

ANIMAL ADAPTATIONS

Guided Tour



GUIDED TOUR DESCRIPTION

Animals truly are amazing! They can survive in their environments through their amazing adaptations. During this lesson, students will discover the basic habitat needs of animals, and explore how living things adapt to seasons and environments. Students will journey through four habitats in the Greater Yellowstone Ecosystem – the alpine, forest, mountain meadow, and plains/basin environments. Dress-A-Beaver Activity included in Pre-K through 4th grade programs.

TOUR OBJECTIVES

- To explain the requirements of a habitat (food, water, shelter, and space).
- To explain the term adaptation and give examples of how animals and plants are adapted to their environment.

STANDARDS

Wyoming

Science: Disciplinary Core Ideas and/or Performance Expectations: K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS1-1, 1-LS1-2, 2-LS4-1, 3-LS2-1, 3-LS3-1, 3-LS3-2, 3-LS4-2, 3-LS4-3, 4-LS1-1, 5-PS3-1, 5-LS2-1, MS-LS1-4, MS-LS1-5

Montana

Science: Disciplinary Core Ideas and/or Performance Expectations: K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS1-1, 1-LS1-2, 2-LS4-1, 3-LS2-1, 3-LS3-1, 3-LS3-2, 3-LS4-2, 3-LS4-3, 4-LS1-1, 5-PS3-1, 5-LS2-1, MS-LS1-4, MS-LS1-5

PRE-VISIT ACTIVITIES

Brainstorm Museum Etiquette

Discuss your upcoming trip to the Buffalo Bill Center of the West. Engage students in a brainstorming session. Ask them to name rules they should follow when visiting the museum.

Habitats of the Greater Yellowstone region

Discuss with students the different types of habitats in the Greater Yellowstone region.

- **Alpine** – tall mountain above 10,000 feet with cold, windy, and snowy conditions with little trees or shelter
- **Mountain Forest** – a forest between 6,000-10,000 feet in elevation with more trees and shelter than the Alpine habitat
- **Mountain Meadow** – a wet habitat with elevations above 6,000 feet
- **Plains Basin** – a dry habitat with elevations below 5,000 feet

PRE-VISIT ACTIVITIES

Introduce Vocabulary | *Discuss the vocabulary terms below.*

- **Adaptation** – a characteristic, trait, or “thing” that plants and animals have that helps them survive in a particular environment
- **Camouflage** – an animal’s ability to blend in with its surroundings
- **Carnivore** – animals that eat other animals
- **Environment** – the surroundings in which a person, animal, or plant lives
- **Habitat** – a place where plants and animals live with four important requirements for survival (food, water, shelter, and space)
- **Herbivore** – an animal that eats plants
- **Hotspot** – areas of the Earth’s surface that have long periods of volcanic activity
- **Lava** – molten rock that erupts from a volcano or crack on the Earth’s surface
- **Magma** – molten material below or in the Earth’s crust
- **Omnivore** – an animal that eats both plants and animals
- **Predator** – an animal that hunts other animals for food
- **Raptor** – bird of prey that hunts other animals using strong talons, sharp hooked beaks, and excellent eye sight
- **Riparian** – a wet environment near rivers and streams
- **Shelter** – an animal’s place of safety and protection from danger and weather
- **Super Volcano** – unusually large volcano that does not resemble the shape of a cone with steep sides, but has a large depression such as a crater or caldera

POST-VISIT ACTIVITIES

Studying Endangered Animals (Grades 4-8)

Study different types of endangered animals in the Northern Rocky Mountains. Discuss their status today. Examples may include the grizzly bear, gray wolf, black-footed ferret, prairie dog, Canada lynx, whooping crane, and Wyoming toad.

Mixing up Adaptations (Grades K-5)

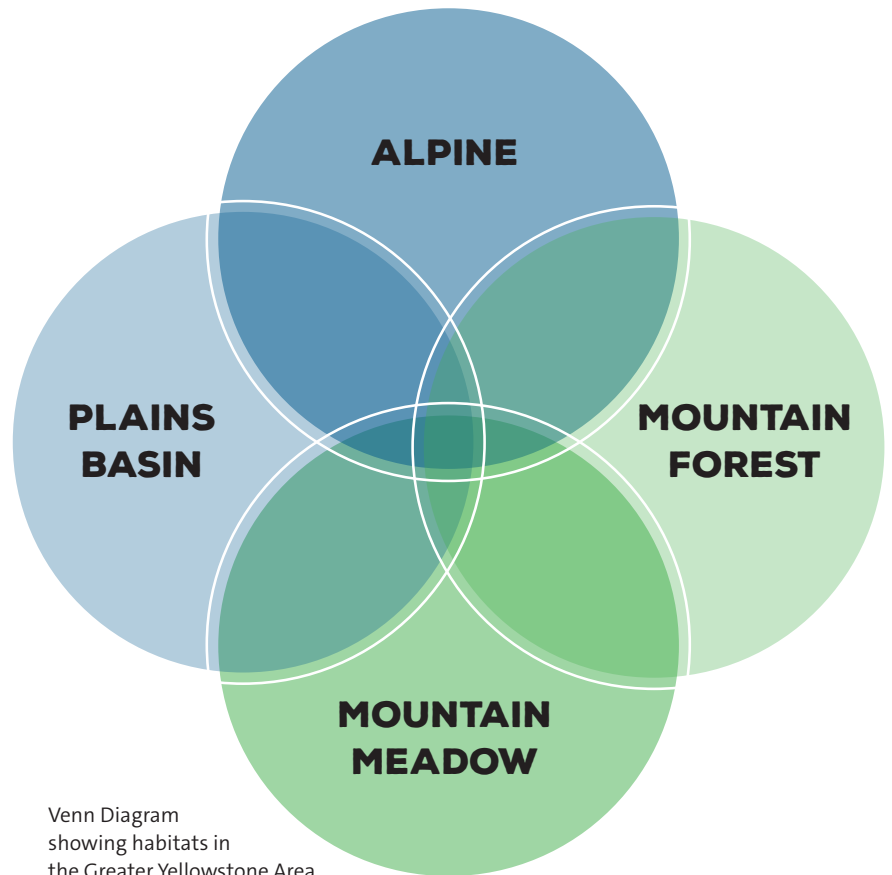
Materials: The Mixed-Up Chameleon by Eric Carle, craft supplies

Read or have students read *The Mixed-Up Chameleon* by Eric Carle. Challenge students to name the different adaptations the chameleon has throughout the story. Allow time for students to create their own mixed up animal with many adaptations.

Let's Not Forget Plants (Grades 3-8)

Materials: paper, markers or crayons

Have students brainstorm as a class some of the adaptations that plants need for survival, creating a master list for students' reference. Remind them that just like animals, plants need food, water, air, and space to survive. Invite students to choose one of the habitats they learned about during their tour. Then have them create their own made-up plant with specific adaptations to that habitat. Encourage them to label their drawings. Older students can research actual plants from their habitat.



Venn Diagram showing habitats in the Greater Yellowstone Area

Comparing Adaptations (Grades K-8)

Materials: Venn Diagram

Have students complete a Venn Diagram such as the one provided. Ask students to recall the different animal adaptations from each habitat. Explain that they should fill in the diagram looking for similarities and differences in adaptations. Younger students can draw their answers.



BUFFALO BILL CENTER OF THE WEST

Buffalo Bill Center of the West Resources

- Visit our website at www.centerofthewest.org

- **Gray Wolf Natural History Trunk** available through our lending programming

The Gray Wolf is a keystone species of the Greater Yellowstone region. With its reintroduction in 1995-1996, there has been a lot of discussion about the impact of this animal. Use this trunk to explore the wolf's biology and controversy, and to develop management solutions in your classroom! The trunk contains a wolf pelt, skulls, tracks, and various other current resources and fun activities! A teacher's manual and activities for grades 1-8 are also enclosed.

- **Greater Yellowstone Sights and Sounds**

Short video clips, perfect for illustrating a school project - <https://www.youtube.com/user/DraperNHMuseum/videos>

- **COMING SOON! An Amazing Animal Adaptations (and Plants too!) Virtual Tour and Curriculum**

Other Resources

- **Books**

Animals That Hibernate (Watts Library: Animals) by Phyllis J. Perry

Animals That Migrate (Watts Library: Animals) by Carmen Bredeson

Our Wild World series (Northwood Press)

A Weird and Wild Beauty: The Story of Yellowstone, the World's First National Park (Sky Pony Press) by Erin Peabody

Yellowstone (True Books: National Parks) by Audra Wallace

- **Websites**

Yellowstone National Park - <https://www.nps.gov/yell/learn/index.htm>

National Park Foundation - <https://www.nationalparks.org/explore-parks/yellowstone-national-park>

Yellowstone Volcano Observatory - <https://volcanoes.usgs.gov/volcanoes/yellowstone/>

National Geographic's Yellowstone National Park - <https://www.nationalgeographic.com/travel/national-parks/yellowstone-national-park/>

