SECTION 18.3  Volcanoes

In your textbook, read about the anatomy of a volcano and volcanic material. Circle the letter of the choice that best completes the statement or answers the question.

1. Lava erupts through an opening in Earth's crust called a 
   a. vent.  
   b. crater.  
   c. caldera.  
   d. volcano.

2. A bowl-shaped depression that forms around the vent of a volcano is a 
   a. magma chamber.  
   b. vent.  
   c. crater.  
   d. sill.

3. Rock fragments thrown into the air during a volcanic eruption are called 
   a. dikes.  
   b. sills.  
   c. calderas.  
   d. tephra.

4. The smallest tephra are 
   a. lapilli.  
   b. dust.  
   c. volcanic bombs.  
   d. volcanic blocks.

5. Fast-moving clouds of gas, ash, and other tephra are 
   a. calderas.  
   b. pyroclastic flows.  
   c. volcanic blocks.  
   d. volcanic bombs.

6. Which of the following forms when the top or side of a volcano collapses into the magma chamber? 
   a. dike  
   b. pyroclastic flow  
   c. caldera  
   d. vent

7. Large, angular volcanic fragments are called 
   a. pyroclastic flows.  
   b. volcanic blocks.  
   c. vents.  
   d. volcanic bombs.

8. When magma reaches Earth's surface, it is called 
   a. a vent.  
   b. a pyroclastic flow.  
   c. lava.  
   d. calderas.

9. Large, rounded or streamlined tephra are called 
   a. pyroclastic flows.  
   b. volcanic blocks.  
   c. calderas.  
   d. volcanic bombs.
SECTION 18.3  Volcanoes, continued

In your textbook, read about types of volcanoes. Label the diagrams as composite volcano, cinder-cone volcano, or shield volcano.

10. 

11. 

12. 

Identify the type or types of volcano being described as shield volcano, cinder-cone volcano, or composite volcano.

13. Forms when tephra are ejected into the air then fall back to Earth and pile up around a vent

14. Has broad, gently sloping sides and a nearly circular base

15. Forms when layers of basaltic lava accumulate during a nonexplosive eruption

16. Mauna Kea in Hawaii is an example.

17. Small volcano with steep sides

18. Forms when layers of tephra alternate with lava

19. Forms from lava that contains relatively small amounts of gases and silica 

20. Forms from lava that is higher in water and silica content than lava that forms shield volcanoes

21. Fueled by magma that contains large amounts of silica, water, and gases

22. Magma that fuels this type of volcano contains large volumes of gases but not silica and water.

23. Potentially the most dangerous to humans and most destructive to the environment

24. Mount St. Helens and Mount Rainier are examples.
SECTION 18.3  Volcanoes, continued

In your textbook, read about where volcanoes occur.
Use each of the terms below just once to complete the passage.

Hawaiian Islands  crust  divergent  flood basalts  hot spots
Iceland  mantle  volcanoes  plateau  ocean ridges
Circum-Pacific Belt  western  convergent

Most of the world’s volcanoes form along (25) ____________ plate boundaries. Slabs of oceanic crust descend into the (26) ____________ and melt. The magma that forms is forced upward through the overlying plate and forms (27) ____________ when it reaches Earth’s surface. The (28) ____________ marks the locations of most convergent boundary volcanoes. It stretches along the (29) ____________ coasts of North and South America and down the eastern coast of Asia.

At (30) ____________ plate boundaries, magma is forced upward into fractures and faults that form as plates separate or spread apart. Most of the volcanoes that form along divergent boundaries are located underwater along (31) ____________. This type of volcanic activity can be observed above sea level in (32) ____________, which sits atop the Mid-Atlantic Ridge.

Some volcanoes that form far from plate boundaries form over (33) ____________, which are unusually hot regions of Earth’s mantle. At hot spots, high-temperature plumes melt rock. The magma that forms moves upward toward the (34) ____________ and melts the crust to form a volcano. As a tectonic plate moves over a hot spot, a string of volcanoes forms. The (35) ____________ are forming as the result of a hot spot. Hot spots can also result in the formation of (36) ____________, which erupt from fissures to form a flat plain or a (37) ____________ rather than volcanic mountains.
**Main Idea**

**Details**

**Compare and Contrast** the three types of volcanoes by completing the table below.

<table>
<thead>
<tr>
<th>Type of volcano</th>
<th>Description</th>
<th>How does it form?</th>
<th>How explosive is its eruption?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cinder-cone</td>
<td>steep sides, generally small</td>
<td></td>
<td>more explosive than shield</td>
</tr>
<tr>
<td>Shield</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composite</td>
<td>larger, with steep slopes that are concave</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Volcanic Material**

*Use with page 483.*

**Sketch** a small volcano below at the left. Draw and label an example of each of the following types of tephra as it is ejected above or to the right of the volcano. Your drawing should illustrate relative sizes and possible places where the tephra might be found. Then write the size range for each next to the label.

- ash
- dust
- lapilli

- volcanic blocks
- volcanic bombs