attempt took 84 minutes.

Question 1

10 / 10 pts

Head to Stop 1 on the Google Earth tour. This is Mt. Alyata, a volcano in Africa that last erupted in 1915. The extent of the volcano is outlined for you. Measure the longest dimension of this volcano. To do this, click on the "ruler" icon on the bottom of the menu on the left side. Move your cursor to one side of the volcano and click to start the measurement. Then click again to end the measurement. Remember, we want what looks like the longest distance and the unit should be kilometers. Enter a number only.

28.5

Question 2

5 / 5 pts

What is the distance in miles? Enter a number only.

17.71

Question 3

15 / 15 pts

Based on your measurement, what type of volcano is Alyata?

☒ Shield volcano

☐ Composite volcano

☐ Cinder cone

Question 4

5 / 5 pts

Head to Stop 2 on the Google Earth tour; this is Mt. Vesuvius. Note how densely populated the area around the volcano is. What is the diameter of Mt. Vesuvius in kilometers? Start your measurement on the western side of the volcano at the boundary between buildings and the natural landscape (which is green). End your measurement on the eastern side of the volcano at the same boundary. Make sure your line goes through the crater of the volcano. Enter a number only.

7.6

Question 5

10 / 10 pts

Based on your measurement, what type of volcano is Mt. Vesuvius?

☒ Composite volcano

☐ Cinder cone

☐ Shield volcano

Question 6

5 / 5 pts

Head to Stop 3 on the Google Earth tour. This is Capulin Mountain in New Mexico, the closest volcano to Houston. What is the diameter of Capulin in kilometers? Use the 3D mode on the bottom right to determine where the base of the volcano is to make your measurement. Enter a number only.

1.5

Question 7

10 / 10 pts

What type of volcano is Capulin?

☒ Cinder cone

☐ Shield volcano

☐ Composite volcano

Question 8**15 / 15 pts**

Calculate the amount of material erupted by Capulin. Since volcanoes are cone-shaped, you can use the **volume of a cone formula** <https://www.google.com/search?q=volume+of+a+cone&oq=volume+of+a+cone>. You need the radius, which you can get from the diameter, and you need the height. As you move your cursor around on Google Earth, the elevation is given to you on the lower right side of the screen, it should be in meters. Move your cursor to the highest point of Capulin and write down the elevation. Then move to the base of Capulin and record that elevation. Subtract the lowest elevation from the highest elevation to get the height of the mountain.

What is the volume in cubic meters? Remember to convert any units. The answer should be a whole number, no scientific notation.

Question 9**15 / 15 pts**

Stop 4 on the Google Earth tour is Mt. Rainier. Mt. Rainier is a composite volcano that impacts the Seattle-Tacoma region of Washington state. Open the link to the volcanic hazard map. What volcanic hazard poses the greatest risk to the city of Tacoma?

- ☒ Lahar
- ☐ Pyroclastic flow
- ☐ Volcanic ash
- ☐ Tsunami

Question 10**10 / 10 pts**

Why is lava not the greatest risk to Tacoma?

- ☒ The lava from Rainier would be intermediate or felsic, which does not travel very far because of its high viscosity.
- ☐ The mafic lava would not be able to reach Tacoma because it's too far away.
- ☐ The lava would flow down other river valleys.
- ☐ Rainier is an extinct volcano and there is no potential for eruption.

Quiz Score: **100** out of 100