

1. What role has volcanoes played in the formation of:
 - a. The atmosphere (5pts):
 - b. The hydrosphere (5pts):
2. Where do most volcanoes occur on the Earth (5pts)?
3. Molten rock that is underground is called _____, but becomes _____ when it reaches the Earth's surface.
4. Explosive eruptions can produce rapidly cooled rock fragments called _____. These range in size from the smallest called _____ to large boulders called volcanic _____.
5. Calm oozing of magma out of the ground produces lava _____.
6. Pyroclastics and lava flows form _____ igneous rocks.
7. Lava flows and pyroclasts pile up to form _____.
8. Name three good things that come from volcanoes (3pts).
 - a.
 - b.
 - c.
9. Name three bad things that result from volcanoes (3pts).
 - a.
 - b.
 - c.
10. The violence of a volcanic eruption is controlled by the amount of dissolved _____ in the magma, and the _____ (gooeyness) of the magma.
11. Circle the correct terms that would make for a violently explosive volcano (3pts).

High Silica	Low Silica
Cooler magma	Hotter magma
Low dissolved gases	High dissolved gases
12. High silica extrusive rock tend to be _____ in color, whereas low silica extrusive rocks tend to be _____ in color.
13. Obsidian is sometimes called volcanic glass. Obsidian forms from lavas that cool very _____.
14. Extrusive igneous rocks that have larger crystals in a matrix of much finer crystals or glass are called _____.
15. Some extrusive igneous rocks were formed when large quantities of gas bubbles were trapped in the cooling lava. These rocks are said to be _____ and _____ is a good example.

16. Label the parts of the volcano x-section below using the following words (6pts):

Magma Chamber

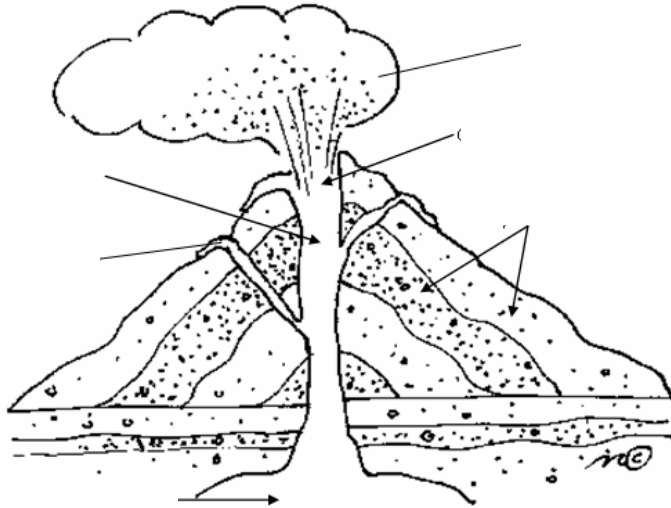
Side Vent

Crater

Ash Cloud

Main Vent

Pyroclastic Layers



17. Compare and contrast the three different types of volcanoes (9pts).

Volcano Type	Description	Composition	Examples
Shield			
Composite			
Cinder Cone			

18. _____ eruptions occur when very fluid lava (basalt) is extruded onto the Earth's surface in very large quantities, creating lava plateaus. Such eruptions correspond to a mass extinction event, 250 million years ago that wiped out some 90% of all living things.

19. The largest volcano in the solar system is on the Planet _____ and is called Olympus Mons. This volcano is larger than the State of Arizona, and three times higher than Mount Everest.

20. One of Jupiter's moons called _____ is the most volcanically active body in the solar system.

21. Review how texture is related to cooling history (5pts).

22. How are volcanic cones related to the viscosity of the lavas that produce them (5pts)?