

THINKING CRITICALLY

● Minding Mount St. Helens

Mount St. Helens is part of a chain of continental volcanoes in the Cascade Range in the northwestern United States. After lying dormant for 123 years, Mount St. Helens erupted in May 1980. Scientists first noted volcanic activity on Mount St. Helens on March 27, 1980, when small tremors began and the mountaintop began to bulge. About a week later, scientists discovered steam coming out of cracks in the north side of the mountain.

The first violent eruption occurred on May 18, 1980. At that time, the north side of the mountain collapsed, and the collapsed material was ejected from the mountain.

Huge clouds of gas, dust, ash, and pulverized, hardened lava formed as the volcano erupted. The clouds reached a height of 24 km and a width of 32 km. The volcanic ash that fell to earth has a very high silica content.

Your Turn to Think

1. What kind of plate tectonic activity is responsible for the formation of the Cascade Range?
2. During the nineteenth century, Mount St. Helens erupted three times. Each time, Mount Baker, a nearby volcano, also erupted. What hypothesis can you make about the origins of Mount St. Helens and Mount Baker?
3. Does the 1980 eruption of Mount St. Helens by itself support your hypothesis about Mount St. Helens and Mount Baker? Why or why not?
4. Why was steam coming from cracks in the side instead of the top of the volcano?
5. Why did it take two months from the first observation of activity before Mount St. Helens finally erupted on May 18, 1980?
6. What would you expect the composition of the rocks around Mount St. Helens to be? What evidence suggests this to you?