Mount Rainier

National Park Service U.S. Department of the Interior

Mount Rainier National Park Ashford, WA



Activity: Ask A Ranger Grade Level: K-12 School Subjects: Life Science, Culture, National Park Service Time Requirement: 30-40 minutes

Essential Academic Learning Requirement

(For full list of grade appropriate standards, see appendix 1)

5.1.1	Understands Reasoning
5.1.2	Evaluates Reasoning
5.2.1	Forms Questions
5.3.1	Deliberation

Lesson Overview

A snowy mountain peak comes to mind when picturing Mount Rainier National Park. A closer look would reveal lots of varied topics; from ecology to geology, history to culture. The people who work at this park and places like it are a special kind. They have a wealth of knowledge, stories, and insight about the National Park System, the park they work at, life as a ranger, and much more. Through the "Ask a Ranger" distance learning program, students are given an opportunity to ask a park ranger any question pertaining to Mount



Rainier National Park. This program can be adapted to fit any curriculum objectives, and is versatile enough for any age.

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Lesson Objectives

By the end of the lesson, students will be able to

- Prepare and structure thoughtful questions from a variety of topics.
- Communicate informally with a ranger.
- Determine what a National Park is and describe some specific Mount Rainier National Park topics.

Background Information

The National Park Service's arrowhead



represents what the Park Service stands for. Each symbol: the Sequoia tree and bison, the mountain and water, and the arrowhead itself, epitomize the different characteristics that make up parks. For this purpose the people who staff the parks have a variety of skills, including interpretation, education, law enforcement, visitor assistance, maintenance, search and rescue, and many more. These people have to be prepared to preserve and protect the over 408 units in the National Park Service. Some of these sites are designated parks, historical sites, memorials, recreation areas, scenic trails, lakeshores, and seashores. What a variety of skills park rangers possess!

Mount Rainier National Park may look like just a towering mountain to most visitors at first, but within its 236,000 acres contains rare and colorful forms of life, disappearing glaciers, world renowned wildflowers, archaeological sites, and more. Half a million years ago Mount Rainier erupted, forever changing this ancient landscape. As volcanic processes continue to build up this rock giant, blue and dirt colored glaciers grind it down. Twenty six named glaciers crack and move down the mountain melting and running off into six major rivers, traveling all the way to the Puget Sound. Many local tribes used Mount Rainier lush forest for hunting, fishing and gathering as well as recreational enjoyment. Today, thousands of people still come to the park to hike, drive, climb, and so much more. Over 97% of the park is designated wilderness making the possibility for a true nature adventure available at any visitor's fingertips. Even our roads were designed to increase the visitor experience, traveling along the landscape and complimenting its features. This volcanic colossus is considered an "active" volcano and scientists are learning more and more about Earth's geological processes from a variety of experiments. This active nature doesn't scare away visitors as every kind of person, student to retiree, hiker to non-hiker, leave this place with a sense of awe, and a deeper appreciation for the beauty of Mother Earth.

Plants and animals are found in nearly every part of Mount Rainier National Park, but not all their habitats



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are the same. In fact, they can be quite different! Here, scientists have grouped those with similar habitats into three life zones: the forest, subalpine, and alpine. Every organism has certain traits and behaviors that allow it to live in a particular environment. Lush forests contain the greatest quantity of life, hosting green shade tolerant plants and giant old growth forests. Animals in this zone range from the bugling elk to the endangered spotted owl. The subalpine is world renowned for its brilliant wildflowers. Due to the orographic effect this elevation receives the greatest amount of precipitation, intense wind, sun, and snow. This makes the life that

lives here very special.

The alpine zone extends from the tree line to the mountain's summit, mostly ice and snow covered for the entire year. This makes the life at this zone difficult, but there is still life here. In total, the distinctive nature of Mount Rainier is due to how different the life zones are from each other, and how quickly it takes to travel from one to the next. The change is actually so extreme that traveling from the Nisqually entrance to the summit is the same as traveling from Seattle to the Arctic Circle. From a snowy mountain to a meadow filled with wild flowers to a green dense forest, Mount Rainier National Park hosts a variety of unique life due to its variety in temperature, moisture, and elevation.

To learn more about Mount Rainier's geology, ecology, history or culture, please visit any of the supplemental materials.

Supplemental Materials

In addition to the distance learning requirement, please feel free to explore any of the links provided in Appendix 2, like <u>www.nps.gov/mora</u> and many more.

Procedure

Prior to the program: Have the students complete the pre-program activity as well as the worksheet for the program itself. The question worksheet will help frame the student's research and questions. Introduce the state of Washington and the topic or issue that will be discussed during the program. The students will be



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prompted throughout the program, so be sure to brief the students on how to answer questions and speak clearly into the microphone or speaker.

During the program: Have the students seated so wherever they are they can see the video screen. The ranger will bring visual aids and do a general introduction to the park at the beginning of the broadcast. The rest of the time will be responding to the student's questions.

Assessment

Pre Lesson: Investigate Mount Rainier National Park: The students will investigate and research Mount Rainier through a variety of sources. Students will then devise questions from a variety of topics, or a specific instructor designated topic.

Post Lesson: Mount Rainier Google Earth Challenge: The students will explore Mount Rainier National Park and other localities through Google Earth. Following prompts, students will demonstrate their map knowledge, and gain a deeper understanding for this area.



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