Section 10.1 The Nature of Volcanic Eruptions

This section discusses volcanic eruptions, types of volcanoes, and other volcanic landforms.

Reading Strategy

Previewing  Before you read the section, rewrite the green topic headings as questions. As you read, write the answers to the questions. For more information on this Reading Strategy, see the Reading and Study Skills in the Skills and Reference Handbook at the end of your textbook.

Factors Affecting Eruptions

1. What are three factors that determine how violently or quietly a volcano erupts?

2. Circle the letter of the term that describes lava’s resistance to flow.
   - a. temperature
   - b. eruption
   - c. viscosity
   - d. basaltic

Volcanic Material

3. Is the following sentence true or false? One thing all volcanic eruptions have in common is that they emit large amounts of gas.

4. During a volcanic eruption, particles called ____________, ranging from very fine dust to pieces weighing several tons, are ejected.
Types of Volcanoes

5. Select the appropriate letter in the figure that identifies each of the following types of volcanoes.

6. The steep-walled depression known as a(n) _____________ is located at the summit of many volcanoes.

7. Circle the letter of the type of volcano that is the product of gas-rich basaltic magma mostly in the form of loose pyroclastic material.
   a. cinder cone  
   b. shield volcano  
   c. stratovolcano  
   d. composite cone

8. Is the following sentence true or false? Cinder cones are the most potentially dangerous volcanoes because they generate the most explosive eruptions. ________________

Other Volcanic Landforms

Match each description with its volcanic landform or feature.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volcanic Landform or Feature</th>
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<tbody>
<tr>
<td>conduit that feeds magma to a volcano’s surface</td>
<td>a. caldera</td>
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<tr>
<td>wide area that forms when low-viscosity basaltic lava flows from fissures</td>
<td>b. pipe</td>
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<tr>
<td>rock conduit that remains when the surrounding cone has been eroded</td>
<td>c. lava plateau</td>
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<tr>
<td>depression formed by the collapse of the top of a volcano</td>
<td>d. volcanic neck</td>
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