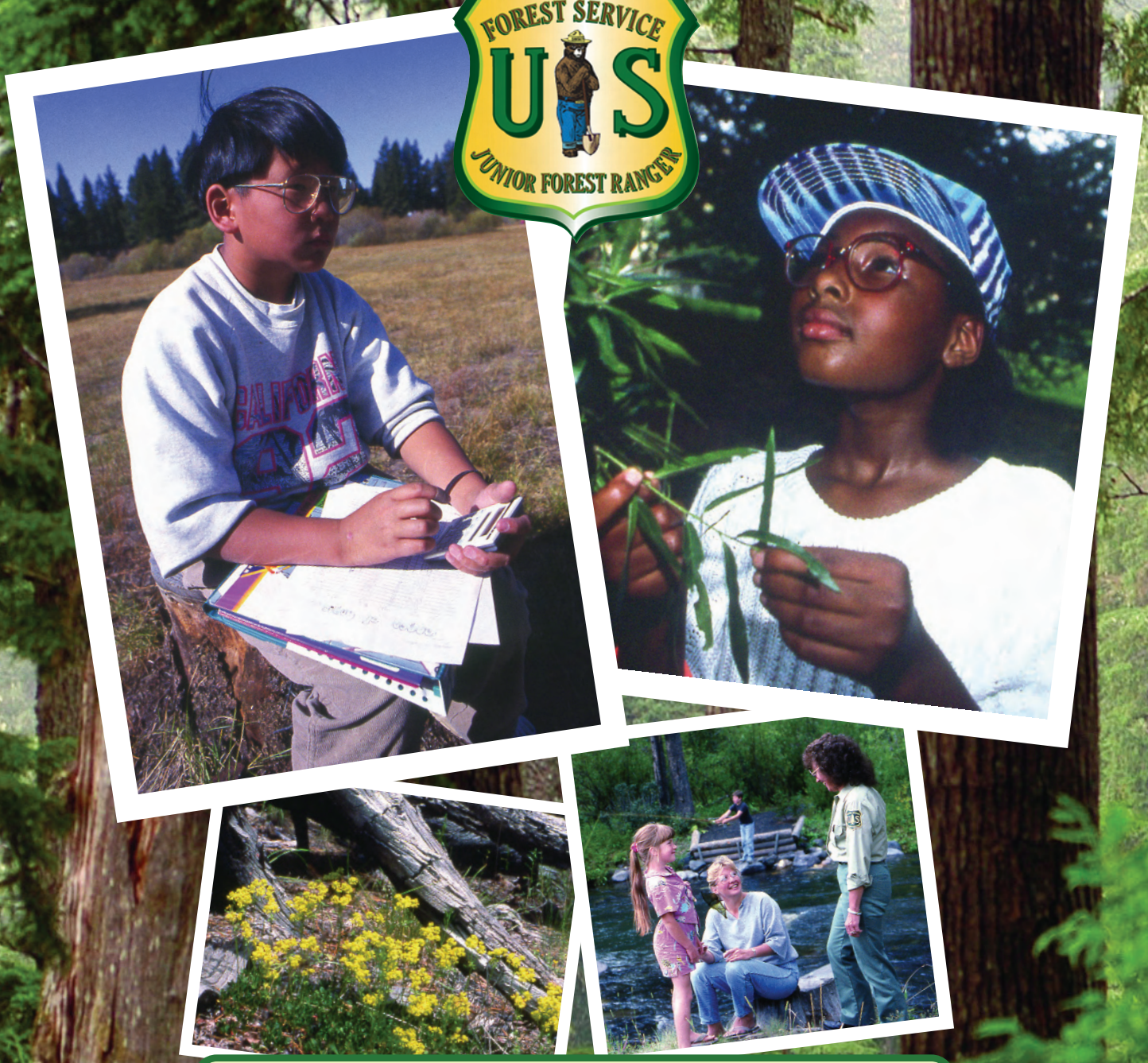
Become a

JUNIOR FOREST RANGER



Photos: USDA Photo Service, except where noted otherwise.

THIS ADVENTURE GUIDE BELONGS TO:

_____

(fill in your name)

My Field Book

My name is _____

I live in _____ **County, in the State of** _____

I go to _____ **School**

My address is _____

_____

ON THE WAY TO THE FOREST

Make the miles fly by! Here are fun things to do on your way to the national forest. Use a notebook or separate piece of paper.

- **Keep a Forest Log:** Record the "Date," "Weather Conditions," your "Location," and (briefly) "What Happened" on your way to the national forest. Note if weather conditions change during the trip. You'll be glad you did!
- **Get Map Smart:** Study a map of where you're going. Knowing how to read a map helps keep you safe in the forest.
- **Write "Forest Ranger" Words:** See how many words you can make from the letters in FOREST RANGER. What's the longest word you can make?

BEING SAFE IN THE FOREST—A CHECKLIST

Top 10 Things To Bring to the Forest (along with an adult!)

1. Clothing (something warm, extra socks, rain gear).
2. Map/compass—always know where you are and where you are going.
3. First aid kit.
4. Food and water (bring extra).
5. Flashlight (with extra bulb and batteries).
6. Insect repellent.
7. An emergency shelter.
8. Sunscreen/sunglasses.
9. Pocketknife (carried by the adult).
10. Waterproof matches (carried by the adult).

Note: This information is adapted from the United States Department of Agriculture Forest Service Web site: http://www.fs.fed.us/recreation/safety/safety.shtml.

WHEN YOU'RE IN THE FOREST...

- Before hiking, tell someone where you are going and when you will return.
- Stay on marked trails.
- Obey signs and forest ranger instructions.
- Watch out for dead trees and tree limbs.
- Take out what you bring in.
- Let adults handle matches.
- Make sure the campfire is dead before you leave the area.

Background photos: Scholastic Inc.

Become a Junior Forest Ranger

This Adventure Guide is YOUR official welcome to the world of the forest. When you turn the page and begin to read, you will have an opportunity to get involved with the forest in many fun and exciting ways. Let us take you on a tour of all the fun facts, stories, and important information that surround our Nation's forests as you discover what this fascinating world is all about.

When you complete all of the activities inside this book, you will be qualified to be an Official Junior Forest Ranger. The activities are fun, easy to do, and have great benefits for you, your friends, and family.

Here are the three easy steps:

1. Travel through the world of the forest by doing the activities on the following pages. You can do them alone, with a friend, or with your family.
2. Once you've filled out all of the pages, complete the registration form you will find on page 18 of this booklet. Then, ask an adult to sign it and send it to us at:

   Junior Forest Ranger
   USDA Forest Service
   National Symbols Cache
   402 11th Street SE
   Grand Rapids, MN 55744–3955

3. Here's the best part! When we receive your form, we will mail you your Official Junior Forest Ranger Pin and Card!

Turn the page and start your exciting journey as you explore the wonders of the forest and earn your credentials as a Junior Forest Ranger!

Background photos: Scholastic Inc.

The Oath of The Junior Forest Ranger

"I give my pledge as a Junior Forest Ranger to save and faithfully defend from waste the natural resources of my country—its soil and minerals, its forests, its flowers and trees, its waters, and its wildlife."

Background photos: Scholastic Inc.

Contents

Smokey Bear and Wildfire Prevention 4

Activity: Make a Smokey Poster 5

Activity: My Smokey Bear Poster 6

Fire Has a Job in the Forest 8

Activity: A Tale of Two Forests 9

Observing What's Around You 10

Activity: Get Oriented 11

You Are a Part of the Ecosystem 12

Activity: Reporting on a Corner of the World 13

More Forest Fun 14

Enjoy Your National Forests 16

Congratulations! You're a Junior Forest Ranger 17

Junior Forest Ranger Registration Form 18

Share with a Friend 18

Smokey Bear and Wildfire Prevention

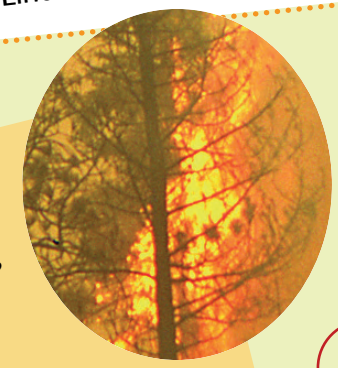
DID YOU KNOW?

In 1944, a fire prevention messenger, Smokey Bear, was created by the U.S. Department of Agriculture Forest Service. The first Smokey was painted by Albert Staehle. Another artist who helped shape Smokey's image was Rudolph Wendelin. But it wasn't until 1950 that Smokey became a living legend. Firefighting crews found a frightened and badly burned bear cub clinging to a tree after a human-caused fire burned more than 17,000 acres in the Lincoln National Forest in New Mexico. The cub was taken to a nearby ranger station, where he was nursed back to health. It was there that he was given the name Smokey, and he became a living symbol for forest wildfire prevention.

More than 60 years later, Smokey's job still isn't done. Even today, 9 out of 10 wildfires are caused by people! Smokey needs your help, as a Junior Forest Ranger, to get the word out about preventing human-caused wildfires.

Listen Up

When Smokey says, "Only You Can Prevent Wildfires," he means it!



Amazing Facts

- Lightning causes some wildfires, but nine out of ten are caused by humans.
- Accidental wildfires start when people carelessly burn trash or debris (such as leaves, pine needles, or branches) or toss out cigarette butts.

FIND OUT MORE

Visit **http://www.smokeybear.com** for information about wildfire prevention.

YOUR TURN

Design a Smokey Bear poster! Look at the posters on the next page. Smokey's wildfire prevention message still needs to be heard! That's where you come in. Follow the directions on page 5 and design your Smokey Bear poster on pages 6 and 7. Write your poster message in the box.

Word Watch

wildfire: An unwanted or unplanned fire burning in shrub, grass, or a forest

© RubberBall

Background photos: Scholastic Inc.

Make a Smokey Poster

Smokey Bear has been the star of wildfire-prevention posters for more than 60 years. All the posters have one message: "Only You Can Prevent Wildfires!" But each poster sends the message in a different way. Read each poster to learn about the ways these old Smokey posters caught people's attention. Write your own wildfire-prevention message on your poster and in the box below.

1944: This poster gives people important facts about forest fires.

1949: This poster rhymes to help people remember a fire-prevention tip.

1960: This poster helps people know they can do something to stop forest fires.

Draw **your** poster on pages 6 and 7. Write your message below and on your poster.

My poster message:

My Smokey

Bear Poster

DID YOU KNOW?

Fire Has a Job in the Forest

The Big Blow-Up of 1910 was the worst wildfire season in the United States. The smoke from western fires could be seen and smelled all the way to Boston. Because the fires were so bad, lawmakers and forest rangers, concerned about people's safety, thought it would be best to put out all new fires.

Forest managers have learned that when all new fires are put out, fires can't do their job. Forests need fire from time to time to clean out old branches and needles and to keep big trees healthy. Without fires, forests soon become too crowded. In overcrowded forests, trees can't get enough light and water. They fall prey to insects and disease. Animals that once lived there move away because there is not enough food for them. When lightning or careless people start fires in an overcrowded forest, the fires burn so hot that they can't be put out.

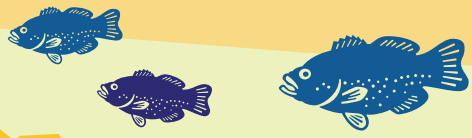
Today, scientists and rangers know that fire is a natural part of the ecosystem and that forests need fire if they are to stay healthy. Forest rangers have slowly reintroduced controlled fires to the forest. Forest rangers use a combination of removing smaller trees and shrubs and controlled fires to carefully burn away the dead material. Usually with the first rain, new grass, plants, and seedlings can be seen sprouting and producing a bountiful food supply for many animals.

Word Watch

crown: A tree top

Amazing Facts

- Rangers know that small natural fires burning slowly keep forests safe and healthy. (See page 9 to find out how.)
- A densely growing forest is unhealthy: The denser the forest, the more fuel there is for a wildfire. Fuel can be bushes, branches, vines, dead trees, tree limbs, dry leaves, and twigs.



JUNIOR FOREST RANGERS: BE WISE ABOUT CAMPFIRES

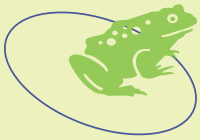
- Always use existing campsites and established fire rings when camping or building a fire. Pile any extra wood away from the fire.
- Keep plenty of water handy and have a shovel for throwing dirt on the fire to put it out.
- Be sure your match is out. Hold it until it is cold.
- Never leave a campfire unattended.
- Drown the fire with water or stir dirt into the embers. Make sure all embers, coals, and sticks are wet or covered with dirt. Move rocks—there may be burning embers underneath.

Source: http://www.smokeybear.com/trip.asp and U.S. Department of Agriculture Forest Service and the National Association of State Foresters, http://www.firewise.org/pubs/outdoor.

YOUR TURN

FIND OUT HOW FIRES AFFECT FORESTS

Find out how forest rangers (and you) can keep forests in good shape. Read the text and check out the pictures on the next page. That's a healthy forest on the left and an unhealthy, burning forest on the right. Fill in the blanks to see what you've learned about forests and wildfires.



Background photos: Scholastic Inc.

A Tale of Two Forests

HEALTHY FOREST

This forest has burned naturally once every 10 years.

UNHEALTHY FOREST BURNING

This is an example of a forest that hadn't burned for 75 years.

Fill in the missing words, using the fill-in words listed below.

Unclogged Forest

Recent fires have already burned off small trees, dead leaves, and pine needles. That leaves less _____ for a fire.

Small Flames

Less fuel keeps flame temperatures low. Less fuel means the fire burns _____.

Safer for Living Things

When the fire burns slowly, only a few trees die. Roots survive, and new _____ grow easily in the open forest. In a few years, these woods recover completely.

Less Forest Damage

If _____ were to strike this ponderosa pine, only one tree might burn, rather than a whole forest.

Ponderosa pine trees grow on an eastern slope of the Cascade Mountains in the Pacific Northwest.

A forest wildfire consumes a tree in Yellowstone National Park.

Clogged Forest

Overgrowth makes "ladders" of fuel that move the fire up to the _____.

Bigger Flames

More_____ means higher temperatures and taller flames.

Crown Fires

The tree tops touch their neighbors. That means fire can race _____ from tree to tree.

Polluted Air and Earth

_____and particles cloud the sky. The soil is roasted and can't support new seeds.

More Forest Damage

Trees and _____ die when an unhealthy forest burns.

Fill-in Words (a word can be used more than once):

fuel, crowns, animals, smoke, slowly, quickly, seedlings, lightning

Answers: fuel; slowly; seedlings; lightning; crowns; fuel; quickly; smoke; animals.

Observing What's Around You

DID YOU KNOW?

"LOOKING OUT" IS KEY

It may not seem like it, but the Earth is constantly changing. You see it happen in small ways with the changing of the weather and seasons. You see it happen in big ways with volcanoes, earthquakes, and wildfires. Understanding these changes and knowing what to look for helps us live better and safer lives.

One of the most powerful tools forest rangers use is observation. Observation means to look at what is around you. What do you see? What are the clouds doing? Are they big and puffy or long and flat? If they are big and puffy you might want to have your rain gear nearby!

Forest rangers use fire lookouts, airplanes, and satellites to see what the forest is doing. If there is a lost hiker or fire, rangers need to know exactly where to send rescue workers. As a Junior Forest Ranger you need to know and be able to tell others exactly where you are in the forest. Forest rangers use maps and compasses to accomplish this.

Word Watch

observation: Looking at what is around you

orient: To figure out your location in relation to points on a map, using the compass

Amazing Facts

- Even a simple change in one part of the Earth can affect the other side of the globe. Hurricanes that rock the Eastern United States typically start as small storms in the Atlantic Ocean off the coast of Africa.
- Your neighborhood is an environment! So is the national forest you're visiting right now.

YOUR TURN

A compass is an important tool for Junior Forest Rangers.

USE YOUR JUNIOR FOREST RANGER TOOLS

1. Do the activity on the next page and then make a rough map of your neighborhood. With an adult and a compass, walk north, south, east, and west. On a sheet of paper, write down roads, buildings, trees, and hills that you need to include in your map.

2. Using the map on page 11, write directions from the **Fire Lookout** to the **Mountain Peak Trail.** Include mileage, direction, and the landmarks you might observe along the way.

© Rubberball
Background photos: Scholastic Inc.

Get Oriented

USING A MAP AND COMPASS

Maps always have a symbol for north. Compasses have a needle that points north. As you stand on a trail with your map and compass, line up north on the map with north on the compass.

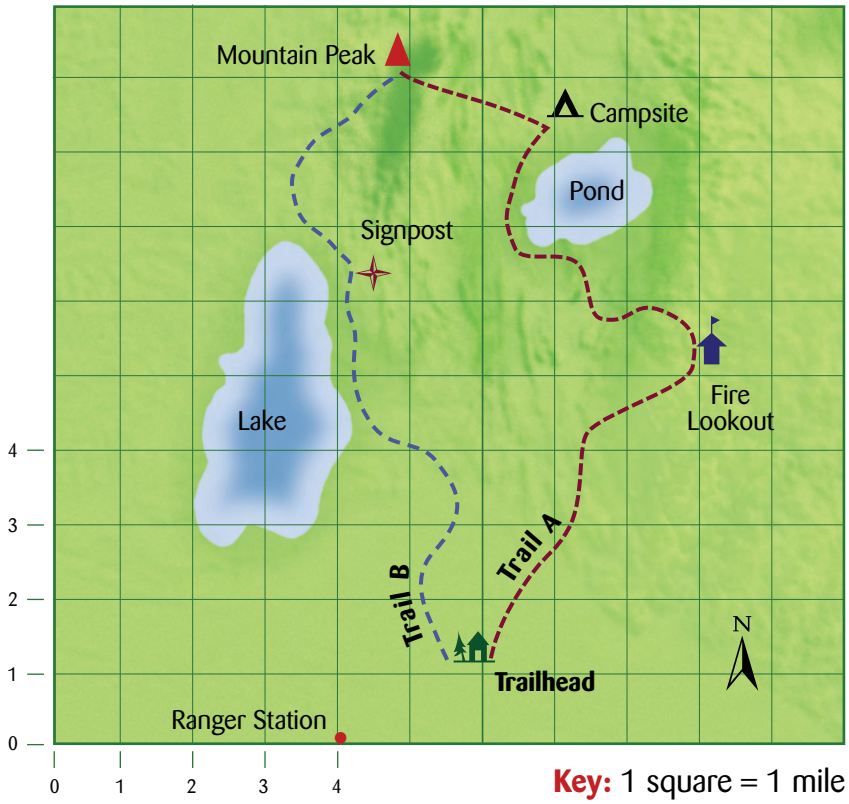
North is one of the four cardinal directions. Once you are facing north you can find the other three cardinal points. South is behind you, east is to your right, and west is to your left.

MEASURING DISTANCES ON A MAP

In a national forest, a map will help you figure out distances from one place to another. Use the map at right to figure out distances for an imaginary hike. **First locate the Ranger Station. This is where you'll be starting from. Then find the Trailhead. Use the map scale (1 square equals 1 mile) and the cardinal directions to answer the questions.**

COMPASS ROSE

SAMPLE MAP



Key: 1 square = 1 mile

This map was created to show you the type of information you will find on an actual map of a national forest.

CIRCLE THE CORRECT ANSWER

1. From the **Ranger Station** to the **Trailhead** is about:
(a) 1 mile (b) 2 miles (c) 5 miles (d) 10 miles

2. From the **Trailhead** to the **Fire Lookout** is about:
(a) 1 mile (b) 2 miles (c) 4 miles (d) 5 miles

3. What direction is the **Lake** from the **Fire Lookout?**
(a) west (b) east (c) north (d) south

4. From the **Fire Lookout** to the **Campsite** is about:
(a) 1 mile (b) 2 miles (c) 5 miles (d) 10 miles

5. To get from the **Mountain Peak Trail** back to the **Trailhead** you would travel mostly:
(a) west (b) east (c) north (d) south

Answers: 1. b; 2. d; 3. a; 4. c; 5. d.

You Are a Part of the Ecosystem

Word Watch

ecosystem: A community of living and nonliving things

Amazing Facts

Not all relationships in an ecosystem are the same. For example, some relationships are symbiotic and some parasitic.

- Symbiotic: Two or more species live in close association. An example of a symbiotic relationship would be the Nile crocodile and the Egyptian bird, the plover. The crocodile gets its gums cleaned by opening its mouth so the plover can feed on leeches attached to the crocodile's gums.
- Parasitic: In a parasitic relationship, a living thing lives on or in the body of another living thing. A parasitic relationship can cause harm. An example would be a tick attaching itself to a deer.

WHAT LIVES HERE AND WHY?

Mountains, oceans, deserts, jungles, tundra, prairies—these are different types of ecosystems. Each one is different from the other. Understanding the differences and the interrelationships is one of the important jobs of a forest ranger.

Ecosystems start with nonliving elements such as:

- Amount of rain
- Type of soil
- Temperature
- Humidity
- Amount of sun
- Amount of water
- Geologic formations
- Latitude and longitude
- Elevation

Then, living elements are added, such as:

- Plants
- Animals
- Insects
- Microbes
- Fungi
- People

When the nonliving and living things come together, you have an ecosystem. Why do they go together? How do they go together? Do they need each other to survive? What lives where and why? (Ecosystems are complex; however, using the best science available today, we try to understand and manage our use of them as well as possible.)

YOUR TURN

TRACKING MIGRATING BIRDS

At **http://www.birdsource.org** you can find out all about migrating birds. You can learn about birds in your area, track birds, and report your observations online. Whether you report on birds you see at home or in the national forest, all your observations are used and are important. You can also see what other people have discovered about birds in other parts of the country. Practice reporting your observations on the next page.

JUNIOR FOREST RANGERS: YOU CAN MAKE A DIFFERENCE!

People haven't always taken care of the Earth. But Junior Forest Rangers know it's important to care for the Earth so that it can continue to provide resources for us—air, drinking water, food, and shelter. You can care for the Earth every day by recycling, turning off the lights, and being careful to shut off water faucets.

Background photos: Scholastic Inc.

Reporting on a Corner of the World

No matter where you might be, whether at home or in a national forest, you can find out more about the natural world. Find a spot outside where you can sit safely and quietly. Spend at least 10 minutes finding out what is going on around you. Use the form below to write down what you observe. Copy this form into a notebook so you can revisit and report on your spot on different days and at different times. You'll be surprised to see how much is going on!

My Corner of the World Report

Name: _____

Location: _____

Date: _____

Time: _____ o'clock to _____ o'clock

LIVING THINGS		
	What does it look like?	What is it doing?
Plants/Trees		
Mammals		
Birds		
Insects		
Reptiles		
People		

WHAT IS A SAFE WILDLIFE HABITAT?

A safe wildlife habitat provides food, water, cover, and a place to raise young animals in a healthy environment.

How is the place you are observing a safe wildlife habitat? _____

How is your backyard or schoolyard a safe wildlife habitat? _____

More Forest Fun

The Forest and the Trees

Can you find Smokey's hat, four palm trees, an owl, and an armadillo in the image below?

Lost Words Puzzle

The words SMOKEY, FIRE, PINE, OAK, and OWLS are lost in this puzzle. Find these words below. (They go across and down.) Then use them to complete this sentence: _____ knows that _____ can destroy living things like _____ and _____ trees and disturbs birds such as _____.

W	S	M	O	K	E	Y	P	X
M	L	P	D	O	P	E	I	R
O	N	I	F	Z	R	H	N	E
A	E	X	D	F	I	R	E	L
K	W	Q	O	W	L	S	Z	T

A-Maze-ing Smokey!

Help Smokey get to the Ranger Station by tracing his path through the maze.

start

finish

National Forest Scramble

Unscramble the names of some of our spectacular national forests! The names should look like this: Rio Grande, Caribbean, Daniel Boone, White Mountains, Osceola, Lewis and Clark.

1. ESWIL DNA AKLRC _____
2. LDAINE ONEBO _____
3. IOR GEDRAN _____
4. IHWET SNOUTAMNI _____
5. RBBEANCAI _____
6. ALOSCOE _____

Then correctly match each national forest with its location:
A. Colorado; B. New Hampshire; C. Puerto Rico; D. Florida; E. Kentucky; F. Montana.

Answers: National Forest Scramble–1. F; 2. E; 3. A; 4. B; 5. C; 6. D.

As a Junior Forest Ranger I will make a difference by

Enjoy Your National Forests!

Congratulations!

Now that you've completed the activities in this book, you are on your way to becoming an Official Junior Forest Ranger! Please fill out the Junior Forest Ranger Official Form on the next page and send it to us at:

Junior Forest Ranger
USDA Forest Service
National Symbols Cache
402 11th Street SE
Grand Rapids, MN 55744–3955

Your Pin and Junior Forest Ranger Card will be returned to you, making you an Official Junior Forest Ranger. We hope you've enjoyed doing all of the activities within this guide and that you'll share the fun and excitement you had with friends, family, and people in your community.

Share the Junior Forest Ranger Experience with a Friend!

Forests and green spaces are important for everyone to share. Now that you've learned so much about the forest, bring a friend along and introduce him or her to the excitement of being a Junior Forest Ranger.

It's Easy to Do:

Just tear off the invitation card on the next page.

Give it to a friend.

Ask your friend to fill it out, put a first-class mail stamp on it, and mail it to the USDA Forest Service.

We will send your friend the same Junior Forest Ranger Adventure guide you are holding in your hands. Then your friend can do the activities and become a Junior Forest Ranger, too!

Jr. Forest Ranger Official Form

Your Name: _____

Address: _____

City: _____ State _____ Zip Code: _____

E-mail: _____ Age: _____

School Name: _____

Parent/Family Member/Friend (Adult), please sign here.

I certify that _____ completed the activities in this booklet.

Signed _____
(name of the adult)

Share with a Friend Card

Yes, I also want to be a Junior Forest Ranger.

My friend _____ gave me this card and told me all the exciting ways I can learn about the forest and the environment. Please mail me a Junior Forest Ranger Booklet, so I can complete the activities and become an Official Junior Forest Ranger.

Your Name: _____

Address: _____

City: _____ State _____ Zip Code: _____

E-mail: _____ Age: _____

School Name _____

Name _____

Address _____

City _____ State ____

Postage Required. Post Office will not deliver without proper postage.

JUNIOR FOREST RANGER
USDA FOREST SERVICE
NATIONAL SYMBOLS CACHE
402 SE 11TH ST
GRAND RAPIDS MN 55744-3955

Name _____

Address _____

City _____ State ____

Postage Required. Post Office will not deliver without proper postage.

JUNIOR FOREST RANGER
USDA FOREST SERVICE
NATIONAL SYMBOLS CACHE
402 SE 11TH ST
GRAND RAPIDS MN 55744-3955

http://www.symbols.gov/jfr

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

USDA Program Aid 1828
October 2005

ISBN 0-439-85275-7

This Junior Forest Ranger Guide was developed in conjunction with Scholastic Inc.