

# Youth & Education in Science (YES)

Lesson Title	<a href="https://pubs.usgs.gov/gip/19/">Living with a Volcano in Your Backyard—An Educator’s Guide with Emphasis on Mount Rainier</a> ( <a href="https://pubs.usgs.gov/gip/19/">https://pubs.usgs.gov/gip/19/</a> )
Grades	5-9 (with extensions for high school or elementary)
Length	Over 30 lessons included in PDF, each ranging approx. 20 - 50 min. Suggestions for activity sequencing included for 1, 2, 3, and 6 week courses of study.
Topics	Natural Hazards, Volcanoes, Geologic Processes, Preparedness
Materials Needed	Included with each lesson plan
NGSS Alignment	NGSS_volcano lessons.pdf This interdisciplinary curriculum is aligned with the middle school level Washington State 2009 K-12 Science Learning Standards (matrix for each chapter details alignment).

## Overview

Chapter 1. What the Past Tells Us This chapter provides a general overview of the volcanoes of the Cascade Range. The chapter begins with a pre-assessment activity entitled “Eruption!” and then addresses the plate tectonics responsible for Cascades volcanism. It ends with activities regarding how volcanoes work.

Chapter 2. Today’s Discoveries Unlock the Past Volcanic processes are the principal focus of Chapter 2 and are the natural progression from the Chapter 1 overview about how volcanoes work. Activities invite inquiry about volcanic processes at Cascade volcanoes and about how researchers conduct their research.

Chapter 3. Don’t be Scared—Be Prepared! Chapter 3 contains information about volcanic hazards and suggestions for preparedness. Several activities suggest how students can appreciate the benefits of living near a Cascade volcano, and can enjoy them, most often from their own communities.

## Related Links

[USGS Volcano Hazards Program](#)

[USGS Cascade Volcano Observatory](#)

[Mt. Rainier Monitoring Summary](#)

## Vocabulary

Volcano, tephra, magma, subduction zone, pressure, lahar, lava flow, pyroclastic flow, debris flow

## Teacher Background

*Living with a Volcano in Your Backyard—An Educator’s Guide with Emphasis on Mount Rainier* is a three-unit guide that provides science content and inquiry-based activities about volcanoes of the Cascade Range, with emphasis placed on Mount Rainier. Activities are designed for middle school students. Adaptations and extensions offer opportunities for students in higher and lower grade levels. Background

sections provide more in depth information. This guide includes more than 30 activities, a field guide to geological sites of interest in Mount Rainier National Park, glossary, list of Internet resources, and supplementary information.

## Lesson Plans

30+ lesson plans available in the [Educator's Guide](#)

<https://pubs.usgs.gov/gip/19/>