

Where do brown bears live?

2-6 SUBJECT AREAS Art Language Arts Math Science **Social Studies**

GRADE

LEVEL

VOCABULARY: Ecosystem, habitat, range, sedge

STUDENTS WILL BE ABLE TO...

- Define and compare the terms ecosystem, habitat and range • Identify the current range of the brown bear and locate
- Katmai National Park on a world map • Explain why living and non-living parts of the environment
- are equally important to the survival of brown bears • Describe at least three brown bear habitat elements
- and connect these to the ecosystem where they are found
- Predict how a change in habitat can impact brown bear survival

BACKGROUND INFORMATION Pages 8-12

WHAT YOU NEED • World map or globe

- Activity Sheet 1: Where do brown bears live?
- Activity Cards: Brown Bear Habitat Cards

LEARNING ACTIVITIES

- 1. Introduce students to the world of the Alaskan brown bear using the movie trailer for Disneynature **BEARS** (available at disney.com/bears). Show students the continents where brown bears are found using a world map or globe and the International Union for the Conservation of Nature (IUCN) range map: http://maps.iucnredlist.org/map. html?id=41688. Discuss the current and historic **range** of the brown bear as a class.
- 2. Disnevnature **BEARS** was filmed in Katmai National Park. Alaska. Locate Alaska and the relative area of Katmai National Park on a world map or globe. Introduce students to Katmai National Park using the park's website featuring a park map, photo gallery and visitor information (http://www.nps.gov/katm/index.htm). Discuss the size and features of Katmai National Park.
- 3. Introduce the term **ecosystem** and use the Katmai National Park website to identify at least three different ecosystems in Katmai National Park. Discuss the importance of both living and non-living parts of an ecosystem. What living elements might brown bears need to survive? Brown bears depend on plants and animals for food. What non-living elements might brown bears need to survive? Students should conclude that sunlight, wind, water, soil, oxygen, temperature and weather are all important to the brown bears' survival.
- 4. Discuss how an ecosystem differs from a habitat. What

examples of brown bear habitat elements (food, water and cover) do students see in the Disneynature **BEARS**

trailer (preview the movie trailer a second time if needed)? Have students use the Brown Bear Habitat Cards to complete Activity Sheet 1. Students should determine which habitat elements belong in each of the three ecosystems.

FOREST = den • puddle • berries **SEDGE MEADOW** = sedge • lake • snowshoe hare **RIVER ECOSYSTEM** = river bank • river • salmon

5. After completing Activity Sheet 1, compare the habitat elements found in each ecosystem. How do brown bears depend on these elements to survive? All habitats must provide food, water and cover for animals to survive. However, the type of food, water and cover changes depending on the ecosystem. In the forest and sedge meadow, food can be berries, nuts, insects or small mammals. But salmon (an important food item in the river ecosystem) would not be found in the forest or sedge meadow. In the same way, sedge might provide cover in the sedge meadow, but not in the forest. Water is an important habitat element that also takes different forms (river, lake or puddle). Students should



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conclude that because brown bears use and travel through multiple ecosystems throughout the year, they depend on different forms of food, water and cover to survive.

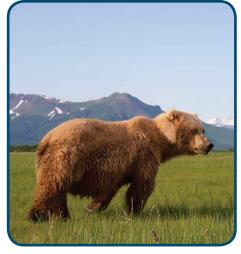
6. For students in Grades 4-6: Break the class into small groups. Have each group pick one of the three ecosystems featured in this lesson (forest, sedge meadow and river). Each group should research the following questions about their ecosystem: What other brown bear habitat elements exist in this ecosystem? How might these habitat elements change throughout the year? How might people impact these habitat elements negatively and positively? How do changes in the habitat impact brown bears? Have students share their findings with the class as part of a PowerPoint presentation or poster display.

WRAP UP & CHECK FOR UNDERSTANDING

Wrap up and check for understanding using the following discussion points:

- Define and compare the terms habitat, ecosystem and range. A habitat is the area where an animal finds food, water and cover; many habitats make up an ecosystem. An ecosystem is the arrangement and interactions of all living and non-living parts; more than one ecosystem may be found in an animal's range. A range is the geographic area where an animal population is found.
- Explain why living and non-living things are equally important to the survival of brown bears. Brown bears depend on their ecosystem, which is made up of both living and nonliving parts. Without non-living components, such as sunlight, wind and weather there would be no living components, such as plants to provide food, oxygen or shelter for bears. Living and non-living parts of the ecosystem are intricately connected and brown bears depend on both to survive.
- Describe at least three brown bear habitat elements and

connect these to the ecosystem where they are found. Predict what would happen if one



or more of these things were removed. Students should state that the brown bears' habitat provides them with the food, water and cover needed to survive. Students can describe any combination of the following ecosystems and habitat elements: forest = berries (food), puddle (water), den (cover); sedge meadow = snowshoe hare (food), lake (water), sedge (cover); river = salmon (food), river (water), river bank (cover). Because everything is connected, removing even one of these habitat elements could disrupt the entire ecosystem, making it difficult for brown bears to survive.

EXTENDING THE LESSON

• LANGUAGE ARTS AND SOCIAL STUDIES: Have students read part or all of Katmai National Park's newsletter *The Novarupta* (http://www.nps.gov/katm/ loader.cfm?csModule=security/getfile&pageid=146715). Break students into small groups and have them choose one or two stories to share with other members of the class. Then, have each group research and create a newsletter or brochure featuring a local, state or national park in your area (http://www.nps.gov/findapark/ index.htm). Students should be sure to highlight fun outdoor activities, any historical or cultural connections, recommendations for visiting at different times of the year and unique wildlife viewing opportunities. Students should also include actions people can take when visiting

the park to lessen their impact on wildlife (for example, staying on marked trails, following park rules, picking up litter and not feeding wild animals). Have students share their newsletter or brochure with peers, other classes or as part of a larger school symposium.

• MATH AND SOCIAL STUDIES: Katmai National Park and Preserve covers over four million acres (6,395 mi² or 16,564 km²)! To discover how large this park actually is, have students overlay a map of Katmai National Park onto a map of your city, county or state. Calculate how many times Katmai National Park could fit into your state,

or how many times your city, county or state could fit into Katmai National Park.





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RESOURCES

For Students

- Breiter, Matthias. *The Bears of Katmai: Alaska's Famous Brown Bears*. Portland, OR: Graphic Arts Books, 2000.
- McHugh, Erin. National Park: A Kid's Guide to America's Parks, Landmarks and Monuments. New York, NY: Black Dog & Leventhal Publishers, 2012.
- National Geographic Kids. *National Geographic Kids: National Park Guide,* U.S.A. Washington, DC: National Geographic Children's Books, 2012.
- Orr, Tamra B. Alaska. New York, NY: Scholastic Library Publishing, 2008.
- Somervill, Barbara A. Alaska. Children's Press (Scholastic Library Publishing), 2008.

For Teachers

- Alaska Geographic/Bear Necessities Coalition. Ballad of the Wild Bear. http://www.alaskageographic.org/uploads/pdf/teaching_guide.pdf
- America's State Parks/ParksbyNature Network. America's State Parks Pocket Ranger[®] Passport. http://pocketranger.com/
- Florida Fish and Wildlife Commission. *Black Bear Necessities*. http://myfwc.com/media/150726/Bear_lesson1.pdf
- Idaho Department of Fish and Game/Idaho ProjectWILD.
 How many bears can live in this forest?
 http://idahoptv.org/dialogue4kids/season7/bears/howmanybears.cfm
- Idaho Department of Fish and Game/Idaho ProjectWILD. What bear goes where? http://idahoptv.org/dialogue4kids/season7/bears/beargoeswhere.cfm
- International Union for the Conservation of Nature (IUCN). *IUCN Red List: Ursus arctos.* http://www.iucnredlist.org/details/41688/0
- National Park Service. Coastal Salt Marshes. http://www.nps.gov/lacl/naturescience/coastal-salt-marshes.htm
- National Park Service. Katmai National Park. http://www.nps.gov/katm/index.htm
- National Park Service. Lake Clark National Park & Preserve. http://www.nps.gov/lacl/naturescience/
- North American Bear Center. The Black Bear Shuffle. http://www.bear.org/website/ images/stories/education-outreach/lesson-plans/Black_Bear_Shuffle.pdf







To learn more about wildlife habitats and ecosystems in your area, plan a class field trip to explore a local, state or national park! Give students local field guides, a nature journal and a digital camera to document their trip.

Download the **America's State Parks Pocket Ranger**[®] **Passport** app (http://pocketranger.com/) to help plan your visit and discover fun ways for your students to explore the great outdoors!



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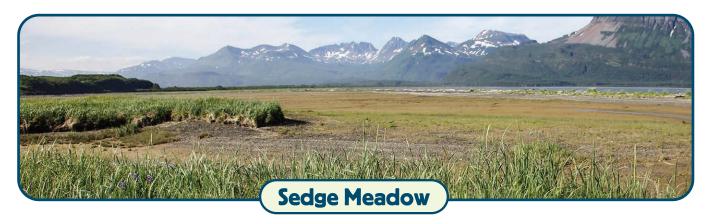


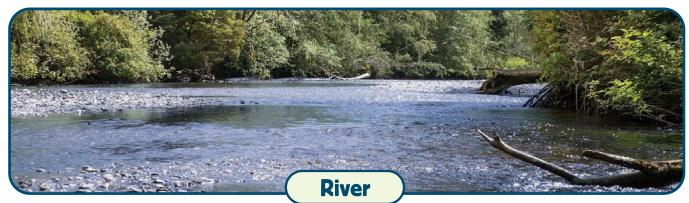
ACTIVITY SHEET 1 GRADES 2-6

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!



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