



Would You Survive As a Cascade Red Fox?



Activity: A day in the life of a *Vulpus vulpus cascadenis* **Subjects:** Ecosystems, Habitat, Endangered

Grade Level: 3rd-5th

Time Requirements: 25-35 minutes

Standards Addressed:

3-LS3-1	Inherited traits
3-LS3-2	Environment Traits
3-LS4-3	Survival
3-LS4-4	Environmental Change
4-LS1-1	Life Needs
5-LS2-1	Matter Movement
5-PS3-1	Sun's Energy

Lesson Overview

You open your eyes in a primeval forest. Far in the distance you hear a mouse squeak a football field's length away. Using your strong upper body, you bring back food for your family. Life is good but not easy at Mount Rainier National Park. While some animals migrate or hibernate, there are a few species that are daring enough to stay around. The cascade red fox is not only important to researchers, but also serves to demonstrate how animals fulfill their life needs in such an extreme environment.





Lesson Objectives

By the end of this program, students will be able to:

- Define adaptation and life needs.
- Choose appropriate life needs for a cascade red fox and speculate the outcome of different choices.
- Generalize what a change in climate can do to an animal and the response of the animal overtime.
- Discuss and evaluate the role of human impact with the cascade red fox.

Background Information

Hiking in Mount Rainier National Park is fun and can be exciting. Walking through fields of colorful wildflowers while realizing the active volcano below is quite the experience for most Mount Rainier visitors. For the park occupants, the plants and elevation changes are just a part of everyday life. In order to meet the food, water, and shelter needs, these animals travel far and wide so they can fulfill

their life needs. A beautiful example of this daily action can be demonstrated with the cascade red fox.

To survive, a cascade red fox must hunt using its skilled features that have been adapted over time. These highly specialized animals are so distinct from other foxes that this is a one of a kind predator in the food web. Enjoying cold temperatures far more than their relatives, the cascade red fox have thrived on mountains in the Cascade Range for hundreds of thousands of years. Recently through, in part due to a moving climate and human interaction, their survival is being threatened. Habituation and loss of hunting grounds has decreased their range only to Mount Rainier and the surrounding National Forests. Through threatened, the cascade red fox still endures today.

Growth, survival, behavior, and reproduction are the priority in the daily struggle to survive. While humans read signs, the cascade red fox uses urine marking and keen scent to find what they need. Leaping and pouncing, they find food all year 'round. If not in a male female companionship, other non-childbearing member of a family will contribute to a young pup's survival and let Ma and Pa have a bit of free time. Social interaction is key, and helps keep the animals safe and well taught. The pups are raised in messy dens dug in the ground or tree roots, and are typically at the forest edge. After reaching an adult age after a half year, these pups are ready to hunt and play within their range. Through their omnivore diet, range, and playful fun, this animal is a great example to explore the many aspects to Mount Rainier.



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Supplemental Materials

In addition to the distance learning requirements, please feel free to explore prior to the program:

www.nps.gov/mora (Learn About the Park: Nature, etc)

<http://wdfw.wa.gov/conservation/endangered/>

Videos: <http://www.nps.gov/mora/learn/photosmultimedia/video.htm>

Youtube: www.youtube.com/user/MountRainierNPS/videos

Facebook: www.facebook.com/MountRainierNPS/videos

Procedure

Prior to the program: Have the students complete the pre-program activity as well as explore some of the supplemental materials. Introduce the state of Washington and some of the plants and animals found at Mount Rainier. Look at the park map and identify major areas and features of the park like the summit, roads, trails, and general size of the park. Have the students generate questions for the ranger to be asked after the program or as time allows. The students will be prompted throughout the program, so be sure to brief the students on how to answer questions and speak clearly into the microphone or computer.

During the Program: Have the students seated so wherever they are they can see the video screen. The ranger will share pictures, graphics, audio, and other props in an interactive program.

Assessment

Pre Lesson: Every Species for Itself! This activity introduces habitats and begins to introduce the topic of how habitat change can affect a species. This activity comes with a downloadable worksheet.

Post Lesson: What can the fox say? After the distance learning program, this activity expands more on adaptations as well as includes a fun fox activity.



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