Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4.3 VOLCAOES

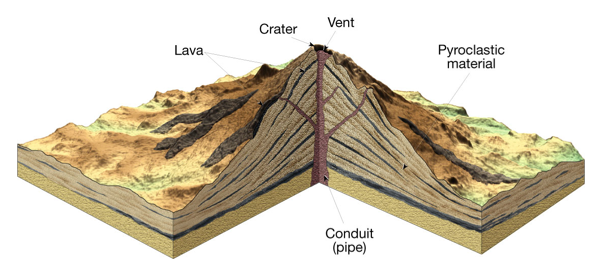
REVIEW: What’s the difference between magma and lava?

How a volcano \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (will it explode? Will it ooze?) is based for the most part on\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. What is viscosity?
   1. Viscosity is how \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a substance is to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. For example, honey is more viscous than water.
   2. Magma that contains more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will be more viscous, magma that contains less silica will be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ viscous.
   3. Magma that is very viscous will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, magma that is less viscous will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   4. Lava that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will be less viscous (like if you heat up honey) and will \_\_\_\_\_\_\_\_\_\_\_\_\_ more.
   5. Lava contains \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and if the lava is very viscous, those bubbles cannot \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Instead, the bubbles will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ upwards.

Along with lava, volcanoes also eject \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which is a fancy name for particles. They can be as small as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or as large as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

There are 3 main types of volcanoes, but they all have this general form:



|  |  |
| --- | --- |
| Volcano Type | Description |
| 1. Shield | Made of very \_\_\_\_\_\_\_\_\_\_\_\_\_\_ lava that spread really far and hardened.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shape  Lots of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ volcanoes (for example, Hawaii)  Eruptions are not very \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 2. Cinder cone | Ejects lots of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (chunks of pyroclastic material) that accumulate at the bottom.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sides  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (usually only erupt once).  Usually pretty \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 3. Composite cone | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!  Produce both \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ material that can reach up to \_\_\_\_\_\_\_\_\_\_\_\_\_\_ mph!  Usually found in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which is a zone of volcanoes that circles the Pacific Ocean.  Can sometimes form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which are mudflows that are made when lava mixes with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |

Other, minor types of volcanoes:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are volcanic depressions that are created when the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is drained and the volcano \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in on itself. Instead of looking like a mountain, it looks like a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Volcanic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are formed when a volcano has been \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ so that only the magma \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (pipe) is left.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are made from very low-viscosity lava flowing out of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (crack) in the ground. The lava spreads really far and creates a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ landform.

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**VOLCAAAAAANOES!**

Directions: Answer the following questions in full sentences.

1. What kind of volcano produces the most violent type of activity?
2. The viscosity of magma is dependent upon what?
3. What is pyroclastic material?

1. What is a caldera?
2. How is a volcanic neck formed? Why are some volcanic necks very economically important?
3. What is the Ring of Fire? What kinds of volcanoes are found there?
4. What is viscosity? How does it affect volcanic eruptions?
5. Match the following terms with the appropriate descriptions:
6. Shield \_\_\_\_\_\_\_\_
7. Cinder cone \_\_\_\_\_\_\_\_
8. Composite cone \_\_\_\_\_\_\_\_
9. Caldera \_\_\_\_\_\_\_\_
10. Viscosity \_\_\_\_\_\_\_\_
11. Lava plateau \_\_\_\_\_\_\_\_
12. Large volcanoes that produce violent eruptions
13. A large, flat volcano made from slow-moving lava
14. Low, broad volcanoes that form islands
15. A volcano that has collapsed, forming a crater
16. Small volcanoes with short life spans
17. A substance’s resistance to flow