

EXPLORE WITH YOUR SENSES



*Ranger Led
Program*

THEME: Five Senses

GRADE LEVEL: Kindergarten

BEST TIME TO PLAN TRIP: Spring or Fall

UNIT RATIONALE

Great Smoky Mountains National Park is an excellent backdrop for students as they explore the natural world with their senses. Lessons in history and animal communities are taught by park rangers as students become actively involved in touching, smelling, seeing, and listening to the resource. Increasing the comfort level between a child and the outdoor environment is crucial to the future of the National Park Service. A child who learns to safely explore the outdoors with adults may become intrigued and excited to explore other natural areas in their own community. This early love of the outdoors is sometimes missed due to the draw of today's entertainment technology such as cable television, computers, and electronic gaming systems. The purpose of this trip is to create an awareness of the natural world and encourage future learning through family activities in Great Smoky Mountains National Park.

STATE CURRICULUM STANDARDS - NORTH CAROLINA (KINDERGARTEN)

SCIENCE

K.P.2 - Physical Properties

K.P.2.1 Classify objects by observable physical properties (including size, color, shape, texture, weight, and flexibility).

K.P.2.2 Compare the observable physical properties of different kinds of materials (clay, wood, cloth, paper, etc) from which objects are made and how they are used.

EX K.P.2.2 Sort objects by observable physical properties (including size, color, shape and texture).

K.L.1 - Animal Characteristics

K.L.1.1 Compare different types of the same animal (i.e. different types of dogs, different types of cats, etc.) to determine individual differences within a particular type of animal.



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PLANNING A SUCCESSFUL TRIP

EXPLORE WITH YOUR SENSES



SCHEDULE FOR A DAY OF ACTIVITIES IN GREAT SMOKY MOUNTAINS NATIONAL PARK

Morning:

- Arrive at Oconaluftee Visitor center
- Use restrooms.
- Ranger introduces students to Barney the “Talking Barn”
- In two groups, students participate in ranger-led activities
- Stay for picnic lunch on lawn or return to school

Planning a Successful Trip

- This kindergarten program takes place at the Oconaluftee Visitor Center on Highway 441, two miles from Cherokee, NC. Park rangers will be waiting for you at the visitor center.
- There is no cost to use this site or for the program.
- Safety is of the utmost importance, especially in a National Park. Be sure to read the safety information provided on the following page. You may wish to take the page with you on your trip or send it to your chaperones prior to the on-site experience.
- Check the weather before you go.
- School buses can park at the program site.
- The maximum number of students for this trip is 50. One adult chaperone is required for every eight students
- Students may leave their lunches on the bus. Teachers and chaperones should bring picnic blankets for the students to sit on. All trash must be carried back to school. NEVER leave food unattended.
- Restrooms and seasonal water fountains are available. Groups should bring their own drinks.



SAFETY CONSIDERATIONS AND OTHER IMPORTANT INFORMATION



- Great Smoky Mountains National Park is a federally protected public use area. Please help the rangers keep all of the plants and animals protected in the park by not picking the plants or taking anything from the park.
- Please remind your students to wear appropriate footwear and clothing for this extended outdoor experience. Flip flops, slip-on shoes, or sandals are not appropriate for the program.
- Temperatures in some parts of the park can be 10-15 degrees colder than at your school. Long pants and layers are suggested for the program. Pants are the best precaution against cool temperatures, bee stings, ticks, and poison ivy.
- Within the park, cell phones are not always reliable. Rangers will follow the on-site agenda. If an unexpected problem occurs, rangers do carry park radios to make contact with the park dispatch office. For non-emergencies, call the Park Ranger dispatch at 865-436-1230 or contact a park employee.

Animals and Plants of Concern in the park

- All animals in the park are wild and their behaviors are unpredictable. Treat all animals with caution.
- Venomous snakes - Two species of venomous snakes live in the Smokies, the copperhead and timber rattlesnake. Students should be cautious where they place their hands and feet.
- Insects - Yellow jacket wasps are the insects of greatest concern. They build nests in the ground along trails and streams and are aggressive when disturbed. Stings cause local swelling and can lead to severe allergic reactions in sensitive individuals. Such persons should carry epinephrine kits.
- Poison Ivy - Poison ivy is a three-leaved plant which can grow on the ground as well as on “hairy” vines up trees. To avoid chances of an allergic reaction wear long pants, stay on trails, and avoid direct contact with vegetation. If contact occurs or is a concern, wash affected parts in cold soapy water immediately.
- It is extremely helpful to rangers leading the program for students to wear clearly labeled name tags with first names only.
- Pets are not allowed on most park trails. Please do not bring them on the field trip.
- For more information about the park (Things to Know Before You Come) please visit the park’s website: <http://www.nps.gov/grsm/planyourvisit/things2know.htm>



BACKGROUND INFORMATION



Park Description:

The National Park Service is charged with the management and preservation of the nation's most precious natural and cultural resources. These resources are woven into our natural heritage, and they provide opportunities for recreation, appreciation of beauty, historical reflection, cultural enrichment, and education.

Great Smoky Mountains National Park is one of the largest protected land areas east of the Rocky Mountains. With over 500,000 acres (800 square miles) of forest, the Smokies contain an enormous variety of plants and animals. In terms of biological diversity, a walk from a mountain's foot to its peak is comparable to the 2,000 mile hike on the Appalachian Trail from Georgia to Maine.

Because the National Park Service is charged with protecting resources and natural systems, the park engages in comprehensive research programs, such as air quality monitoring, to foster an understanding of park resources and to show how they are affected by local, regional, and global influences. Since the Smokies are so biologically diverse, the park is designated as an International Biosphere Reserve by the United Nations. The international system contains over 320 reserves in over 80 countries with the primary objectives of conserving genetic diversity and coordinating environmental education, research, and monitoring.

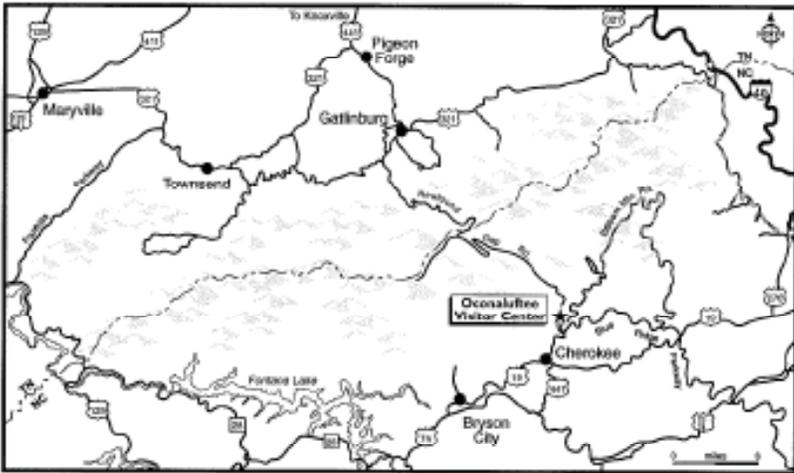
The Smokies also have a rich cultural history. Native Americans have lived in this area for thousands of years, and permanent white settlement began around 1800. The coming of commercial logging around 1900 stripped trees from two-thirds of what is now park land. Established in 1934, the park was created from more than 6,000 tracts of private and commercial land that was bought mostly with money raised and privately donated. Centrally located within a two-day's drive for half of the nation's population, Great Smoky Mountains National Park has the highest visitation of all the national parks in the country.

Oconaluftee Visitors Center Description:

The Oconaluftee Visitor Center is located 2 miles north of Cherokee, NC, on US-441. Situated at an elevation of 2,040 feet, the area contains cove hardwood forests. The adjacent Mountain Farm Museum is a collection of nine historic log structures that were moved from sites throughout the national park to their current location in 1953. They represent some of the types of buildings found on mountain farms at the beginning of the 20th century.



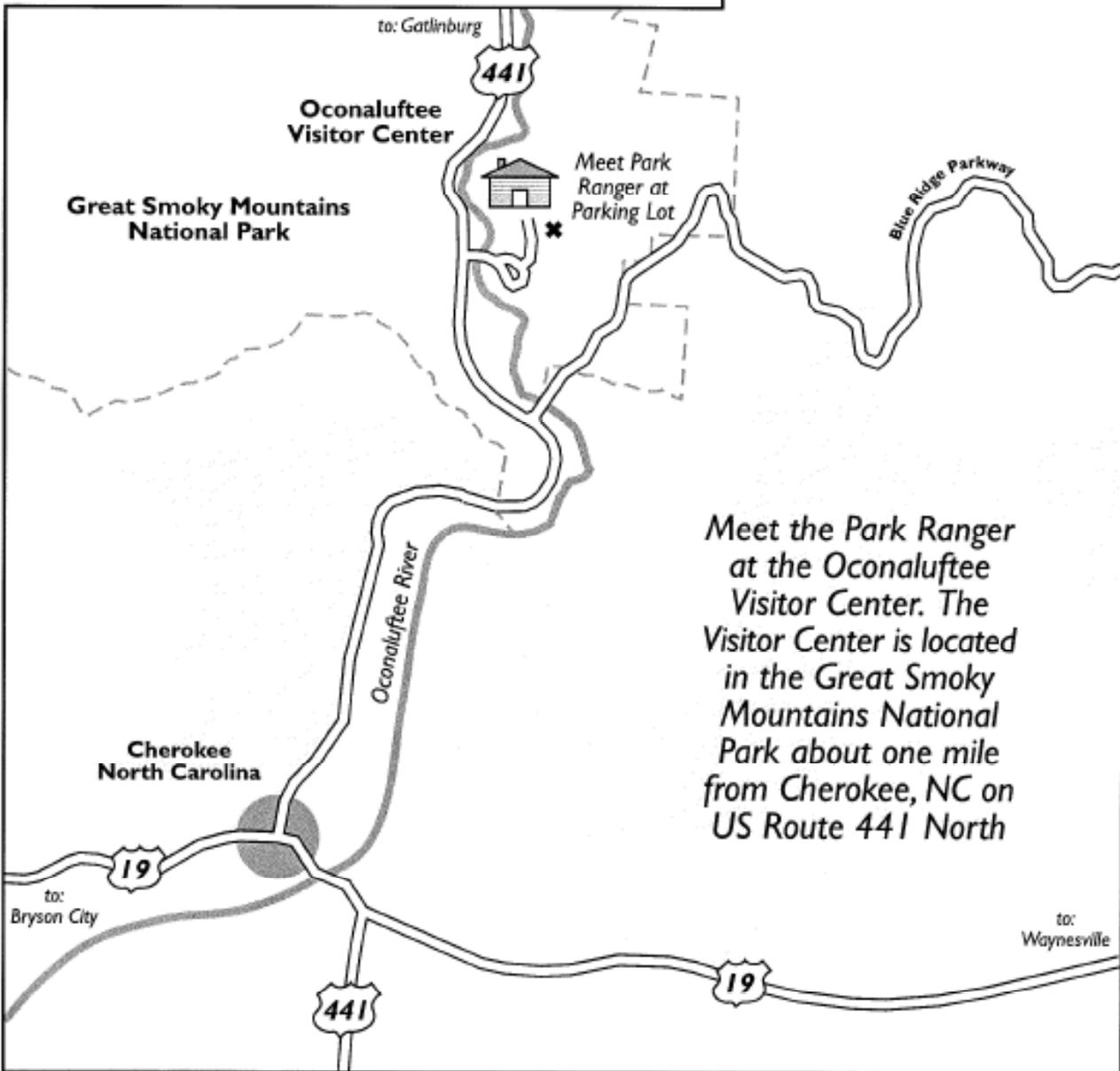
MAP TO OCONALUFTEE VISITOR CENTER



Oconaluftee River Classroom



Meet the Park Ranger at the Oconaluftee Visitor Center. The Visitor Center is located in the Great Smoky Mountains National Park about one mile from Cherokee, NC on US Route 441 North



PRE-SITE ACTIVITY

ANIMALS AND THEIR SENSES

**Grade Level:**

Kindergarten

Subject Area: Science**Activity time:**

30 minutes

Setting: Indoors

Skills: Observing, inferring, communicating, predicting, comparing, brainstorming, analyzing, presenting

Vocabulary:

• **Environment:** All of your surroundings. This includes plants, animals, and people (living things) and the air, water, rocks, buildings and roads (things that are not living.)
National Park- An area of land protected by the government for the enjoyment of the citizens. This area also includes plants, animals, streams, and historic buildings.

• **Senses:** Five different ways humans and other animals experience things. These are sight, taste, hearing, touching, and smelling.

Objective:

- 1) locate and describe the importance of all five sense on humans and animals
- 2) name five animals that live in Great Smoky Mountains National Park

Materials:

- Animal sheets (in this packet)
- Crayons to color the animal drawings
- Scissors to cut out the drawings

Background:

All animals have senses. Though they may not look like you or me, a bear, a frog, and a bird all have parts to their body which help them learn about their environment.

Great Smoky Mountains National Park is home to over 17,000 known different types of animals and plants. The living things of the forest and the streams need to make or find energy from the sun, the plants and sometimes from other animals. How does a raccoon find food? How does a bird make a nest? How does a deer listen for its mother in the forest? The answer to all of the questions is the same: animals use their senses to survive.

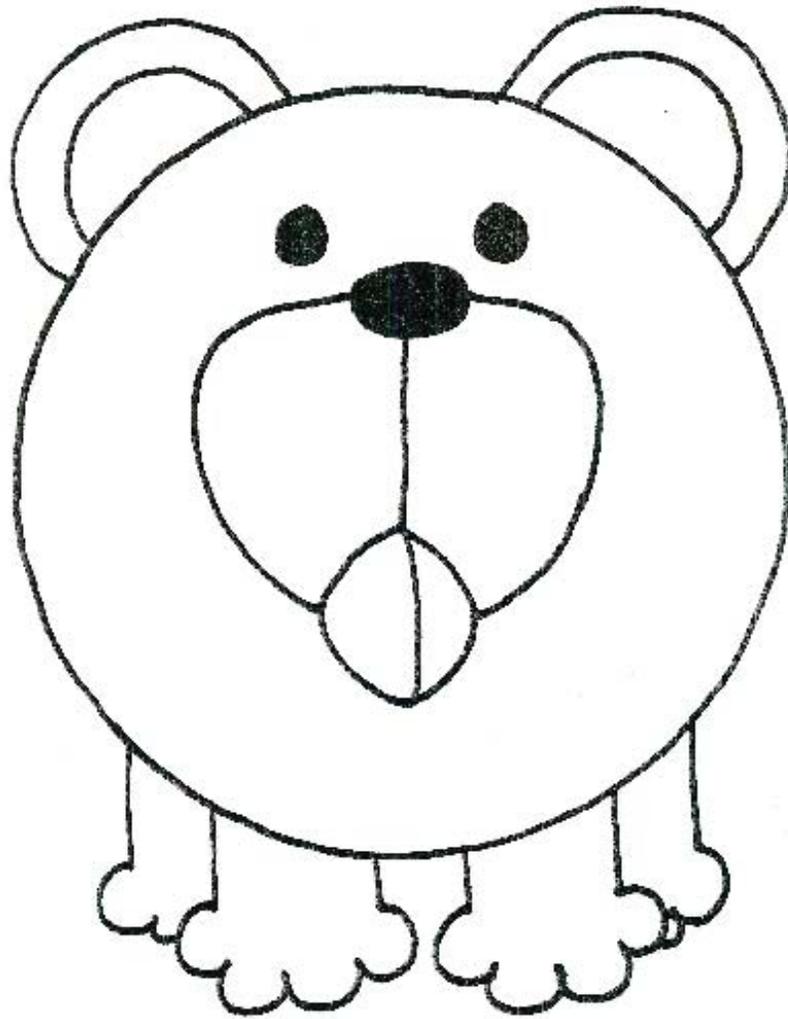
Procedure:

Use the following color sheets to help introduce animals of Great Smoky Mountains National Park to the students and to help reinforce their knowledge of their own senses.

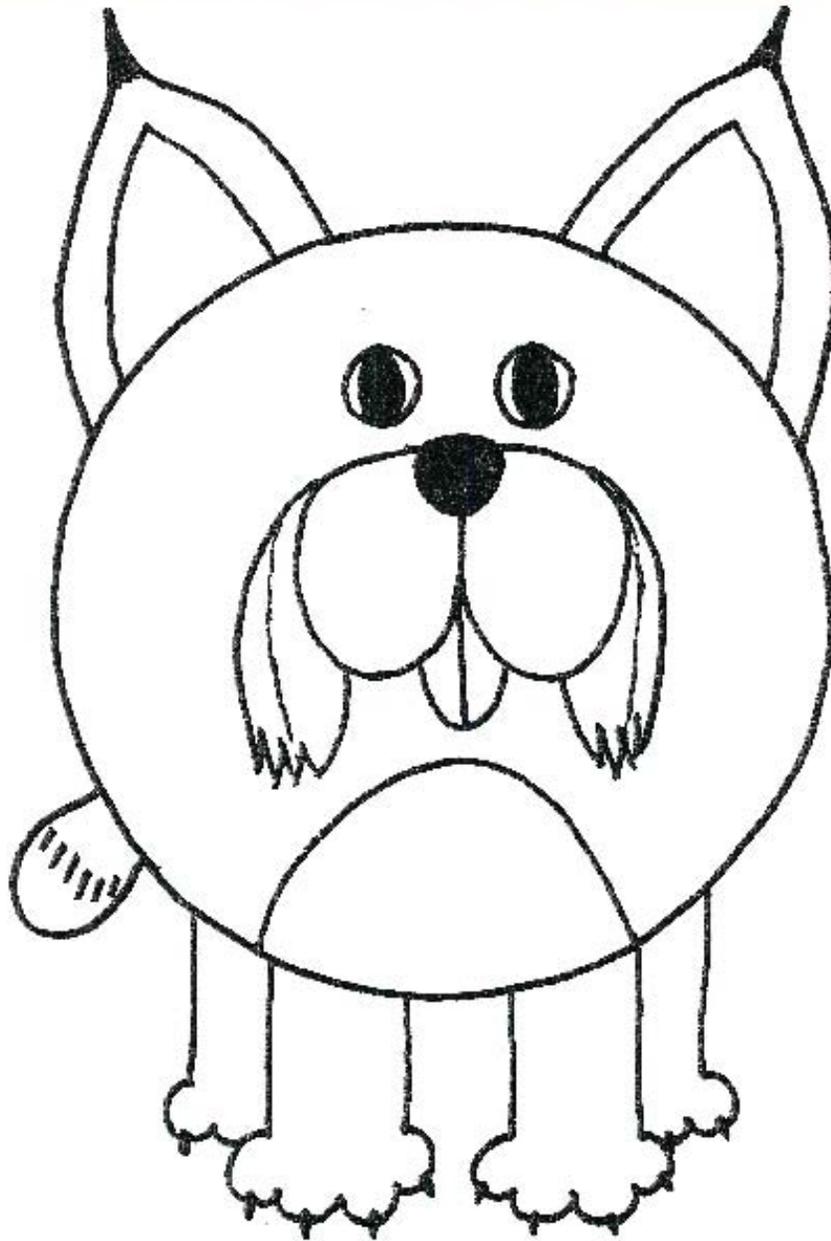
Resources:

Page 7-11 artwork by Sharon Kim, Great Smoky Mountains National Park

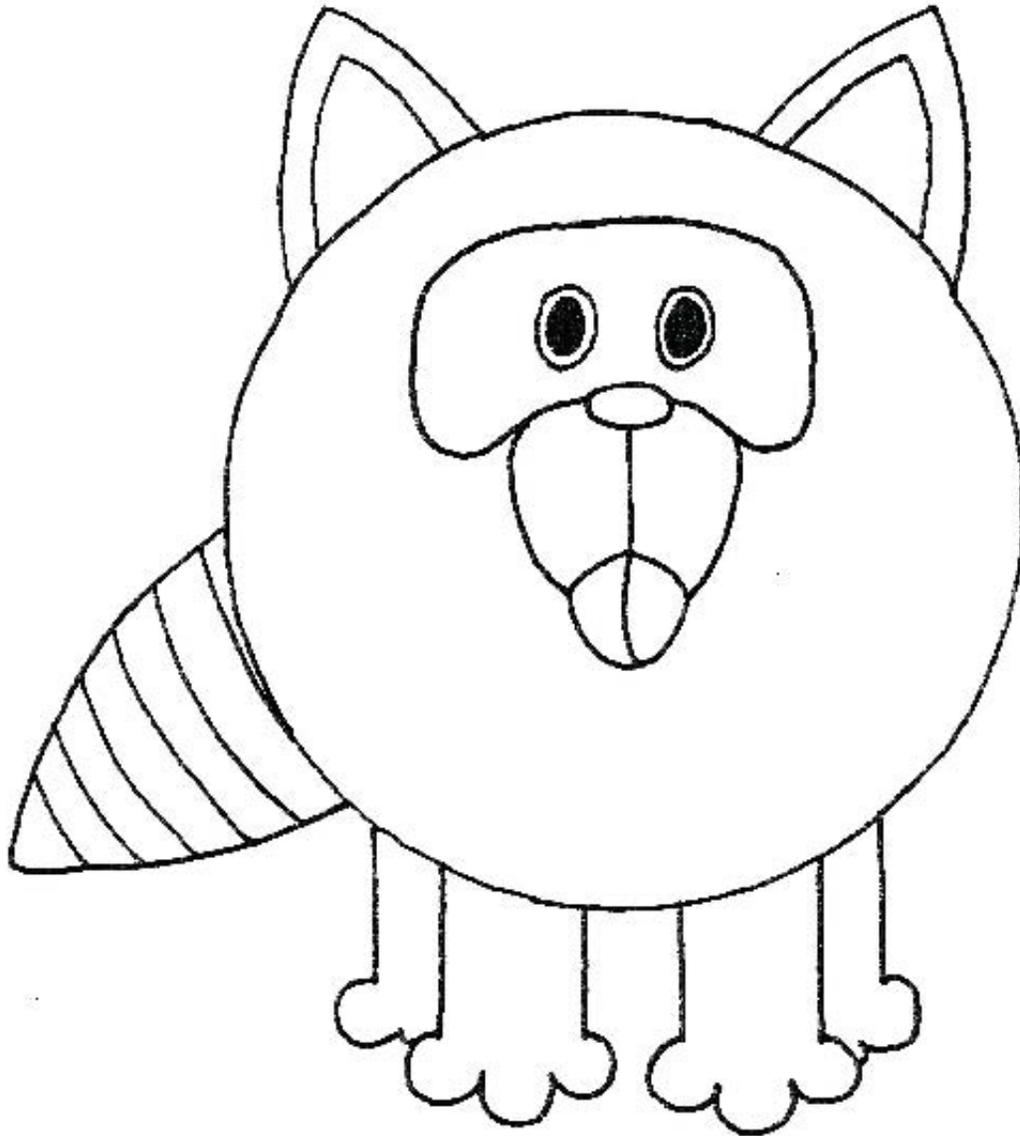




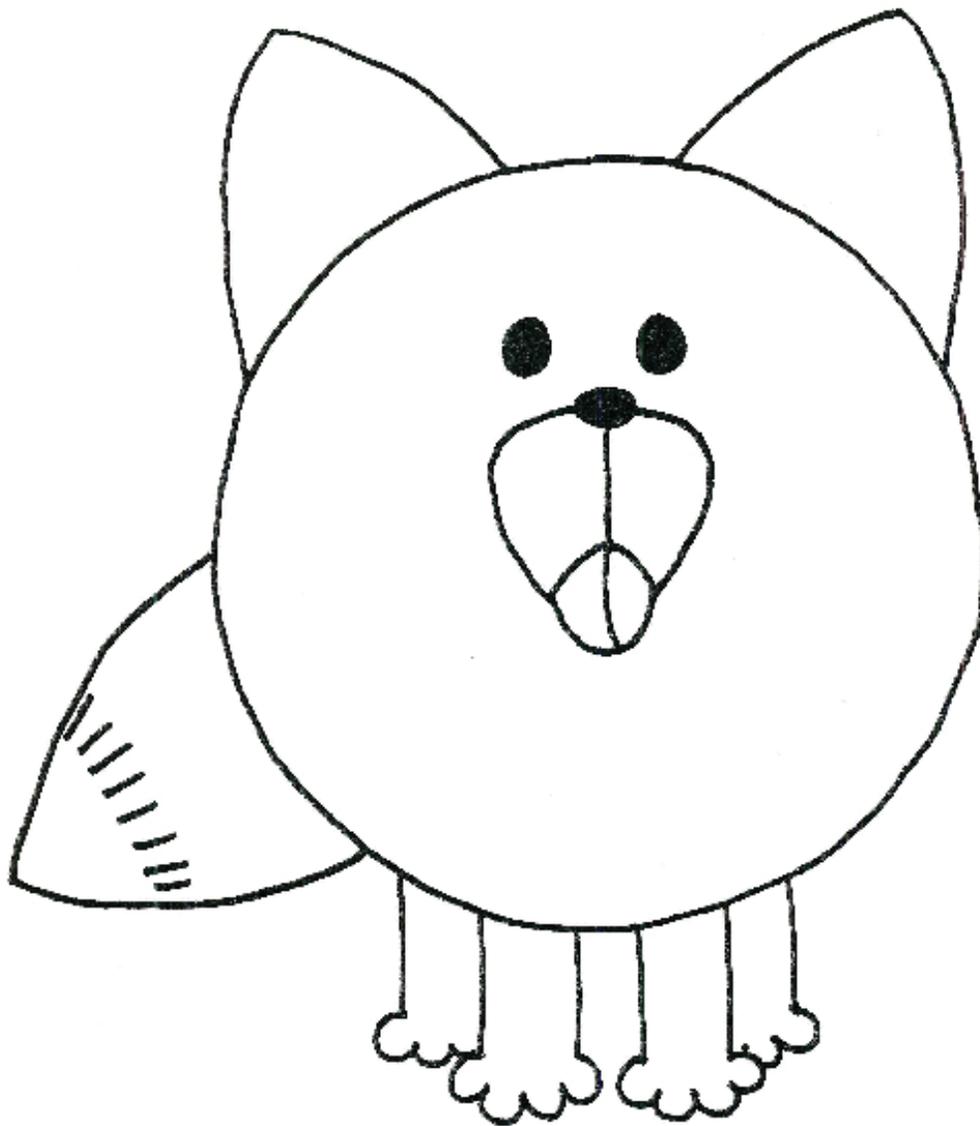
I am a Black Bear. My nose
can _____ food that is far
away.



I am a Bobcat. I have good eye sight. I can ___ even when it is dark outside.



I am a Raccoon. My hands are good for _____ things in the forest and for picking up food.



I am a Red Fox. I use my tongue to _____ eggs and berries. Yum!

ON-SITE ACTIVITIES

PARK RANGER DIRECTED LESSONS

**Grade Level:**

Kindergarten

Subject Area: Science**Activity time:**

1.5 hours

Setting: Indoors**Class Size:** Maximum of 50

Skills: Observing, inferring, communicating, predicting, comparing, experimenting, brainstorming, sorting, classifying, organizing, analyzing, presenting, collecting information

Vocabulary:

- Barn: A building for farm animals and their food.
- Farm: An area of buildings with different used for farming purposes like raising animals or growing plants for food.
- Historic structure: A building with significant history, making it worth protecting for people to visit and learn about.
- Protecting: To keep people from hurting something.
- Senses: Five different ways people experience things. These are sight, hearing, smelling, touching, and tasting.

Objectives:

- 1) use observation and listening skills to learn how it was to live in a mountain community 100 years ago.
- 2) explain the function of a barn and how it was used on a farm.
- 3) Explain why a Park Ranger protects historic structures as well as plants and animals.
- 4) Name their five senses and how they are used.
- 5) Learn how to use a magnifying glass to see small objects.
- 6) Understand the importance of using all their senses to explore in the National Park

Materials: All provided by park rangers

Background:

The following is a brief description of your on-site activities. These activities will be led by park staff, but please be familiar with them, as the classroom teacher may be asked to assist on-site.

Talking Barn (10 minutes)

“Barny” will welcome students to the Mountain Farm Museum. Through storytelling, students will learn about the barn and how they will be exploring with the farm their senses.

Sensory Circle (20 minutes)

Students will be asked to close their eyes and feel as they stand in one place. Rangers will pass different objects around in the circle for students to touch and smell objects of the forest. After all objects have been passed around, the ranger will ask for guesses from the group as to what was discovered with their senses.

Sounds of the Forest (20 minutes)

Students will sit and listen to a variety of recorded animal sounds from Great Smoky Mountains National Park. The ranger will ask students which animal is making the recorded sound. The ranger will show students a photograph of the correct animal.

Nature Artists (20 minutes)

Students will be shown the proper techniques of using a magnifying glass. Students will then receive a magnifying glass and will be directed to search the forest floor using only their eyes to uncover the microscopic world. Student will be asked to report back to the ranger with verbal descriptions of their findings.

Rocks That Roll (And Some That Don't) (20 minutes)

Students will be asked to describe various rocks along the riverside beach and sort them according to their properties. In the fall, students will describe and categorise different leaves.



POST-SITE ACTIVITY

SCHOOL NATURE DETECTIVES

**Grade Level:**

Kindergarten

Subject Area: Science**Activity time:**

As time allows

Setting: Indoors

Skills: Observing, communicating, comparing, experimenting, presenting, collecting information

Vocabulary:

- Magnifying lens a polished plastic or glass lens that helps you see small things.
- Inventory: The process of counting and listing things in an area.

Objectives:

- 1) conduct a school yard inventory.
- 2) compare and contrast their school yard findings with those from the National Park.
- 3) use a magnifying glass to see small objects without damaging them.

Materials:

- magnifying glasses for each student
- inventory list
- trash bags

Procedure:

Just as many exciting discoveries were made during the class trip to Great Smoky Mountains National Park, there are many places to explore within your school yard. Allow students to use their magnifying glasses back at school to make an inventory list just like the one in the national park.

Once completed, ask students if the list looked longer or shorter. Were any of the same types of items found? Why or why not? Is your school yard bigger or smaller than the national park (the park is 500,000 acres).

While visiting Great Smoky Mountains National Park, students heard from park rangers and from the “Talking Barn” about the importance of keeping the forest clean of trash. When people visit special places like national parks, they should be sure to pack out all of their trash and garbage.

Schools are also special places that should be kept clean. As a service learning opportunity, are there places within your school that students could help to clean up? Any trash on the school grounds? Litter in the halls? Find an opportunity for stewardship and encourage students to keep their school clean.



POST-SITE ACTIVITY

EXPLORE YOUR NATIONAL PARKS

**Grade Level:**

Kindergarten

Subject Area: Science**Activity time:**

30 minutes

Setting: Indoors

Skills: Computer skills, research, collecting information, connecting, brainstorming, analyzing, presenting, communicating

Objective:

To teach students about the various aspects of the National Park Service.

Materials: internet access

Background:

The Great Smoky Mountains are world renowned for their diversity of plant and animal species. This great variety makes the park an exemplary outdoor laboratory for the study of relatively undisturbed native flora, fauna, physical environs, and processes of the Southern Appalachians. The park is the largest federally preserved and protected upland area east of the Mississippi River offering park visitors a refuge from the stresses of everyday life.

You and your students can learn more about this special place as well as participate in on-line activities to further

your knowledge of the National Park Service and other federally protected lands.

Please check out the following web addresses:

Especially for Kids

To learn how to become a web ranger for the National Park Service, go to:

www.nps.gov/webrangers

To learn how to become a Junior Park Ranger at Great Smoky Mountains National Park or other parks, go to:

www.nps.gov/learn/juniorranger.htm

Especially for Teachers

For a comprehensive understanding of the background and development of the National Park Service, that is perfect for teachers and others those who need the maximum amount of accurate information in the minimum amount of time, go to:

<http://www.ParkTraining.org>

The U.S. Department of Education is pleased to announce the newly remodeled and updated Federal Resources for Education Excellence (FREE) website. It now provides richer, more expansive resources to teachers and students alike. There are over 1,500 resources to take advantage of at FREE ranging from primary historical documents, lesson plans, science visualizations, math simulations and online challenges, paintings, photos, mapping tools, and more. This easily accessible information is provided by federal organizations and agencies such as the Library of Congress, National Archives, National Endowment for

the Humanities (NEH), National Gallery of Art, National Park Service, Smithsonian, National Science Foundation (NSF), and National Aeronautics and Space Administration (NASA). Go to: <http://www.free.ed.gov/>



PARENT/CHAPERONE LETTER



Greetings Parents/Chaperones:

Park rangers are pleased to be presenting an educational program to the students in Great Smoky Mountains National Park. In order to achieve the goals for a successful program, the park rangers will need your assistance in the following ways:

(These points will help to ensure that park rangers and teachers will be able effectively conduct the lessons and activities throughout the trip.)

- The program will be conducted outside and there will be some hiking throughout the trip. Prepare your student with appropriate footwear, long pants, layers, and rain gear.
- If your child is bringing a lunch from home, we recommend that students bring water to drink and a lunch with minimal packaging. Soft drinks are usually left unfinished by students, and remaining sugary drinks cannot be poured out on the ground. (Minimally packaged lunches lead to less trash being left behind or scattered by the wind. Additionally, this reduces the accumulated trash to be disposed).

If you are a chaperone attending the field trip:

- Please be an active part of the lessons. Keep up with the group and listen to the information being given in the case that you may be called upon to assist (handing out materials, sub-dividing groups etc.).
- Please do not hold conversations with other chaperones or use a cellular phone while the rangers are teaching the students.
- Refrain from smoking during the trip. If you must smoke, please alert a ranger or teacher and remove yourself from the group.
- Please be aware that the program will be conducted outside and that there will be some hiking throughout the trip. Prepare yourself with appropriate footwear, long pants, layers, and rain gear.
- We recommend that parents and students bring a small towel in their backpacks to sit on at lunch (there are no picnic tables at the program site).

Thank you for your needed assistance. We look forward to meeting you on the program!

Sincerely,

The Education Staff at Great Smoky Mountains National Park



RESOURCES AND REFERENCES



Aloian, Molly, and Bobbie Kalmon. The Life Cycle of a Flower. Crabtree Publishing Company, 2004.

Condon, Marlene. The Nature Friendly Garden. Stackpole Books, 2006.

Mazer, Anne. The Salamander Room. Dragonfly Paperbacks, 1994.

Press, Judy and Betsy Day. Animal Habitats. Williamson Books, 2005.

VanCleave, Janice. Play and Find Out About Nature. Jossey-Bass, 1997.

