



Grade Level: 3-12
Duration: Preparation—45 minutes;
Activity—2, 45 minutes sessions
Subject Area: Biology
Skills: Observing, data collecting,
analyzing

Elk Watch Safari

Grab your binoculars and head outdoors to observe wildlife in action!

Summary What child (or adult) doesn't clamor for a clear view when given the chance to see wildlife? In this activity students join a group safari to see the majestic elk herds of the Toutle Valley. On their journey, students will learn to recognize certain behavior and characteristics of elk, and then use the data they collect to reinforce their knowledge about the animals.

Objectives In this activity, students will:

1. Practice basic wildlife observation skills.
2. Collect, analyze and discuss data.

Materials

- copies of the *Elk Watch Safari Recording Sheet* (with *Elk Behavior List* on the back)
- pencils
- clipboards
- binoculars or spotting scopes (a limited number of free scopes are mounted at the Forest Learning Center)
- appropriate clothing for extended outdoor observations
- timer or watches with second hand

Preparation Review the activity.
Make copies and collect appropriate materials.

Key Words

behavior - the regular actions or functions of an animal; can be used to characterize a particular family, species or individual

bugle—high squealing sounds made by bull elk during rut

bull—male elk, grows to an average of 700 pounds

calf—young elk

cow—female elk, grows to an average of 500 pounds

habitat—a defined area with specific characteristics where an animal or plant lives

herbivore—animal that eats plant material

rut—mating season, which occurs in autumn

velvet—soft, fuzzy skin that covers a bull's antlers as they grow

Background Information

Large mammals known as *elk* (*Cervus elaphus*) live in coastal forests, alpine meadows, desert valleys, and their preferred habitat, grassy plains. They're found primarily in the western part of the United States and Canada.

Herds of these gentle herbivores lived in the Mount St. Helens area before the 1980 eruption. But the blast changed everything. Most of the mammals living in the area were killed, and the valley was buried by mudflow and landslide debris.

After the eruption, the Soil Conservation Service seeded thousands of acres to help curb erosion. The land sprouted with nutritious plants, prompting new herds of elk to return. The Mount St. Helens State Wildlife Area, located in the valley below the Forest Learning Center, was created in 1990 to protect the elk's habitat. The herd you see today lives in the valley year round.

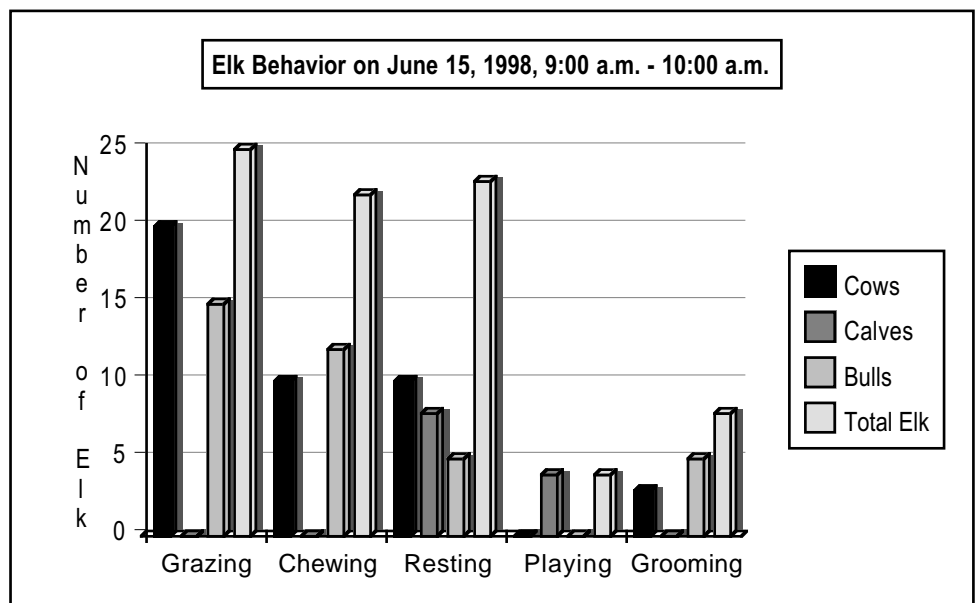
Introductory Questions

- What kinds of wildlife do you see on a daily basis?
- Are there differences between the wildlife you see at home compared with at school?
- What kinds of wildlife do you think live near Mount St. Helens?



Procedure

1. Begin by studying elk as a class. Take a trip to the library, or use elk as a search topic on the Internet. Encourage students to share what they learn with others through posters, presentations, skits or even web pages.
2. Prior to your trip to the Forest Learning Center, explain the *Elk Watch Safari* activity to your students and ask them to predict what the elk will be doing at the time of your visit. Have them write down some ideas so that later they can compare their notes to the actual data they collect. If you are working with students who have not used binoculars or scopes before, practice using these tools before your trip.
3. Once you arrive at the Forest Learning Center, visit the Elk Viewpoint. Divide the class into groups of 2-3 students. One member of each group will act as the observer and the other will be the recorder and timer (in groups of 3, each student will have one job). An adult leader can act as timer for the whole group if necessary. Using spotting scopes or binoculars, observers should watch the behavior of one elk for 3 minutes, announcing to their recorder everything that the elk does. (For younger students you may want to shorten the list of observable activities to only the most common. For older students, suggest that they time the duration of each activity as well.) Recorders can use the *Elk Watch Safari* recording sheet to make notes. After the first observer's time is up, students should switch roles until everyone has had a chance to observe an elk for 3 minutes. Encourage each observer to watch a different elk, if possible.
4. Back in the classroom, have all students compile their elk behavior data into a single graph. A simple bar graph would chart the type of behavior on the x-axis and the number of elk observed on the y-axis. (See sample.) If your students also timed each elk activity within the 3 minute observation window, a more detailed graph could include the amount of time an activity is observed on the y-axis.



Assessment

Discuss the results of the elk observation activity with your students. Use questions such as the following to prompt further discussion:

- How did the elk's behavior compare with the students' predictions?
- Were the students surprised by what they saw?
- Why might weather information be important?
- What behavior was most common? Least common?
- What do the students think the elk do at night?
- What natural cycles affect the life of elk?
- If the students were elk, why would they want to live in the Toutle Valley?

Extensions

- Encourage students to observe other wildlife at school or at home. If you choose a common animal to observe, the data can be compared as a class just as you compared elk data.
- Discuss as a class how you would manage the elk in the Toutle Valley. Some questions to consider as you develop a management plan:
 - What are the factors that limit the number of elk the valley can support?
 - What habitat upkeep is planned, if any? How might better habitat affect the elk population?
 - What action, if any, will you take if overpopulation begins to lead to starvation and disease?
 - Will you allow hunting? Will other recreational access be allowed?

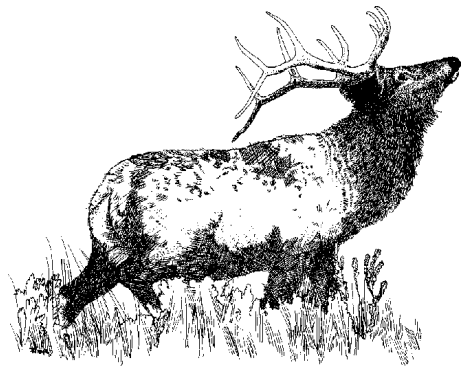
Resources

Merrill, E., Raedeke, K., and Taber, R. *Population Dynamics of Elk in Mount St. Helens Blast Zone*. Seattle, WA: Wildlife Science Group, College of Forest Resources, University of Washington, 1987.

(Scientific paper available from the Forest Learning Center.)

Wild About Elk: An Educator's Guide. Project Wild, Council for Environmental Education and the Rocky Mountain Elk Foundation, 1994.

Rocky Mountain Elk Foundation, 2291 W. Broadway, P.O. Box 8249, Missoula, MT, 59807-8249; Tel: (406) 523-4500; Web Site: www.rmef.org



Helpful hints for elk watching:

- Review the Elk Behavior List for ideas of what to look for before you begin your elk observation.
- Pick an elk that is easy to see and that seems to be doing something.
- Do not be surprised if the elk does the same thing for all 3 minutes of your observation.
- The presence of elk in the valley isn't guaranteed. If the elk are not present you can practice your observation skills on other animals you may see around the Forest Learning Center. Look for birds, insects, small mammals, even other visitors!
- If possible, visit the Forest Learning Center in the Fall during the elk's mating season and again in June during calving season. Then compare elk behavior between the two visits.

Elk Watch Safari Recording Sheet

Weather Data

Fill in today's weather data below.
Some of the information can be found
inside the Forest Learning Center at
the front desk.

Temperature: _____
Humidity: _____
Cloud Cover: _____
Wind Direction: _____
Wind Speed: _____
Barometric Pressure: _____

Briefly describe the weather:

Observer: _____ **Date:** _____

Recorder: _____

School/Group Name: _____

Time Started: _____ **Time Stopped:** _____

Elk Description:

Sex: Bull Age: Calf
 Cow Adult
 Can't Tell Can't Tell

Other: _____

TIME	OBSERVED BEHAVIOR

Elk Behavior List

Routine Behavior (can be observed throughout the year)

- ***Alert**–Head up, ears forward; adults taking turns watching for predators
- ***Bedded Down**–Lying down
- Browsing**–Eating trees or shrubs
- Chewing Cud**–Chewing while laying down or standing
- ***Grazing**–Eating grass
- Grooming**–Scratching, licking, biting an itch
- In Water**–Crossing the river, splashing in a pond
- Running**–Note what disturbance may have prompted the run
- ***Standing**–Standing, doing nothing else
- Vocalizing**–Chirping, making sounds to other elk
- Walking**–Note whether the elk is also eating

Rutting Behavior (observed September–October)

- ***Bugling**–Wailing, drawn out sounds made by bull elk, used to intimidate rivals
- Fighting/Sparring**–Two bulls fighting with antlers
- Herding**–Bull collecting cows into a group, chasing off smaller bulls
- ***Posturing**–Two bulls walking side-by-side, comparing the size of each other
- Removing Velvet**–Bull elk rubbing antlers on vegetation
- Sniffing**–Bull elk testing air for cow elk scent
- Wallowing**–Bull lying in mud bath

Caring for Calves (observed June–July)

- ***Baby-sitting**–One cow watching several calves
- Feeding Calf**–Cow nursing a calf
- Giving Birth**–Cow delivering a calf
- Hiding**–Young calf hugging the ground to hide from predators
- Nursing**–Calf suckling on cow's teats
- Playing**–Calves chasing each other or playing “king of the hill”

**Behaviors marked by an asterisk indicate most commonly observed behaviors.*