

Today's Discoveries Unlock the Past

Overview - Chapter 2

Living with a **VOLCANO** in Your Backyard
MOUNT RAINIER



Chapter Two introduces external volcanic processes at Cascade volcanoes, such as eruptions that produce lava flows, pyroclastic flows, volcanic ash, and the formation of volcanic mudflows (lahars). Then, students discover methods for investigation of past volcanic activity, and learn how scientists identify hazardous areas. Chapter two activities strengthen students' mental connections between volcanic processes, hazards, and their own community.

Throughout Chapter Two, encourage students' recognition of lahars as the principal hazard to communities located on valley floors at the base of Cascade volcanoes. Identify volcanic ash as abrasive but non-toxic fragments of volcanic rock that cool to air temperature and are transported by winds, often to great distances from their source volcano. Activities in Chapter Two dispel any notion of direct risk to communities near Mount Rainier by lava flows,

pyroclastic flows, volcanic gases and the small debris flows that are a common occurrence in the upper valleys of the Cascade

Start this chapter by viewing the **Understanding Volcanic Hazards video** and instructing students complete the worksheet. Use **Volcanic Processes** with younger students or if the video is unavailable. Both activities provide descriptions of volcanic processes and their potential effects on communities. The **Perilous Beauty video** activity describes volcanic hazards at Mount Rainier.

Offer students more in-depth investigations into the mechanics of each process in **Tephra Popcorn, Rock Stars, Lava Building Blocks, Fire and Ice, and Lahar in a Jar**. In **Volcano Fan Club, Tephra Explorer, and Earth Blocks**, students learn about the Law of Superposition and other principles of geological investigation. Students become the scientists as they construct and reveal rocky layers in **Shoobox Geologist**. They test their knowledge of volcanic processes in **Rock Rubble Review**. The information learned in chapter two will help students appreciate the geology observed during school field trips to the south side of Mount Rainier (see **Journey Back in Time** fieldtrip in the Appendix). This knowledge of volcanic processes can motivate your students to participate in the family and community preparedness actions presented in Chapter Three.

Make your message clear:

Volcanic activity has been changing the Pacific Northwest landscape dramatically for thousands of years. The volcanic vistas we enjoy today are different from those seen by our ancestors, and future eruptions surely will alter today's landscape further for our descendants. Our lives encompass an instant of geologic time, a snapshot of an ongoing story that has no end in sight.

