WELCO PE to the WORLD of

Why Are Brown Bears Important?

Bears are a part of our culture: For thousands of years, people and bears have shared the land. Pictographs in central Montana dating back 3,000 years illustrate the importance of bears to prehistoric humans. Brown bears are considered to be an enduring symbol of true wilderness in North America. Their strength, power and beauty have inspired our respect, fear and admiration. Many native Americans believe brown bears possess special powers and can even take on human form.

Bears are like us! Bears are more like us than you might think. They sometimes stand on two feet, use their paws to reach for things and eat both plants and meat. Female bears are great moms. They fiercely protect and care for their cubs for their first two years. During that time mothers teach their cubs how to survive on their own.

Bears keep our environment healthy:

Brown bears keep wildlife populations healthy and strong

by feeding on sick and weak individuals. They keep plant-eating animal species from overpopulating and help forests grow by spreading seeds. Natural areas that support bears are home to many other animals. So by protecting bears, we protect other wildlife too.

Bears are survivors: At one time brown bears were scarce in the continental US and headed for extinction. Today America's greatest predator is making a comeback! Their recovery is one of our biggest conservation success stories and represents what we can accomplish when we all work together!

Bears share our space: As bear and human populations grow, conflict for space and resources between the two are on the rise. By becoming bear aware – learning ways to avoid unwanted or unsafe encounters – and teaching others what you've learned, you can create a brighter future for bears.

SAFETY OUTDOORS

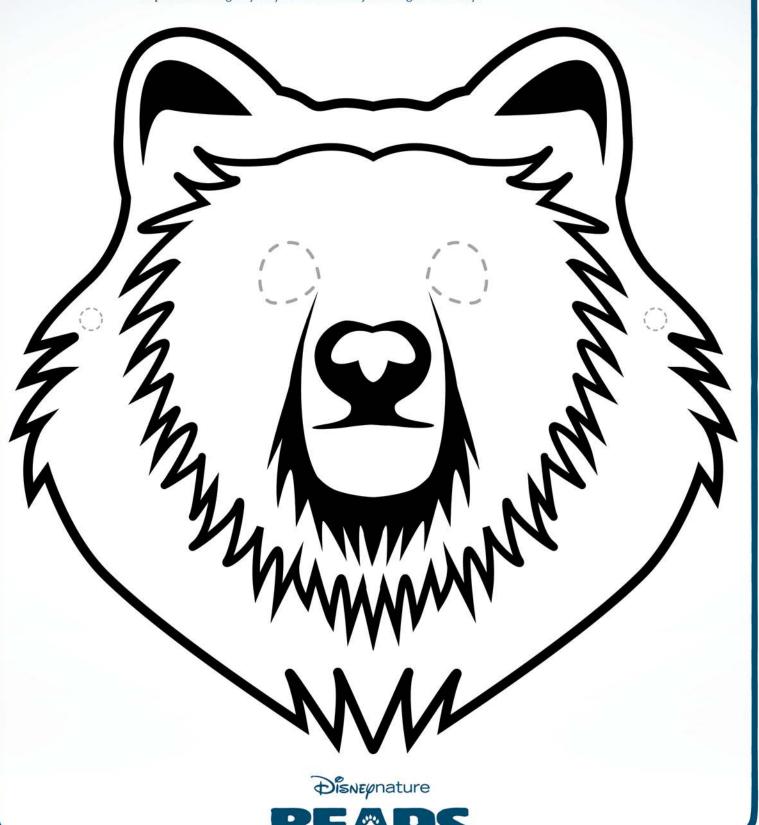
Connecting children to nature means taking them outdoors into the beauty of nature. In order to ensure a safe experience, we suggest you walk the outdoor area the day before to look for any potential safety hazards. Be aware of any plants that might cause skin irritation such as poison ivy. The goal is to have a fun, immersive, safe experience outdoors.





MAKE YOUR OWN BEAR MASK!

DIRECTIONS: Print this sheet on a piece of thick paper. Use your favorite coloring material to color the bear. Ask an adult to help you cut out the eye holes. Carefully punch holes on the dotted circles on each side of the bear's face and tie the ends of an elastic string on each hole. TIP: You may want to reinforce the holes with scotch tape to prevent tearing. Try on your mask and adjust string as necessary.







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WORD SEARCH



WORDS TO FIND:

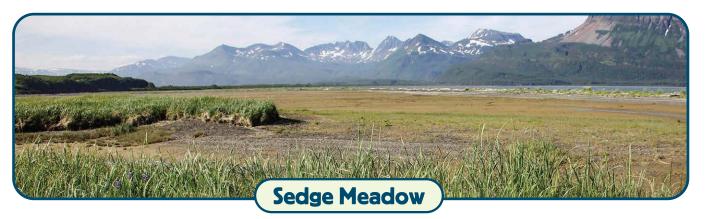
Camouflage	Adaptation	Ecosystem	Footprints	Scavenger
Herbivore	Carnivore	Omnivore	Territory	Predator
Meadow	Habitat	Species	Salmon	Katmai
Forest	Alaska	River	Niche	Bear
Prey	Paw	Den	Cub	



Where Do Brown Bears Live?

DIRECTIONS: Place one food, one water and one cover card into each ecosystem below to learn where brown bears live and the habitat elements they need to survive.









Visit a local, state or national park to learn more about plants, animals and wildlife habitats near you!





Where Do Brown Bears Live? Activity Cards

Cut out and place the Brown Bear Habitat Cards into the ecosystems on Activity Sheet 1 to see where bears live and how bears depend on different forms of food, water and cover to survive.





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How do I compare to a bear?

ACTIVITY SHEET 1B

GRADES 2-6

Comparing Hands

Line your hand up to the bottom of the paw print. Trace your hand. How are your hand print and the bear paw print alike and different?



Measure your fingernail and the bear claw in centimeters and inches. Whose is longer?

 $\textbf{BEAR:} \underline{\hspace{1cm}} cm \, / \, \underline{\hspace{1cm}} in$



CONNECTLook for animal tracks in your backyard to find out what wildlife visits your home.

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BEARS
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Brown Bear Adaptation Cards

What covers the brown bear's skin and provides it with protection?

- a. Feathers
- b. Hair
- c. Scales

Hair protects brown bears from cold temperatures and

- a. Insect bites
- b. Getting sunburned
- c. Both a and b

A bear's hair helps it to blend into its environment. What is this called?

- a. Mimicry
- b. Camoflauge
- c. Hiding

This keeps a bear's body insulated in cold tempuratures.

- a. Mittens
- b. Fat layers
- c. Bubbles

During which season do brown bears build layers of fat?

- a. Spring
- b. Summer
- c. Winter

Bears need to eat kg) of salmon per day in the summer to build fat.

- a. 2 lbs/less than 1 kg
- b. 5,000 lbs/2,267 kg
- c. 90 lbs/40 kg

Brown bears have sharp teeth for eating

- a. Ice cream
- b. Berries
- c. Salmon

Brown bears have long, flat molars for eating

- a. Salmon
- b. Berries
- c. Pizza

Brown bears have different types of teeth because they eat both plants and meat. This type of animal is called a/an

- a. Herbivore
- b. Carnivore
- c. Omnivore

Brown bears stand on their hind legs to



- a. Get a better view or a better smell
- b. Tree scratch
- c. Both a and b

What adaptation do brown bears have that give them strong muscles for digging?

- a. Nose opening
- b. Shoulder hump
- c. Sharp teeth

A bear's nose is large with wide nostrils. What adaptation does this allow for?

- a. A strong sense of smell
- b. An excellent sense of hearing
- c. Good eyesight

How many digits, or fingers, does a bear paw have?



- a. 5
 - b. 4 c. 3

How long is the average brown bear claw?



- a. 40-80 inches (100-200 cm)
- b. 11-19 inches (30-50 cm)
- c. 1-4 inches (5-10 cm)

What does a young bear use its claws for?



- a. To find food
- b. To climb trees
- c. Both a and b

What does a brown bear use its sense of smell for?

- - a. To find food
 - b. To find other bears
 - c. Both a and b

A bear can smell scents up to miles away.

a. 50 feet (15 meters)



- b. 2 miles (over 3 kilometers)
- c. 100 miles (160 Kilometers)

What type of food should you bring when visiting bear country?



- a. Fish
- b. Ice cream
- c. Only food that can be stored properly to avoid a bear encounter

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Brown Bear Adaptations Game

Help the brown bear get to its den! Roll a numbered cube to move your game piece through the board. Take the adaptation card that is the same color as the space you landed on. Answer the question correctly to collect your adaptation card. The first to collect all six adaptation cards and successfully reach the bear den is the winner!





Visit a local AZA zoo or aquarium to learn more about animal adaptations.





ACTIVITY SHEET 1 GRADES 2-6

What's For Dinner?

DIRECTIONS: Find out what's for dinner in Katmai National Park! Choose one Alaskan animal and glue its card into the box below. Using the provided clues, glue the corresponding plant or animal cards onto the plate to show what your animal eats.

PLACE ANIMAL CARD HERE

Based on this plate, check one of the boxes to show whether your animal is a herbivore, omnivore or carnivore.

INIIA					
	HERBIVORE				
	OMNIVORE				

CARNIVORE



Organize a river, lake or beach clean-up to keep water habitats clean for fish and the animals that eat fish.

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Who are a brown bear's neighbors?

ACTIVITY SHEET 1 GRADES 2-6

Animal Cut-Outs



















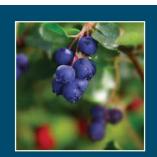






GRADES 2-6

Alaskan Animal Cards



FRUIT

I get my energy from the sun.



SALMON

from tiny
floating plants
and animals
called plankton.



MOSS

I get my energy from the sun.



SEDGE

I get my energy from the sun.



RED FOX

I get my energy from fruit, flies and hares.



SNOWSHOE HARE

I get my energy from grass and bark.



FUNGUS

I get my energy from rotting plant material.





GRADES 2-6

Alaskan Animal Cards



PLANKTON

I get my energy from the sun.



GREY WOLF

I get my energy from deer. foxes, hares, porcupine, caribou and carrion.



BEAVER

I get my energy from grass and bark.



WHITE-TAILED DEER

I get my energy from grass, bark and fruit.



PORCUPINE

I get my energy from grass, bark and fruit.

I get my energy



from carrion.



ORB SPIDER

I get my energy from flies.





Alaskan Animal Cards





CARRION

I am the remains of a dead animal.

Many animals





BALD EAGLE

I get my energy from salmon, hares, beavers, foxes and carrion.



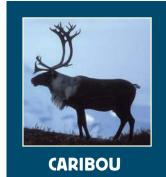
BARK

I get my energy from the sun.



BROWN BEAR

I get my energy from sedge, moss, fruit, flies, fungus, beavers, deer, hares, caribou, foxes, salmon and carrion.



I get my energy from grass, bark and fungus.





Timeline Images

DIRECTIONS: Cut out the photos from Disneynature **BEARS** below and place them in order of events. The photos will follow brown bear cubs Amber and Scout through their first year with their mother, Sky.



Cubs observing salmon fishing



Cubs nursing



Cubs emerging from den





Cubs resting

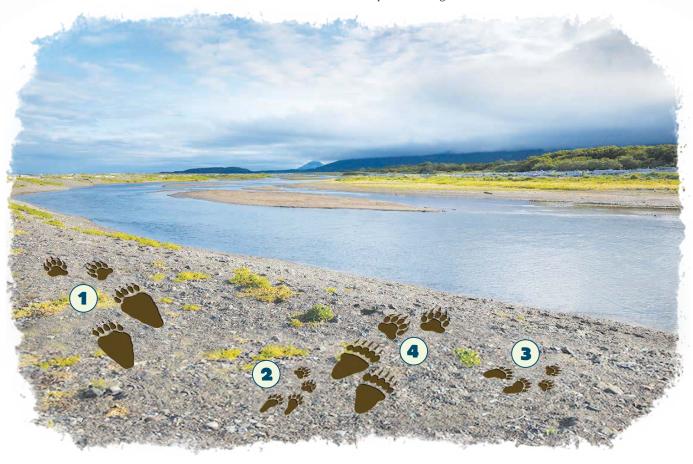






Which Brown Bears Visited This River?

The river is a popular spot for brown bears in Katmai National Park! Use the back footprints from the brown bear Identification Guide to decide which prints belong to each bear.



Based on my observations,	these	brown	bear	footprints
belong to:				

1. ______ 2. ____

3._____ 4.____

Why do you think bears are visiting this river?

Do you think this area of the river should be protected? Why or why not?



Use a field guide to look for and identify animal footprints in your backyard or near your school!







Brown Bear Identification Guide

Help scientists learn which bears have visited the river! Use the pictures, rear footprints and discriptions in the Brown Bear Identification Guide below to complete Activity Sheets 2 and 3.



Sky **Adult Female** **NOTES:** Large adult female with dark coat and long claws. Sky visits the river to catch fish to eat. She needs to feed her growing cubs.



Chinook Adult Male

NOTES: Adult male with wide paws and short claws. Chinook often competes with other bears for fishing spots on the river.





Amber Young cub

NOTES: Amber's paw is thin and long. She watches her mother's every move – learning the best ways to open clams or fend off wolves. If Sky happens to catch a fish, Amber will be there to share it with her.





Young cub

NOTES: Scout's paw is wide and short. Scout is a fearless adventurer who puts his nose everywhere - especially where it doesn't belong. Scout can get into trouble, but Sky is always there to protect Scout.



Use a local field guide to explore your backyard or a park near your home! Have an adult help you make plaster molds of any footprints you find.





How Can I Safely Visit Bear Country?

Help this family make their campsite safe by circling the things below that are good practices and placing an \mathbf{X} on the wrong practices.





Do your research before you visit a park! Learn more about the animals that live there and how you can be safe when you visit.





ANSWERS TO BEARS ACTIVITIES

Glossary

Adaptation: a trait that helps an animal or plant survive in its environment

Alpha: the highest ranking individual in a group

Amino acid: the building blocks of proteins; found within DNA

Bear-proof: an object that bears cannot open or break

Biodiversity: the variety of life forms on Earth; includes three major types of biodiversity: species, genetic and ecosystem diversity

Camera trap: a special automated camera equipped with a motion-detecting beam that is used to capture pictures of wild animals

Camouflage: a physical adaptation that helps an organism blend in with its environment

Canine teeth: *sharp, pointed teeth situated in the upper and lower jaws of an animal's mouth*

Carnivore: an animal that eats mostly meat

Carrion: a dead and decaying animal

Cell: the basic structural and functional unit of all living organisms

Chromosome: a threadlike structure containing DNA found within the nucleus of living cells

Consumer: an organism that does not make its own food; primary consumers eat producers, secondary consumers can eat primary consumers and producers, and tertiary consumers can eat secondary and primary consumers and producers

Coordinate: a group of numbers that indicates a point or plot on a map

Data: a collection of facts, numbers or text used to represent ideas or conditions

Decomposer: a living organism at the base of a food web that breaks down and recycles nutrients from dead animals and plants

Den: a shelter in which a resting bear spends the winter months

Deoxyribonucleic acid (DNA): the genetic material, made up of proteins called amino acids, found within most living organisms

Development: land use planning that includes the building of structures, such as roads, houses, schools and shops, for human use

Digits: the name for an appendage found on an organism's hand or foot; fingers and toes

Ecosystem: the interaction of all living and nonliving components found within a given area

Energy: ability to do work; energy can take many forms including heat and light. Plants make energy using sunlight through the process of photosynthesis; animals obtain energy from the food they eat

Fat layer: located just below a the skin, this layer gives a bear enough energy to survive the winter

Food chain: the way energy is transferred from producers to consumers in an ecological community

Food web: an interconnected network of feeding relationships in an ecological community

Footprint: the indentation or outline left by an organism's foot on an impressionable surface such as sand, mud or snow

Forage: to look or search for food items

Forest: a large area of land covered in dense trees and other plants

Fragment: an area of land that has been separated from a larger portion of the surrounding ecosystem by a natural or human-made barrier

Fungus: a multi-cellular organism that is neither a plant nor an animal that gets its energy from breaking down other organisms; a mushroom is an example of a fungus

Global positioning satellite (GPS): a system of navigational satellites that can provide accurate data on an object's location

Habitat: a place where plants and animals have everything they need to survive

Hair: threadlike strands that grow from the skin of mammals and other animals

Hair snare: a device used by scientists to retrieve hair samples from bears to study their genetics

Herbivore: an animal that eats plants

Herd: a large group of animals living together in the same area

Home range: the main area in which an animal lives and travels

Human-wildlife conflict: a negative interaction between people and animals that impacts them or their environment

Incisors: narrow-edged teeth found in the front section of the mouth specialized for cutting and tearing

Latitude: *imaginary lines used to measure the distance north or south from the equator*

Learned behavior: actions or mannerisms that are not instinctive but are taught through experience

Longitude: *imaginary lines used to measure the distance east or west from the prime meridian*

Meadow: a grassy area of land typically found near a body of water

Molars: flat teeth used for grinding found in the back of a mammal's mouth

Navigate: to plan and direct a course using measurements or maps

 $\textbf{Niche:} \ \textit{the role each living thing has in its habitat}$

Nucleus: the control center of an animal cell

Nursing: the method that mammals use to feed their young

Omnivore: an animal that eats plants and animals

Pack: a group of wolves that live and hunt together

Paw: an animal foot that contains both claws and footpads

Population: all of the animals living in an area

Predator: an organism (usually an animal) that eats other animals for food

Prey: an animal that is food for another animal

Producer: an organism that is able to make its own food (i.e., plants, some algae)

Range: the geographical area in which an animal population is found

River: a large channel of water flowing to or from another body of water

Salt marsh: a coastal wetland that is flooded and drained as salt water is brought in by the tides

Scat: animal waste; dung

Scavenger: an animal that feeds on food captured or acquired by another animal

Scent marking: a body odor, scent from a gland, urine or scat deposited in a geographic area to communicate with others of the same species

Scientist: a person who studies the living or non-living world

Sedge: a grass-like herb often found in salt marshes that grows in wet ground near water

Species: a group of very similar organisms; individuals in the same species can mate to produce fertile offspring

Teeth: enamel coated structures found in vertebrates used for biting and chewing

Territory: an area defended by an animal

Threat: indication of impending harm; something that negatively impacts the survival of an organism

Tracking collar: a special band of material placed around the neck that is equipped with a device to record an animal's movement throughout its habitat

Tree scratching: a behavior in which brown bears use their front claws to score the trunks of trees in order to mark their territory and communicate with other bears

Wildlife corridor: a habitat that connects wildlife populations separated by human-made structures such as roads or housing developments





ACTIVITY SHEET 1

GRADES 2-6

ANSWER KEY

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This keeps a bear's body insulated in cold tempuratures.

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During which season do brown bears build layers of fat?

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Bears need to eat _____lbs
(____kg) of salmon per
day in the summer to build fat.

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Brown bears have sharp teeth for eating ______.

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Brown bears have long, flat molars for eating _____

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Brown bears have different types of teeth because they eat both plants and meat. This type of animal is called a/an____.

- a. Herbivore
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Brown bears stand on their hind legs to_____.

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What adaptation do brown bears have that give them strong muscles for digging?

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A bear's nose is large with wide nostrils. What adaptation does this allow for?

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How many digits, or fingers, does a bear paw have?



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How long is the average brown bear claw?



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What does a young bear use its claws for?



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What does a brown bear use its sense of smell for?



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A bear can smell scents up to miles away.



- a. 50 feet (15 meters)
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What type of food should you bring when visiting bear country?



- a. Fish
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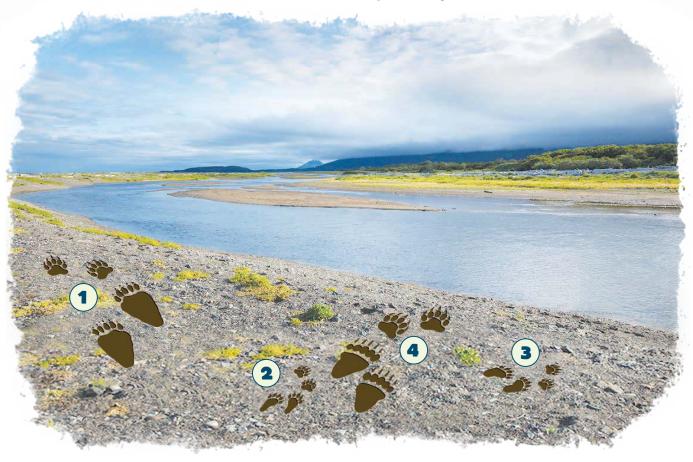
ACTIVITY SHEET 2

GRADES 2-3

ANSWER KEY

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belong to:					

1. <u>Chinook</u> 2. <u>Amber</u>

3. Scout 4. Sky

Why do you think bears are visiting this river?

Do you think this area of the river should be protected? Why or why not?

CONNECT WITH NATURE

Use a field guide to look for and identify animal footprints in your backyard or near your school!







ACTIVITY SHEET 1

GRADES 2-3

ANSWER KEY

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