



# Wild Animals & Wild Places

## *1st Grade Field Trip*

### Preparing For Your Trip





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## Welcome and Need to Know Information

Dear Teacher,

This packet contains all the information you will need to prepare your students for a “Wild Animals, Wild Places” field trip to Glacier National Park.

- The field trip lesson plan on pages 18-24 should answer most questions about field trip logistics, objectives, and schedules.
- The rest of the lessons are meant to prepare students for the concepts and vocabulary highlighted on the field trip. Each activity can serve as a pre-visit introduction or a post-visit assessment/extension. A suggested unit plan organization is located on the following page.
- Glacier’s [SmartBoard lessons](#) are a great way to supplement this unit.
- Visit our [website](#) for more lesson plan ideas and background information for any field trip. This guide contains only a sample of what is available.

Be sure to confirm the date(s) and meeting place for your field trip (received via email are correct). There is no cost for this field trip. A waiver for the park entrance fee has been processed for your class(es). [Travel grants](#) from the Glacier National Park Conservancy may be available to schools with restricted travel budgets.

The education ranger assigned to your group will call you before your field trip date to discuss the schedule and answer any questions. You can also reach them at 406-888-7899.

Our education programs are made possible by the support of the Glacier National Park Conservancy. Thank you for introducing your students to the National Park Service mission and the wonders of Glacier!

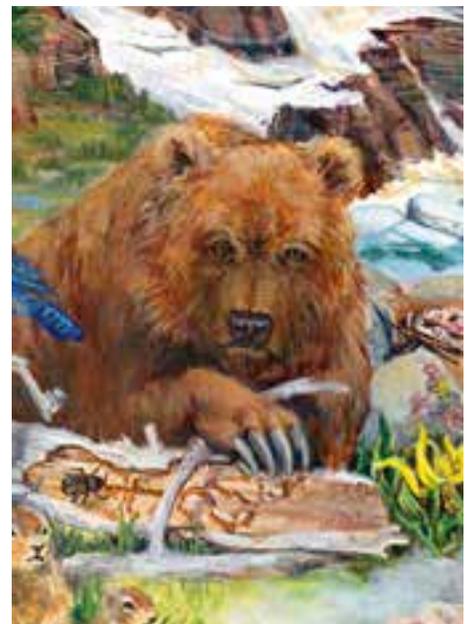
Glacier National Park  
Education Staff



Glacier National Park  
CONSERVANCY

## Glacier’s Education Goals

- Provide opportunities for the students to form emotional and intellectual connections with park resources and values.
- Introduce students to the National Park Service mission and significances of Glacier.
- Provide curriculum-based, outdoor education experiences that are age appropriate and supplement classroom learning objectives.
- Introduce students to the value of protecting natural and cultural resources for current and future generations and to encourage actions we can all take to be good stewards of this special place.



# Suggested 5-Day Lesson Sequence with Field Trip

	<b>Summary</b>	<b>Objectives</b> <i>Students will understand:</i>	<b>MT and Next Generation Science Standards</b>	<b>Materials</b>
<b>Pre-Field Trip</b> <i>Lesson 1 - National Park Service Symbols</i>	Students learn how the design of the National Park Service arrowhead is made up of symbols and have a chance to create their own design.	<ul style="list-style-type: none"> <li>The symbolism of the National Park Service Arrowhead</li> <li>How to use their understanding of symbols to create their own arrowhead design</li> </ul>	CCSS.ELA-Literacy.CCRA.R.7 Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words. K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.	<ul style="list-style-type: none"> <li>NPS Arrowhead symbols handouts</li> <li>Coloring Arrowheads</li> <li>Blank Arrowheads</li> </ul>
<b>Pre-Field Trip</b> <i>Lesson 2 - Who Eats Whom?</i>	Students make a paper chain and attach the sun as well as the appropriate plants and animals to make a Glacier food chain.	<ul style="list-style-type: none"> <li>How to make a food chain or food web of Glacier organisms</li> </ul>	MT.SCI.K-12.3.2 ...demonstrate knowledge of characteristics ... and how living organisms interact with each other and their environment. K-LS1-1. Use observations to describe patterns of what plants and animals ... need to survive.	<ul style="list-style-type: none"> <li>Scissors</li> <li>Animal drawings (end of packet)</li> <li>Glue</li> <li>Colored Paper</li> </ul>
<b>Pre-Field Trip</b> <i>Lesson 3 - Surviving in the Wild</i>	Students, using role playing, will think about how "wild" animals are different from domestic animals and why wild animals need "wild" places to live.	<ul style="list-style-type: none"> <li>The basic needs of all living things</li> <li>The differences and similarities between wild and domestic animals</li> <li>Why wild animals need wild places to live</li> </ul>	MT.SCI.K-12.3.2 ...demonstrate knowledge of characteristics, the process and diversity of life... and how living organisms interact with each other and their environment. K-LS1-1. Use observations to describe patterns of what plants and animals ... need to survive.	<ul style="list-style-type: none"> <li>Scissors</li> <li>Animal drawings (end of packet)</li> <li>Magazines with animal pictures</li> <li>Yarn</li> <li>Paper for collages</li> </ul>
<b>Field Trip Day</b> <i>Wild Animals &amp; Wild Places</i>	Students will participate in ranger-led activities in Apgar Village and take a short hike to a beaver lodge to learn about wild places & wild animals in Glacier National Park.	Vary depending on field trip. Talk to the ranger before your visit for more information.	Vary depending on field trip. Talk to the ranger before your visit for more information.	<ul style="list-style-type: none"> <li>Layers of clothing</li> <li>Nametags</li> <li>Lunch</li> <li>Adult Helpers</li> </ul>
<b>Post-Field Trip</b> <i>Lesson 4 - What is Wild?</i>	Students participate in a guided imagery exercise and take a trip to an imaginary "wild" place.	<ul style="list-style-type: none"> <li>The similarities and differences between their homes and wild environments</li> <li>Wilderness is a place not developed by or for humans</li> </ul>	MT.SCI.K-12.3.2 ...demonstrate knowledge of characteristics ... and how living organisms interact with each other and their environment. K-ESS3-1. Use a model to represent the relationship between the needs of different plants and animals ... and the places they live.	<ul style="list-style-type: none"> <li>3 large writing papers</li> <li>Magazines (to cut up)</li> <li>Animal Drawings (end of packet)</li> <li>Glue</li> <li>Scissors</li> </ul>



## Lesson 1: Pre-Visit

### *National Park Service Symbols*

#### Materials:

- \* *NPS Arrowhead Symbols Worksheet*
- \* *Blank Arrowhead*
- \* *Coloring Arrowhead*



#### Vocabulary

Symbol

#### Method

Students learn how the design of the National Park Service arrowhead is made up of symbols then have a chance to create their own design.

#### Objectives

Students will be able to:

- Describe the symbolism behind the National Park Service Arrowhead.
- Use their understanding of symbols to create their own arrowhead design.

#### Common Core Standard

CCSS.ELA-Literacy.CCRA.R.7 - Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

#### Next Generation Science Standard

K-ESS3-3 - Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

#### Background

There are more than 400 National Park sites in the United States. These places include parks, battlefields, monuments, seashores, historic sites and recreation areas. The National Park Service protects these places because they are important to our nation.

The arrowhead is the symbol for the National Park Service. This shape reminds us of the culture and history National Park sites protect. Each picture inside the arrowhead represents something that is protected in a National Park site.

#### Procedure

1. Begin with the NPS symbols worksheet. Have students follow the directions to fill in the blank in each sentence.
2. You may wish to then have the students color their own National Park Service arrowhead. Finally using the blank arrowhead worksheet have students design their own arrowhead. Possible assignments might be to use symbols that represent their class, themselves, their family, a favorite natural place or Glacier.

**Evaluation**

While students are working and as they finish ask individuals why they chose specific symbols and what they represent.

**Extension**

Have students identify other symbols around their school or community and learn what they represent.

# The National Park Service

There are almost 400 National Park sites in the United States. These places include parks, battlefields, monuments, seashores, historic sites, and recreation areas. The National Park Service preserves and protects these places because they are important to our nation.

The arrowhead is the symbol for the National Park Service. This shape reminds us of the culture and history National Park sites protect. Each picture inside the arrowhead represents something that is protected in a National Park site.

**Directions:**  
Look at the National Park Service arrowhead at the top of the page. Now look at the pictures and words on the right. Fill in the blanks with the word you think fits best to describe what National Park Service sites protect.

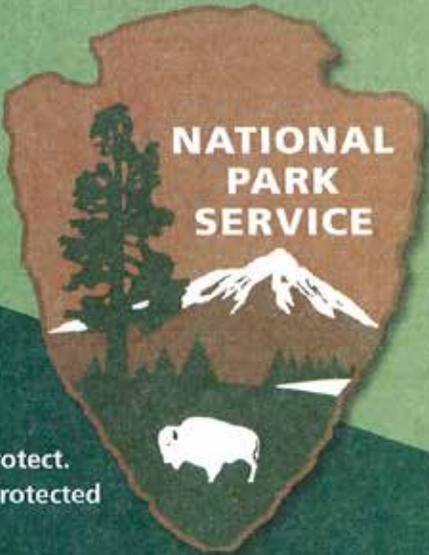
The \_\_\_\_\_ represents the wildlife protected by the National Park Service.

The \_\_\_\_\_ represents the plants protected by the National Park Service.

The \_\_\_\_\_ represents the beautiful scenery protected by the National Park Service.

The \_\_\_\_\_ represents the natural resources (like clean air and water) protected by the National Park Service.

The \_\_\_\_\_ represents the history of our nation protected by the National Park Service.



Lake



Mountain



Bison

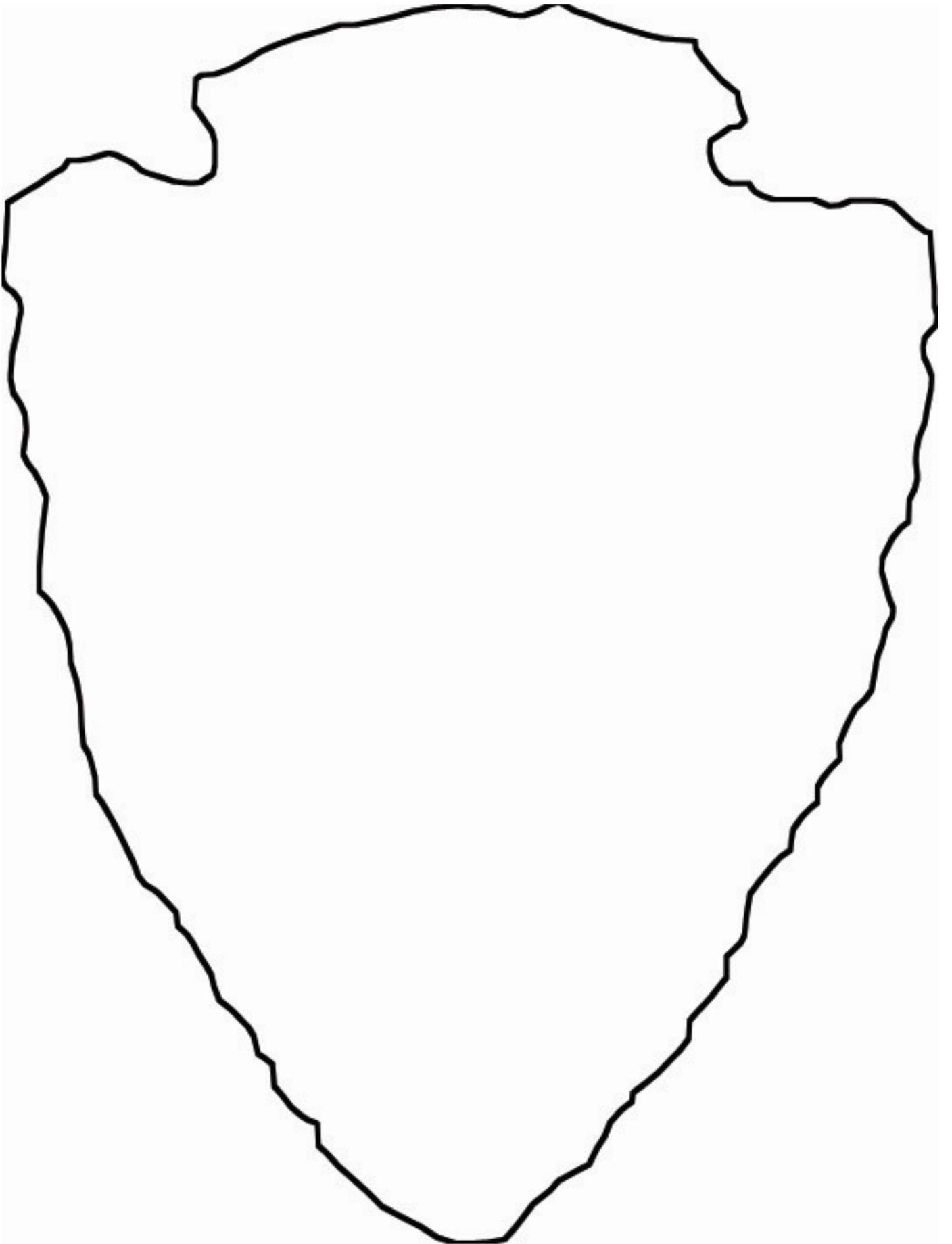


Tree



Arrowhead

2



The image shows the outline of the National Park Service logo, which is a shield-shaped emblem. Inside the outline, there are several elements: a large sequoia tree on the left, a mountain range in the center-right, a smaller tree line at the bottom, and a bison at the bottom center. The text 'NATIONAL PARK SERVICE' is written in a bold, sans-serif font across the middle of the shield.

**NATIONAL  
PARK  
SERVICE**



## Lesson 2: Pre-Visit

### *Who Eats Whom?*

#### **Materials:**

- \* Scissors
- \* Animal Drawings (end of packet)
- \* Glue
- \* Colored paper



#### **Vocabulary**

Carnivores, consumer, decay, decompose, detritus, food chain, food web, energy flow, herbivores, leaf litter, omnivores, predator, prey, producer.

#### **Method**

Students make a paper chain and attach the sun as well as the appropriate plants and animals to make a Glacier food chain.

#### **Objectives**

Students will be able to make a food chain or food web of Glacier organisms.

#### **MT State Science Standard**

MT.SCI.K-12.3.2 Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.

- A proficient student will identify, measure, and describe basic requirements of energy and nutritional needs for an organism.

#### **Next Generation Science Standard**

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.

#### **Background**

This activity helps students think through the concept of food chains and the need for energy to support basic life functions. All of our energy comes from the sun. We and other animals get energy by eating plants or other animals. By thinking about what animals eat or where they get their food energy, students will realize how plants and animals are connected through food chains.

## Procedure

1. Show students the food chain example on the following page. Discuss how energy from the sun is converted from radiant energy into chemical energy by plants (through photosynthesis). When plants are eaten by insects, mice, deer, etc., the energy gets passed to that animal. Just like when we eat cereal for breakfast (or too much sugar) we get lots of energy. Wild animals in Glacier National Park need to be able to not only find water and shelter but enough food to help them have energy to stay warm, move around, and to reproduce.
2. Print the animal drawings and line art coloring pages from Glacier's [website](#). Have students research where each animal gets its food energy (or help younger students find out who eats whom by using the table included here).
3. When they know what eats what, have them cut 4 strips of paper from the colored paper. (They can fold the paper lengthwise once, and then again to make 4 sections) Have the students glue both ends of the paper strips together to make a ring. Then have them loop the next ring through the first, so that they create a "chain."
4. Make sure they start with a picture of the sun on the first link of their chain (they could draw it). Then the next link has to be an organism that uses the energy from the sun to make food (a plant or producer). Then the third link should be something that would eat that plant/producer, a consumer (like a deer). The fourth link will be something that eats the deer for energy (wolf, coyote, mountain lion, bear).

## Evaluation

When the students' "food chains" are done. Have them predict whether the animal at the top of their food chain would be able survive in Glacier. Ask them if that animal's food is available in winter so that it would have energy to stay warm and be active year round in Glacier? Do they think it resists (stays and remains active), migrates (leaves), or hibernates (becomes inactive to conserve energy)? If there is no food, it is more likely that animal migrates or hibernates.

## Extension

Students can combine their food chains into food webs by attaching an animal link from their chain to an animal it eats in another person's food chain. A third person can then see if they have an animal or plant that might be eaten by one of the organisms in the first two chains and attach those links.

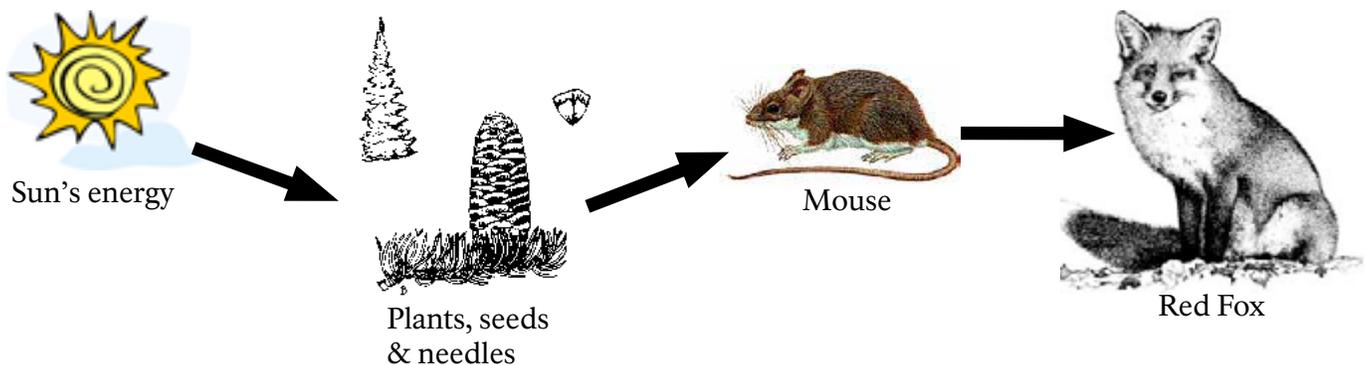
Make picture cards of plants and animals that live in Glacier. Make sure you also have one of the sun. Give each student a card and have them stand in a circle so everyone can see each others' cards. Start with the sun and hand them the end of a ball of string. They are going to pass the ball of string to something that depends on them to get/make food (should be a producer). Then that person has to pass the ball of string onto someone who depends on them for energy. Keep going in this way and see if you can get everyone connected in your "food web." Discuss how if something disappears from the web (say insects) all the people who are connected to the insect need to set their string down. What happens to all the things connected to those people now? This can lead into a discussion of threatened and endangered species.

# Who Eats Whom?

Animal/Plant	Eats	Is Eaten By
Grizzly bear	Rodents, insects, elk calves, roots, pine nuts, grasses, large mammals, carrion, berries	
Black bear	Rodents, insects, elk calves, pine nuts, grasses, other vegetation, berries, carrion	Wolves, grizzly bears, mountain lions, humans
Elk	Grasses, sedges, shrubs, aspen bark, aquatic plants	Wolves, grizzly bears, mountain lions, humans
Red Fox	Grasshoppers, beetles, crickets, berries, nuts, grains, mice, rabbits, birds, turtles, eggs, and even dead animals like road-kills	Bobcats, lynx, mountain lions, and wolves
Beaver	Grasses, sedges, inner tree bark	Wolves, bears, scavenger species, humans
Fungi	Decomposed carrion and dead plant matter	Some small mammals
Bighorn Sheep	Grasses, shrubby plants	Coyotes, wolves, humans
Mountain lion	Elk, mule deer, small mammals	
Snowshoe hare	Shrubs, conifer needles	Lynx, foxes, bobcats, Great Horned Owls, coyotes
Buds and twigs		Elk, beaver, snowshoe hare, moose, deer
Fruits		Bears, birds, foxes, insects, coyotes, deer
Aspen		Elk, beavers, insects
Grasses		Elk, deer, bears, moose, rodents, insects
Snakes	Small rodents, tadpoles, fish, salamanders, frogs, worms, insects	Fish, birds, carnivorous mammals
Birds	Seeds, insects, berries, fish	Other birds, carnivorous mammals, snakes and squirrels, and weasels (bird eggs)
Aquatic insects	Other aquatic insects, aquatic plants, detritus	Fish, birds, amphibians
Eagle	Fish, carrion, ducks	
Ground squirrel	Fungi, roots, leaves, bird eggs, buds, insects, seeds, carrion, nuts	Weasels, coyotes, badgers, hawks, foxes, owls
Deer	Shrubs, grasses, aspen, conifers	Wolves, bears, coyotes, mountain lions
Terrestrial Insects	Plant material, other insects, blood (mosquitoes, ticks)	Rodents, weasels, foxes, martens, coyotes, fish, bears, birds

Animal/Plant	Eats	Is Eaten By
Pika	Grasses, lichens, sedges, conifer twigs	Coyotes, pine martens, hawks
Weasel	Rodents, snakes, ground squirrel, insects, birds, frogs, eggs	Hawks, owls, foxes, coyotes, humans (trapped for fur)
River otter	Fish, frogs, young muskrat	Humans (trapped for fur)
Pine marten	Rodents, eggs, hares, insects, shrews, berries, carrion, birds	Owls, humans (trapped for fur)
Shrew, Moles	Insects	Owls, coyotes, foxes, hawks
Mice	Seeds	Owls, coyotes, foxes, hawks
Yellow-bellied marmot	Grasses, seeds	Coyotes, foxes, bears
Coyote	Small mammals, carrion, ground squirrels, birds, deer	Wolves
Cutthroat trout	Small fish, fish, eggs, small rodents, frogs, algae, insects	Bald eagles, Lake Trout, osprey, otters, humans
Wolf	Hoofed animals (90%), beaver, hares	

## Glacier Food Chain





## Lesson 3: Pre-Visit

### *Surviving in the Wild*\* \*from the Wilderness Land Ethic Curriculum, Arthur Carhart National Wilderness

#### Materials:

- \* Scissors
- \* Animal drawings (end of packet)
- \* Magazines with animal pictures
- \* Yarn
- \* Paper for collages



#### Vocabulary

Domestic, habitat, national parks, pet, tame, wild, wilderness.

#### Method

Students role play a day in the life of a pet animal and then sort pictures of a variety of animals into “wild” or “domestic” categories with the option of making collages of each category. They will think about how “wild” animals are different from domestic animals and why wild animals need “wild” places to live.

#### Objective

Students will be able to:

- Describe the basic needs of all living things.
- Define differences and similarities between wild and domestic animals.
- State in their own words why wild animals need wild places to live.
- Learn about some of the wild animals that live in Glacier National Park.

#### MT State Science Standard

MT.SCI.K-12.3.5 Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.

- A proficient student will create and use a classification system to group a variety of plants and animals according to their similarities and differences.

#### Next Generation Science Standard

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.

#### Background

Students often have the misconception that the rangers in Glacier National Park feed and take care of the animals that live here just like they do for their pets. In fact, the rangers take care of the animals’ habitat and then the plants and animals can survive on their own. Wild animals are very different from pets. A pet is a domesticated animal kept for companionship or amusement. A domestic animal is one whose breeding is largely controlled by humans.

Domestic animals have been bred to have characteristics that make them compatible with people. Some of these characteristics are physical (amount and distribution of meat, size, shape changes, coat characteristics); others in-

## Background, Continued

volve selecting for “personality” traits that are desirable (docility, tractability, etc.). The herd social structure tends to provide the correct basic characteristics that are selected for compatibility with people. So, animals like raccoons largely lack the basic personality characteristics to become good domestic animals.

The following animals meet the definition of domestic as presented above: dog, cat, sheep, goat, cattle, pig, donkey, horse, camel, llama, alpaca, ferret, guinea pig, rabbit (one species), chicken, turkey. A tame animal has been brought from wildness into a domesticated state. People need to provide for their pets and domestic animals because they have not been bred to care for themselves in the wild.

## Procedure

1. Ask students to think of their favorite pet or a pet they know (if they don't have a pet). Tell them they will act out this pet as you describe the activities it goes through each day. Begin with all children as animals sleeping. In your description include waking up, stretching, playing, drinking, exercising, interacting with others, eating, keeping warm, and having a bed or shelter. Conclude with the students going back to sleep. Have students share the pets they chose and what they did during the day.
2. Ask them to think about some of the things they needed when they were pets, and make a list on your paper. Focus student's attention on categories of food, water, shelter, and living space. Explain that these are the same basic needs of plants, people, wildlife, and domestic animals although they meet their needs in different ways.
3. Compare the students' pet animals to wild animals, reminding students that wild animals have the same basic needs, but they take care of themselves in wild places. Discuss animals that are predators, hunters or grazers. Show them an overhead of the “Adaptations” blackline master of the different parts of the beaver that help it to survive in the wild. Older students can fill in the student page as you point out the different adaptations.
4. Show pictures of other animals and have students verbally categorize them as wild or domestic. Ask the questions: in their natural home, would there be people taking care of them? Could people take care of them in a wild place?
5. Have students collect pictures of animals both wild and domestic or have them draw their own. Then see if students can divide the pictures: Make two circles of yarn on the floor labeled “wild” and “domestic” and have students place their pictures in the appropriate circle and explain why, or make two class collages of these categories.
6. Use the following questions in your discussion: What are some of the differences between the two groups? Similarities? What about domestic compared to tame animals? If you are out camping and find a den of baby raccoons, what should you do? What is “best” for the animals? The Montana Fish, Wildlife & Parks has [information about wildlife viewing](#).
7. Have students share their understanding of how wild places are important for the survival of wild animals. In a sharing circle or as a written activity, have students fill in the blanks: I would like to be a \_\_\_\_\_ (animal). I need \_\_\_\_\_ (adaptation) to help me to survive.

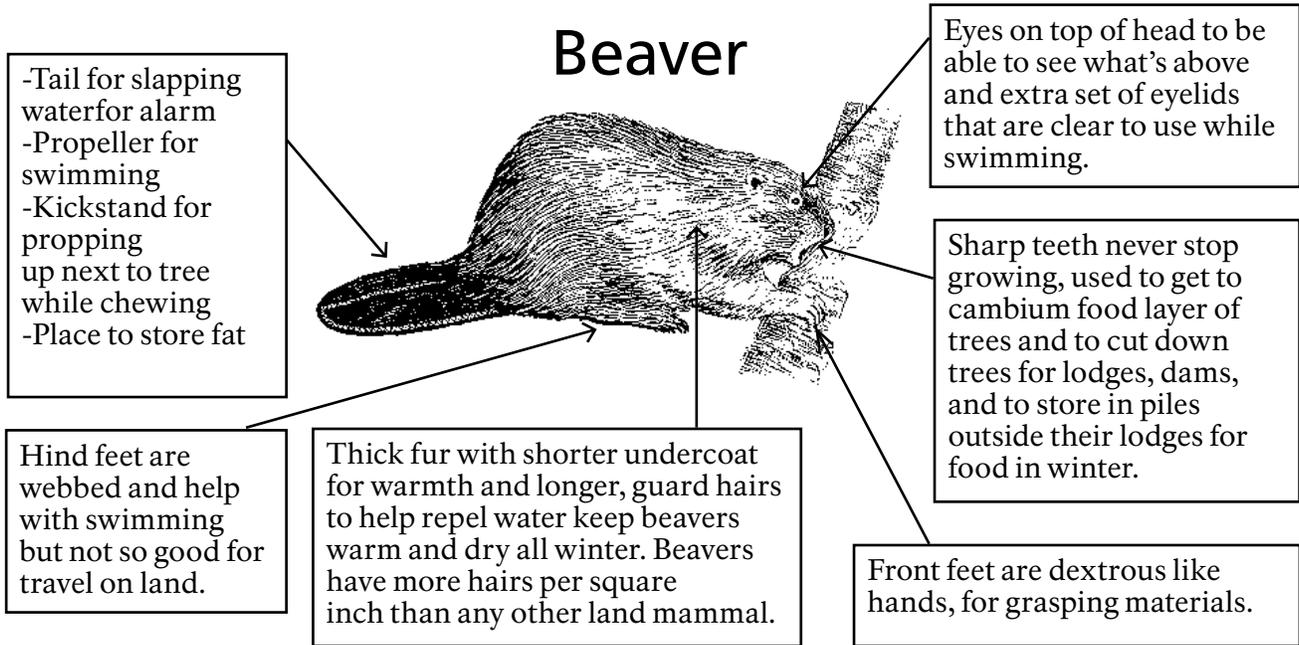
**Evaluation**

Use the wild and domestic page following this activity to have students circle which animals are wild and which are domestic. Then draw a Glacier animal or domestic animal they are familiar with.

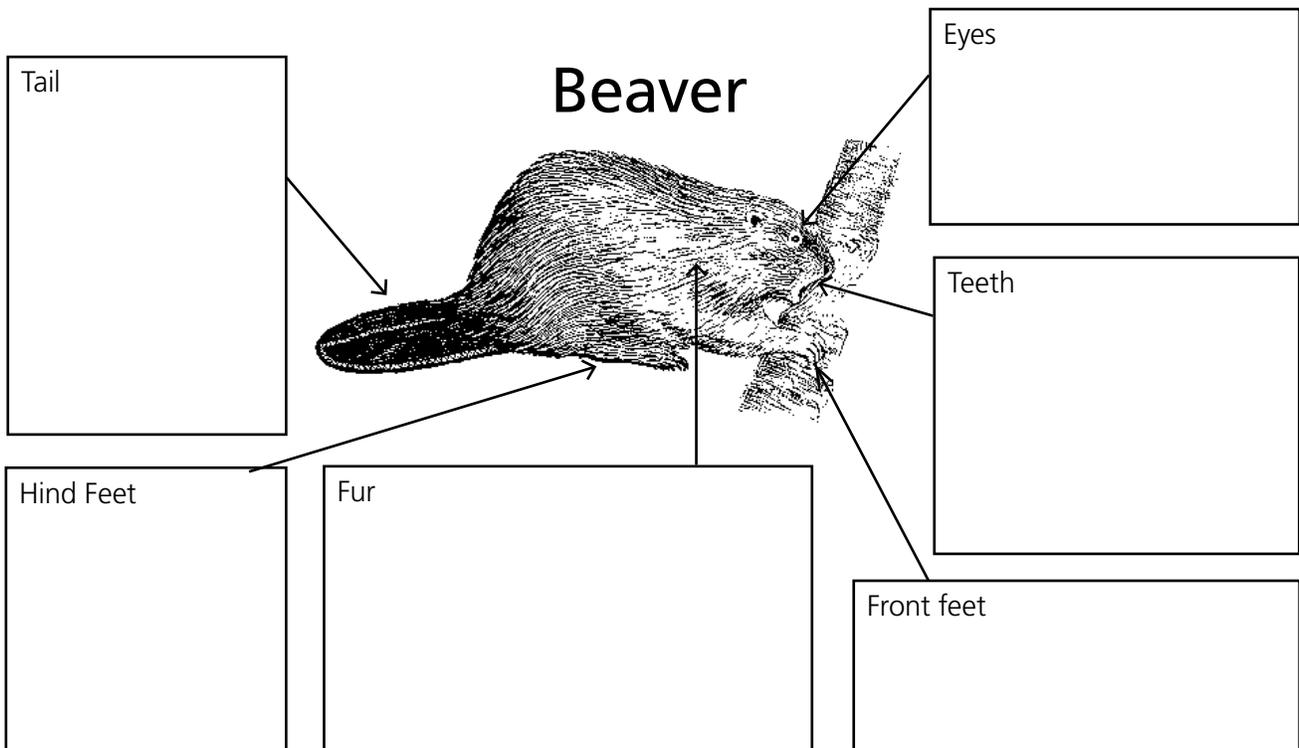
**Extension**

Have students learn about what kinds of wild animals live in Glacier National Park and the surrounding areas of northwest Montana. Students can create wildlife clue cards for Glacier animals by using the drawings at the end of this guide or finding their own pictures. Paste the drawing to one side of an index card and on the other side, use information from the resource section to make clues about the animal. See if students can “stump” the class with their animal clues. Example: “I look like a pet you might have at home, but I am not a pet. I am a very good hunter and can smell small animals through the snow (coyote).” or “I am small but I can make a loud noise. I look kind of like a small rabbit and I live in the high mountains where I stay active in winter. I eat the grasses that I have stacked up all summer (pika).”

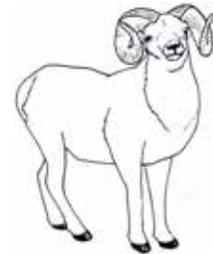
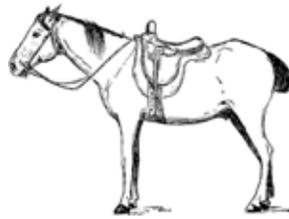
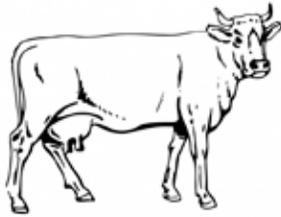
# Adaptations



# Adaptations - Student Page



Below are wild and domestic animals. Circle the animals that are wild. Could some be both? Then draw a picture of a wild animal that lives in Glacier National Park and a domestic animal that you or a friend has at home.



A Glacier Wild Animal

A Domestic Animal I Know



## Field Trip Day!

### *Wild Animals & Wild Places*

#### Remember:

*\* Flexibility is essential for an enjoyable visit to Glacier. Each program is unique but the following represents a typical visit.*



#### Vocabulary

Carnivore, food chain, herbivore, natural world, natural resources. Also see bolded words below.

#### Method

Students will participate in ranger-led activities at the Apgar Education & Training Center and in the forest next to the Apgar Nature Center. They will also take a short hike to a beaver lodge to learn about wild places & wild animals in Glacier National Park.

#### Objectives

Students will be able to (depending on grade level and weather condition):

1. Tell what **national parks** protect and name some natural features protected in Glacier National park – **lakes, mountains, rivers, valleys**.
2. Distinguish between natural and un-natural objects.
3. Differentiate between living (eats food, grows, reproduces) and non-living things in nature.
4. Tell one thing that people can do to keep natural areas healthy (don't litter, don't feed wild animals, leave wild animals in their habitats, etc.)
5. Explain the difference between a **wild** animal and a **domestic** animal- a pet or farm animal- and name three wild animals that live in Glacier National Park.
6. Show or tell one thing people should do to be safe when hiking in a place that has wild animals (make noise, don't hike alone).
7. Look for simple food chains of organisms while in Glacier National Park and then draw a simple food chain.
8. **Observe** skulls and pictures of Glacier animals and tell one characteristic of an herbivore and one characteristic of a carnivore.
9. Draw a beaver and label the body parts that help the beaver to find food (get energy) and live in its **habitat**.

- Objectives, Continued**
10. Describe what type of natural area a beaver would live in (river or pond).
  11. Identify examples of Montana American Indians making use of natural resources.
  12. Hike independently making observations using their senses- sight, touch, taste, smell, hearing.
  13. Record and communicate observations of natural objects made by using the five senses.

**MT State Science Standards**

MT.SCI.K-12.1 Students, through the inquiry process, demonstrate the ability to design, conduct, evaluate, and communicate results and reasonable conclusions of scientific investigations.

MT.SCI.K-12.3 Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.

**Next Generation Science Standards**

We are in the process of linking our lessons to Common Core and Next Generation Standards where applicable. We appreciate any help or suggestions you have for standards that would fit here.

**Background**

Glacier is a wild place that protects: wild animals, plants, waterways, scenery, and quiet places to sit and observe nature. The animals here depend on this wild place for their home and they have special body parts and behaviors that help them to live here without help from people.

**Sample Field Trip Schedule**

**8:30 a.m.-9:30 a.m. Travel to the Park**

Simple assignments can be completed by seat-mates or individuals during this time. Point out sights along the way that relate to the park story such as if they see farm fields or ranches versus cities or forests.

**9:30 a.m.-10:00 a.m. Meet Park Rangers at Designated Site**

After a welcome by park rangers to Glacier National Park, the group will talk about the National Park Mission and take a snack/bathroom break.

**10:00 a.m.-10:30 a.m. Puppet Show**

Rangers will review the importance of park resources with the students and discuss ways for the group today to protect those resources.

**10:30 a.m.-12:00 p.m. Ranger-Led Hike (Alternatively, hike may be after lunch if another group is using the space in the morning.)**

Hike with a ranger along the Oxbow Trail (1.5 miles on fairly level terrain) to a beaver lodge and look for wild animal signs along the way. The ranger will conduct several activities which may include: a scavenger hunt, creating food chains, playing charades, a camouflage game, etc. depending on the time and ranger's preference.

**12:00 p.m.-12:30 p.m. Lunch**

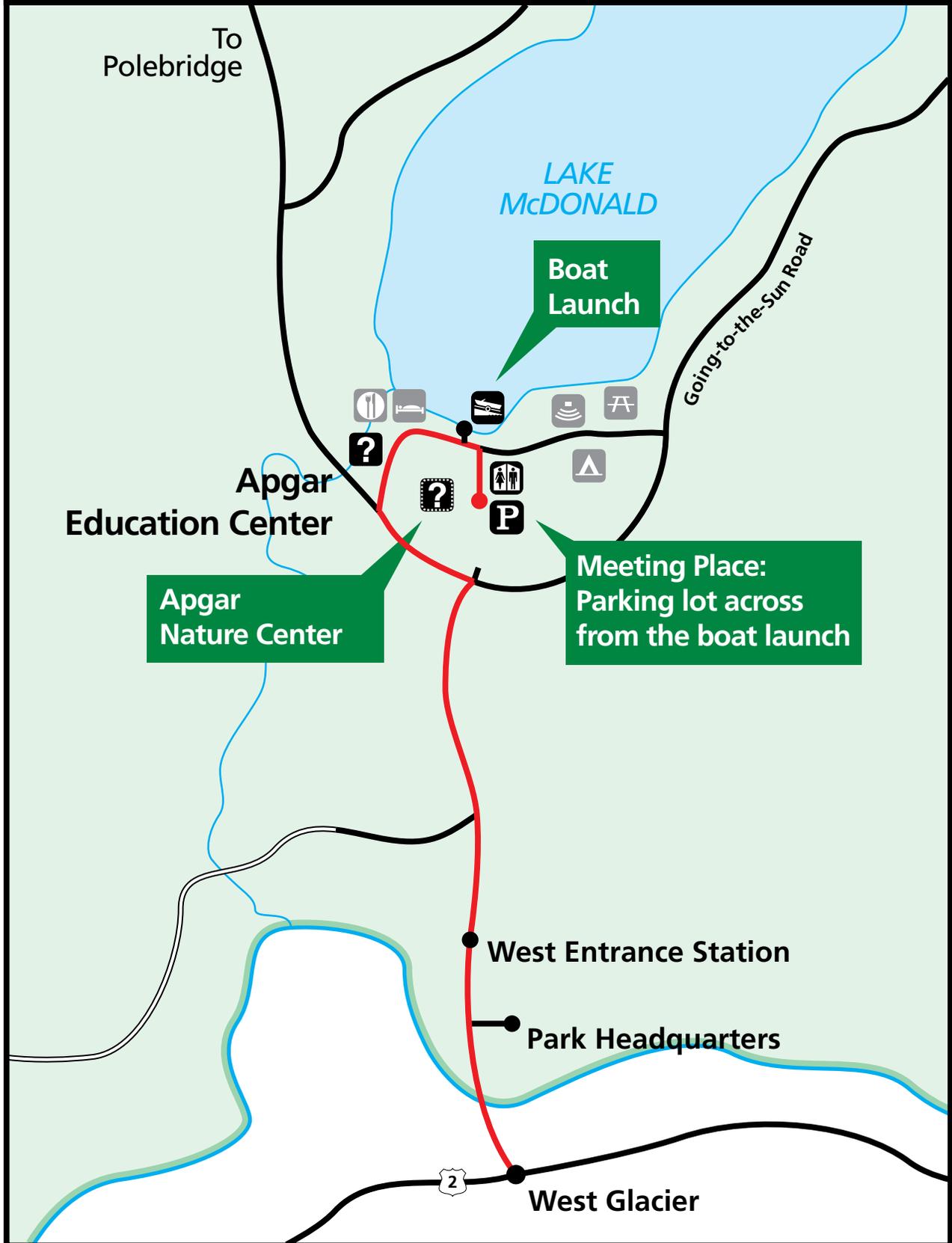
**12:30 p.m.-1:15 p.m. Stations in and around Education Center (Alternatively, stations may be combined with puppet show in a.m. if hiking after lunch.)**

Students participate in Education Center stations with help from chaperones and then play games outside the Apgar Nature Center that build on learning about wild animals/wild places.

**1:15 p.m.-1:30 p.m. Conclusion**

**1:30 p.m.-1:45 p.m. Bus Leaves Park**

# Education Programs



## Protecting the National Park

In order to have a fun and exciting experience, a firm framework of rules should be discussed in advance. The discussion should include the following points:

- Respect both plants and animals in Glacier National Park.
- Harassing animals and picking flowers, pine cones, feathers, and other natural objects in the park are illegal.
- Respecting rights of others in Glacier by refraining from disruptive behavior.
- Respecting each other, the ranger, chaperones, and teachers (walk on trails, keep hands to yourself, wait to talk until the instructor is finished, etc.)

## School Regulations and Safety

Teachers are responsible for following school regulations regarding parental permission slips, travel authorization/insurance, etc. An accident can ruin a field trip and jeopardize future ones. Safety is of utmost importance. Students must be with adults at all times.



## Clothing

Remind students to check the weather and bring appropriate clothing. Shoes should be comfortable and appropriate for weather conditions. In case of cold or damp weather, students should bring extra layers and dry clothes.

## Name tags

For safety and courtesy, rangers prefer to call students by name. Masking tape with names written in big letters, works well. If you make name tags as a pre-visit activity, be sure they are easy to read and stay on when the students are active.

## Food and Lunches

Everyone needs a lunch and drink. Resealable drinks work best as they can be refilled and saved. No food or drink is available at the park. Students are expected to clean up the lunch area. Food/gum are prohibited except at designated times.

## Groups

See the chaperone guidelines on the next page. Typically it works best to assign adults to groups of students before arriving at the park. (A typical bus of 45 students would be divided into 15 groups of 3 students each.)

## Items to leave Behind

Students should not bring iPods, CD players, radios, cell phones, or money. These items can be lost and may be a distraction. Adults should also leave cell phones at home (or turned off) during the field trip. Cameras and binoculars will not be needed and may only be brought if they will be used at ranger approved times. Designating one adult as the class photographer and asking them to take pictures throughout the day to share with everyone is a great alternative.

## Safety

An accident can ruin a field trip and jeopardize future ones. Safety is of the utmost importance. Students should stay with adults at all times.

## Chaperone Guidelines and Responsibilities

The chaperone requirements for ranger-led educational field trips to Glacier are (these numbers include the teacher):

- Kindergarten - 2nd Grade = 1 adult for every 3 students (example: 22 students, 8 adults required/allowed).
- 3rd - 5th grade = 1 adult for every 5 students (example: 22 students, 5 adults required/allowed)).
- 6th grade and higher = 1 adult for every 10 students (example: 22 students, 3 adults required/allowed).

Please assist your child's teacher by volunteering to help with a field trip to Glacier, or by respecting their apologies when your help is not needed because it exceeds the park's guidelines listed above. Our facilities, staffing, and resource protection mandate that we limit not only the number of students we can handle per trip, but also the number of adults with each group.

If you are selected to help with a field trip, realize that you are an important partner in our program. We need your participation and cooperation to make the trip a success and will be asking this of you:



- **Do not bring siblings who are not part of the class.** Your full attention is needed to help monitor the students assigned to you that day.
- **Please ride on the school bus.** It makes getting everyone through the entrance station much easier and avoids parking problems.
- **Assist with safety.** It will be one of your primary duties as a chaperone.
- **Be an active participant.** Students will want to participate if you do.
- Provide guidance to students for lunch and clean-up.
- Help set boundaries and provide leadership.
- Guide the learning process and help focus students on the activity or speaker.
- **Please consult with your school administrators about the policy regarding firearms on school sponsored events.** We have never had an injury from a wildlife encounter in over 20 years of conducting school field trips in Glacier. Rangers carry bear spray, first aid kits, and radios and will show the group how to hike and recreate safely while in the park.
- Most importantly go with the flow, adapt, and have fun in Glacier! The students pick up on how you react if you are having fun, they will too!

# Sample Teacher Evaluation of Ranger and How the Day Went



IN REPLY REFER TO:

## United States Department of the Interior

NATIONAL PARK SERVICE  
Glacier National Park  
West Glacier, Montana 59936

Thank you for bringing your students to Glacier National Park. Your candid and thoughtful responses to the questions below will be used to help us further improve our programs.

1. Please rate how enthusiastically the ranger engaged your students
  - Exceeded my expectations
  - Met my expectations
  - Did not meet my expectations
2. Please rate how respectfully the ranger engaged with you and your chaperones
  - Exceeded my expectations
  - Met my expectations
  - Did not meet my expectations
3. Please rate how appropriate the ranger's teaching techniques were for your students' grade level
  - Exceeded my expectations
  - Met my expectations
  - Did not meet my expectations
4. Please rate how well prepared the ranger was to teach and lead your class
  - Exceeded my expectations
  - Met my expectations
  - Did not meet my expectations
5. How well did the ranger attend to the safety of all participants?
  - Very well
  - Somewhat well
  - Not at all well
6. Please let us know what the ranger did well and what he/she can improve upon
7. Please rate how well the program activities met the curriculum learning objectives
  - Very well
  - Somewhat well
  - Not at all well
8. Please rate how appropriate the vocabulary and concepts were for your students' age level.
  - Very appropriate
  - Somewhat appropriate
  - Not appropriate
9. Please rate how much your students' understanding of concepts you are teaching in the classroom increased.
  - Exceeded my expectations
  - Met my expectations
  - Did not meet my expectations
10. Please let us know what content and activities worked well and what we can improve upon
11. How would you rate the ease of registering for the GNP program?
  - Very easy
  - Somewhat easy
  - Not easy
12. Please rate the usefulness of the pre-arrival resources you used by placing an "x" in the appropriate box.  
Essential Useful, not essential Not useful Don't know/Didn't use
  - Pre-visit lessons
  - Tips for a successful field trip
  - Chaperone guidelines and responsibilities
  - Meeting map
  - Field trip logistics and timeline
  - Learning objectives and alignment with state standards
  - Pre-trip phone call with GNP ranger
  - Post-visit lessons
13. If you used pre- and/or post-visit lessons, please describe the ones which you found most useful.

**Sample Ranger  
Evaluation of Class  
and How the Day  
Went**



IN REPLY REFER TO:

**United States Department of the Interior**

NATIONAL PARK SERVICE  
Glacier National Park  
West Glacier, Montana 59936

Dear \_\_\_\_\_:

Thank you for participating in the education program at Glacier National Park on \_\_\_\_\_.

We hope that the field trip provided your class with an opportunity to better understand the significance of their national park. As a follow-up we are sending all participating teachers this evaluation to help you better prepare for your next trip. This evaluation is intended to point out strengths as well as areas that need additional attention.

Students wore name tags and were properly dressed for the day.	
Snacks/lunches were organized for easy distribution and everyone assisted with lunch clean-up.	
There were an appropriate number of chaperones present.	
Chaperone(s) actively participated in supervising students.	
Pre-site class preparation was evident.	
Class behavior facilitated a positive learning environment.	

Additional comments:

Sincerely,

Park Ranger(s)



## Lesson 4: Post-Visit

### *What is Wild?\**

\*from the Wilderness Land Ethic Curriculum, Arthur Carhart National Wilderness

#### Materials:

- \* 3 large writing papers
- \* Magazines (to cut up)
- \* Animal Drawings (end of packet)
- \* Glue
- \* Scissors



#### Vocabulary

Habitat, national park, protection, wilderness,

#### Method

Students participate in a guided imagery exercise and take a trip to an imaginary “wild” place.

#### Objectives

Students will be able to:

- Identify similarities and differences between their home and wild places.
- Know that wilderness is a place not developed by or for humans.

#### MT State Science Standard

MT.SCI.K-12.3 Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.

- A proficient student will create and use a classification system to group a variety of plants and animals according to their similarities and differences.

#### Next Generation Science Standard

K-ESS3-1. Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.

#### Background

In 1974 President Nixon recommended to Congress most of glacier National Park be designated as Wilderness. Congress has not acted on that proposal but 95% of the park has been managed as wilderness since 1974. (Presently, all developed areas are excluded from proposed wilderness.) Many children have never visited wilderness, though they may have images from stories or movies of what such places would look like. Drawing on students’ own experiences and perceptions, these activities introduce the concept of wilderness by comparing wild places to developed places. The levels of distinction students make will vary with their experience, age, and the location of your community. A good definition of wilderness for young children is that of a place influenced by the forces of nature, where people visit, but do not live. The Wilderness Act of 1964 defines wilderness “in contrast with those areas where man and his own works dominate the landscape, as an area where the earth and its community of life are

## Background Continued

untrammelled by man, where man himself is a visitor who does not remain.” Rod Nash, wilderness historian, believes that wilderness is so heavily weighed with meaning of a personal, symbolic, and changing kind that it is difficult to define.

## Procedure

1. Share with your students your own definition of “wildlands” or “wild place.” You might also want to ask them to share their perceptions of these words with you. Write all the words on the board. Explore the feelings associated with the word “wild.” How does the word make you feel? Then add “erness”. Wilderness areas are places that are wild. Glacier is considered a wilderness.
2. Tell students that you are going to take an imaginary trip to Glacier National Park, a place that is wild. Create your own story or use the following scenario to stimulate students’ thinking. Students could act out the story you describe. You may even wish to arrange chairs as the seats of a school bus and have students “climb aboard.”
3. “Imagine we are all going to put on our hiking clothes (describe what these will be depending on weather for your trip), and pack our backpacks with our lunches and drinks for the day in the wild. We are going to travel in our magic school bus...everyone aboard and take a seat! We’ll drive through town and past neighborhoods until we can’t see highways, stores or gas stations. We drive a long time. It is such a long way, that everyone goes to sleep! The bus keeps moving until finally it stops at the edge of a wild place. You can hear a few quiet sounds. It smells clean and looks all green. Before you open your eyes, make a picture in your mind of what you might see in this wild place.”
4. On a paper labeled “wild” write down images as students share them. Encourage students to be specific in their descriptions. Also have a paper labeled “developed” and record things students saw as they were leaving their school/city. Label the third paper “both.” For example, people belong in both places, as well as plants and animals. But the types of plants and animals may differ and the numbers of them and/or people may be different.
5. Review words generated in the above activity and use magazines and the animal drawings in this packet to make collages of things that may be found in a wild place and those found in developed areas around cities and towns. Remember to mention that we all share the same air, water, soils, and scenic views that are exchanged between wild and developed areas.
6. Have them think about how Glacier National Park has been designated to be a wild place and some of the reasons why we need wild places (peacefulness, home for wild animals, place to study nature, clean water source, etc.).

## Evaluation

Have students share ways their home is different and similar to a wild place.

## Extension

- Look at maps and see what other wilderness areas exist in northwest Montana. What about other areas of the state?
- Borrow the “Wilderness Trunk” from Flathead National Forest to find more resources and lessons about wilderness.
- Look for more storybooks in your library about wilderness.
- Complete the [My World](#) activity on Glacier’s website

# Animal Card Drawing Page

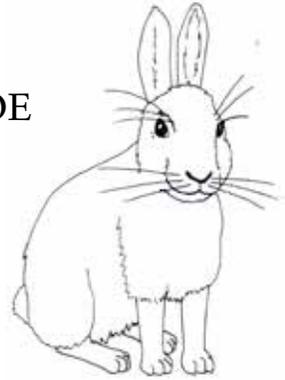


WHITE-TAILED  
DEER

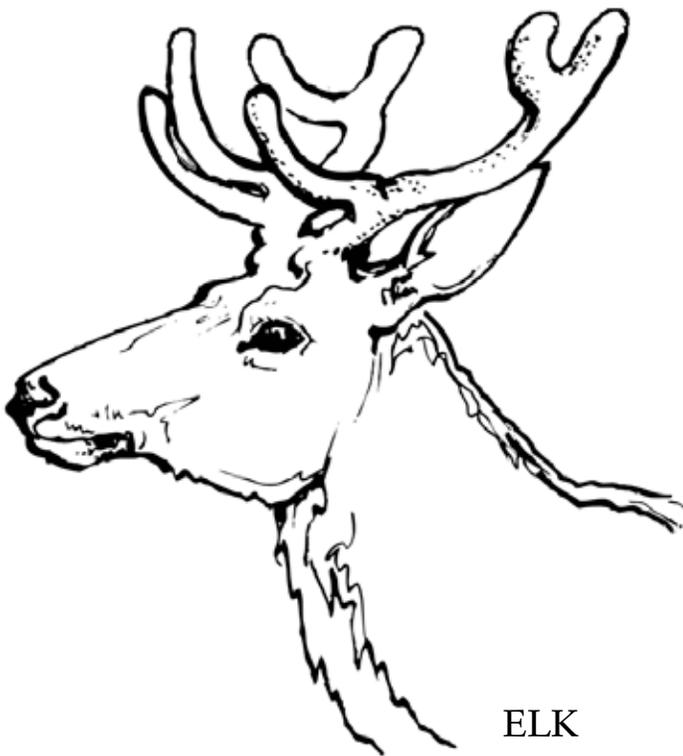


TREE  
SQUIRREL

SNOWSHOE  
HARE



SHORT-TAILED  
WEASEL OR  
ERMINE

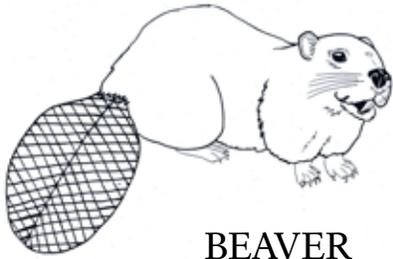


ELK



MOOSE

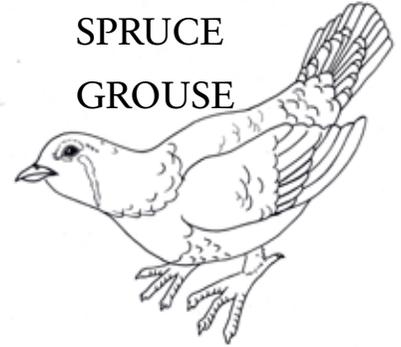
# Animal Cards Drawing Page



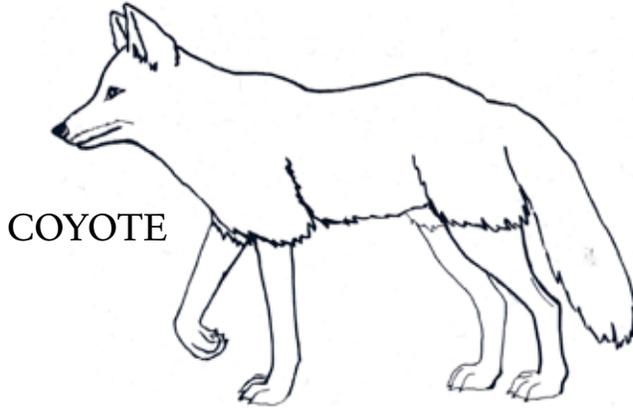
BEAVER



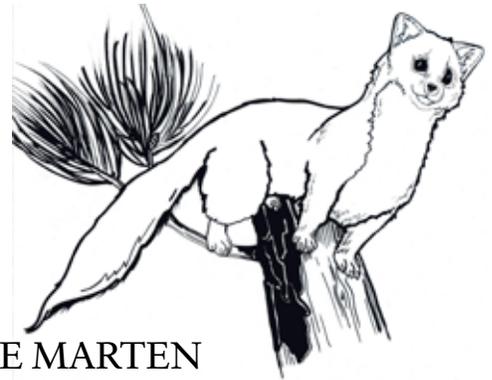
MINK



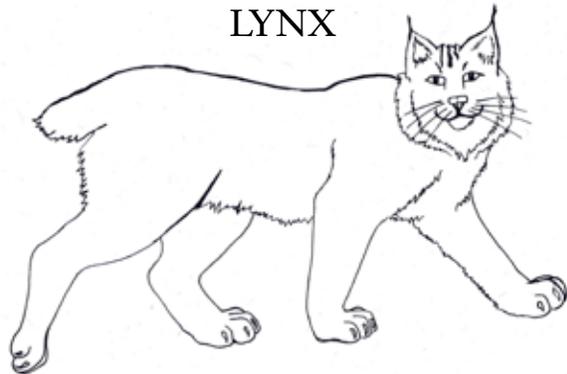
SPRUCE  
GROUSE



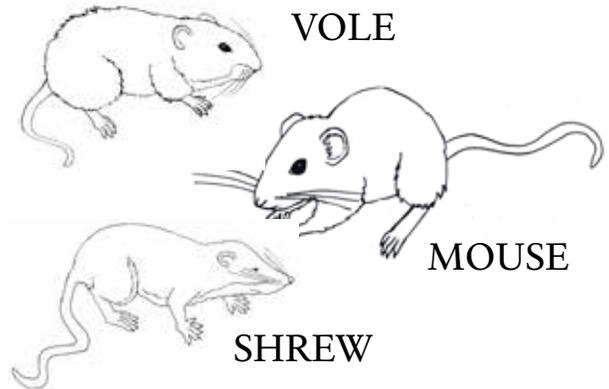
COYOTE



PINE MARTEN



LYNX

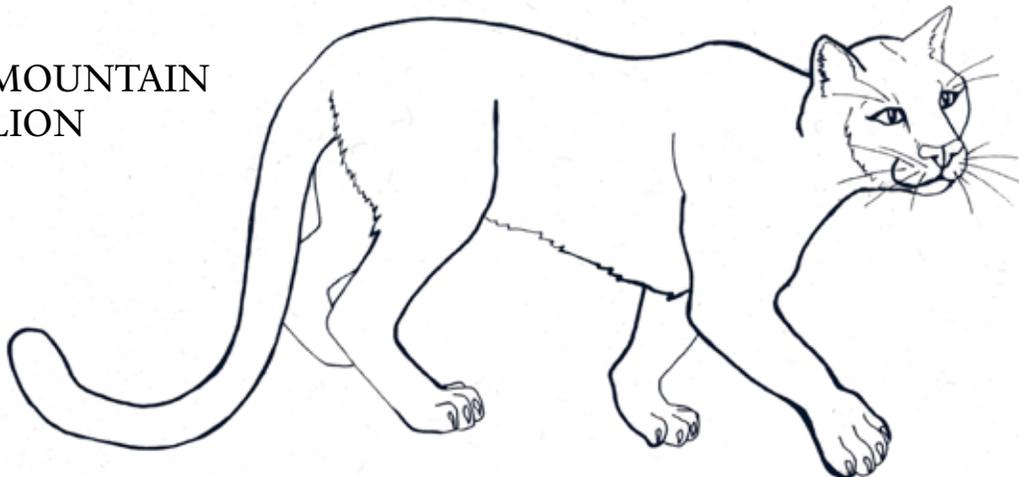


VOLE

MOUSE

SHREW

MOUNTAIN  
LION





## Appendix

### *Additional Teacher Background Information*

#### **Animals**

Like plants, animals are affected by environmental influences such as landforms, climate, and availability of food and water. The great diversity found in the Waterton-Glacier International Peace Park area is mainly due to the overlap of habitats between the mountains and the prairie – and the great junctioning of five floristic provinces.

As human developments continue to fragment wildlife habitat, Waterton-Glacier and other national parks have become more important to wild animals that require space, prey, and human tolerance. Nevertheless, even within the refuge of large parks, many species are so far ranging (birds, bears, wolves and ungulates, to name a few) that the long-term reality is the need for interagency cooperation in ecosystem management planning. The baseline information that the parks offer through monitoring and research comes to play once again.

Review of the earliest records suggests that wildlife composition, at least for mammals and birds, has changed little since the parks were established. Species known to have been extirpated include mountain bison and mountain or woodland caribou. Nonnative species include the ring-necked pheasant, rock dove, starling and house sparrow; however, none of these species is widespread or abundant. Raccoons and blue jays have expanded their ranges into the W-GIPP area as have the turkey (introduced in different areas of the state/province).

The park provides important year-round habitat for many wildlife species. Grasslands, shrub lands and riparian areas provide winter range for deer, elk and moose. Grasslands and forest environments provide spring range for deer, elk and grizzly bears. As spring progresses into summer, deer and elk move to higher elevations following the green-up of vegetation. The higher elevations also provide summer habitat for grizzly bears, bighorn sheep and goats. Low elevation valleys in the fall and spring provide habitat for almost all terrestrial wildlife species.

There are many documented migration routes for raptors (birds of prey) that follow mountain ranges and ridges in Waterton-Glacier. These are significant travel corridors through which, using rising thermals and updrafts from the mountains, thousands of birds make their semi-annual migrations to winter or summer ranges. A vast majority of the birds are golden eagles, with some bald eagles and hawks mixed in. During the autumn of 1996, over 3,000 raptors were counted at one site during September, October and November as they crossed high above the upper McDonald Valley. The parks may be along one of the largest golden eagle migration corridors in North America. This needed air space, a necessity for what some researchers indicate are declining populations of raptor species, is an interesting and no less important “habitat” requirement that must not be compromised by inappropriate human activities, especially within the protected “domain” of a national park. This is an excellent example of a management concern that requires cooperation among varying interest groups and managing agencies.

Good opportunities to see wildlife tend to be seasonal. The key to successful wildlife watching is being at the right place at the right time and having the proper equipment such as binoculars. In fact, one

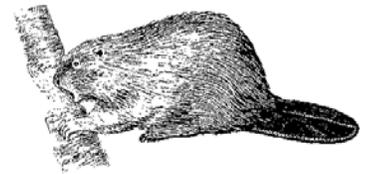
of the best ways to see wildlife is to use binoculars and patiently scan open areas. In the high country, this technique can reward the viewer with sightings of bears, bighorn sheep, marmots, mountain goats, eagles and much more. One animal house we routinely see on our field trips is a beaver lodge.

## Beavers

Beavers are members of Rodentia, the largest mammal order. Rodents are gnawing animals and have two pairs of prominent, chisel-shaped incisor teeth. These teeth grow continuously and maintain their sharp edges; they must be used frequently for gnawing or they will become too long.

The beaver, weighing up to 60 pounds, is the largest North American rodent. Beavers are excellent swimmers and can be easily identified by their scaly, flat tails. The tails are used for steering while swimming, and bracing them on land as they gnaw trees. Their back feet are webbed and used like paddles when swimming. Beavers move slowly on land, where they are prey for coyotes and mountain lions. Being excellent swimmers, they are safe from predators while in the water.

Beavers often dam streams to create deep ponds. They then build a lodge in the pond near the bank. On large streams and rivers, however, dams are not constructed. To build a dam and make a pond, beavers cut down trees and bushes with their sharp teeth. They take branches in their mouths and pull them into the water. Holding the branches with their teeth and front paws, they push the branches into the mud at the bottom of the creek. They dig up mud from the creek bottom and pile it on top of the branches to fill up the holes. This continues until the beavers have constructed a strong dam. Water builds behind the dam creating a pond.



The beaver lodge is similar in construction to the dam. A large pile of branches and mud is piled until it is higher than the surface of the water. The beavers swim to the bottom of the pond and gnaw up through the pile until they have made a tunnel that reaches above the water line. There they make a living chamber lined with leaves and grass. Beavers are monogamous and work together to choose the spot to build a dam and lodge.

Beavers eat the inner bark or cambium layer of branches of deciduous trees. Preparing for winter, beavers cache branches in the water. When the pond freezes, the store of food is easily available to them.

When beavers dam a stream, they set in motion a form of succession. The resulting backwater floods lowland near the creek. Trees are soon killed, creating an opening in the forest canopy. Water-associated plants and shrubs quickly invade the pond and shoreline, creating favorable habitat for waterfowl, moose, blackbirds, amphibians, fish, insects, muskrats, wading birds, warblers, marsh hawks, and a score of other animals. After many years the water becomes shallow, filling in with silt and plant debris.

Stimulated by the nutrient-rich mud, grasses, sedges, and shrubs begin to choke the water with their accumulating debris. The ground begins to firm as more silt is trapped.

As years pass, the trees near the lodge are cut down by the beavers for use as food and shelter. The beavers must move on and find a new spot to support themselves. Without the beavers to keep it strong, the old dam collapses, draining the pond. The area becomes meadow, supporting grasses, sedges, and other flowering plants. Trees begin to re-invade the drier ground and eventually the meadow reverts to forest. Centuries may be required to see this process completed.

At each stage, many of the animal inhabitants change because the habitat has changed. The robin and the red squirrel in the original, pre-beaver forest give way to the heron; the heron is replaced by the insect and berry eating cedar waxwing; the waxwing is followed by the tree-dwelling robin and red squirrel once again.