

M O D E R N E A R T H S C I E N C E

Chapter 7

Volcanoes**Review**

Choose the best response. Write the letter of that choice in the space provided.

- _____ 1. Factors that allow magma to push its way upward include temperature and
a. color. b. density. c. crust. d. thickness.
- _____ 2. Activity caused by the movement of magma is called
a. extraterrestrial. b. pyroclastic. c. volcanism. d. subduction.
- _____ 3. The belt of volcanoes that encircles the Pacific Ocean is called
a. the subduction zone. b. an island arc.
c. a hot spot. d. the Pacific Ring of Fire.
- _____ 4. Island arcs are formed by the collision of
a. two plates with continental crust at their edges.
b. two calderas.
c. two volcanic bombs.
d. two plates with oceanic crust at their edges.
- _____ 5. Areas of volcanism within plates are called
a. hot spots. b. calderas. c. cones. d. fissures.
- _____ 6. Lava that breaks into jagged chunks when it is subjected to rapid cooling is called
a. aa. b. pahoehoe. c. pillow lava. d. felsic lava.
- _____ 7. Explosive volcanic eruptions result from
a. mafic lava. b. aa lava. c. felsic lava. d. pahoehoe lava.
- _____ 8. Pyroclastic materials that form into rounded or spindle shapes as they fly through the air are called
a. ash. b. lapilli.
c. volcanic bombs. d. volcanic blocks.
- _____ 9. The Hawaiian Islands are formed from
a. shield volcanoes. b. cinder cones.
c. composite volcanoes. d. calderas.

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Choose the best response. Write the letter of that choice in the space provided.

- _____ **10.** A cone formed only by solid fragments built up around a volcanic opening is a
 - a.** shield volcano.
 - b.** cinder cone.
 - c.** composite volcano.
 - d.** stratovolcano.

- _____ **11.** The depression that results when a cone collapses into an empty magma chamber is a
 - a.** crater.
 - b.** vent.
 - c.** caldera.
 - d.** fissure.

- _____ **12.** Shortly before a volcano erupts, magma may cause its surface to
 - a.** bulge out.
 - b.** cave in.
 - c.** get darker.
 - d.** melt.

- _____ **13.** Scientists have discovered that before an eruption, earthquakes
 - a.** completely stop.
 - b.** increase in number.
 - c.** bear no relation to volcanism.
 - d.** decrease in number.

- _____ **14.** Olympus Mons, the largest known volcano in the solar system, is found on
 - a.** the moon.
 - b.** Io.
 - c.** Mars.
 - d.** the earth.

- _____ **15.** The material ejected from volcanoes on Io is probably
 - a.** sulfur and sulfur dioxide.
 - b.** basalt.
 - c.** granite.
 - d.** lapilli.

Critical Thinking

Read each question or statement and answer it in the space provided.

- 1.** Most lava that forms on the earth’s surface goes unnoticed and unobserved. Why does this happen?

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Read each question or statement and answer it in the space provided.

- 2. Can you assume that every mountain located along the edge of a continent is a volcano? Why or why not?

- 3. Why does felsic lava tend to produce composite volcanoes and cinder cones rather than shield volcanoes?

- 4. How might geologists distinguish an impact crater on earth, such as Meteor Crater in Arizona, from a volcanic feature?

Application

Read each question or statement and answer it in the space provided.

- 1. While exploring a volcano that has been dormant, you observe volcanic ash first and lapilli later. Are you more likely to be moving toward or away from the volcanic opening? Explain your answer.

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Read each question or statement and answer it in the space provided.

2. If you see a steep volcanic cone that is only 300 m high, what can you assume about the type of cone and its composition?

3. To predict a volcanic eruption, what kinds of information would you seek?

4. Construct a **concept map** using as many new terms as possible from the list on page 128 of your textbook to illustrate the concepts in this chapter.

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