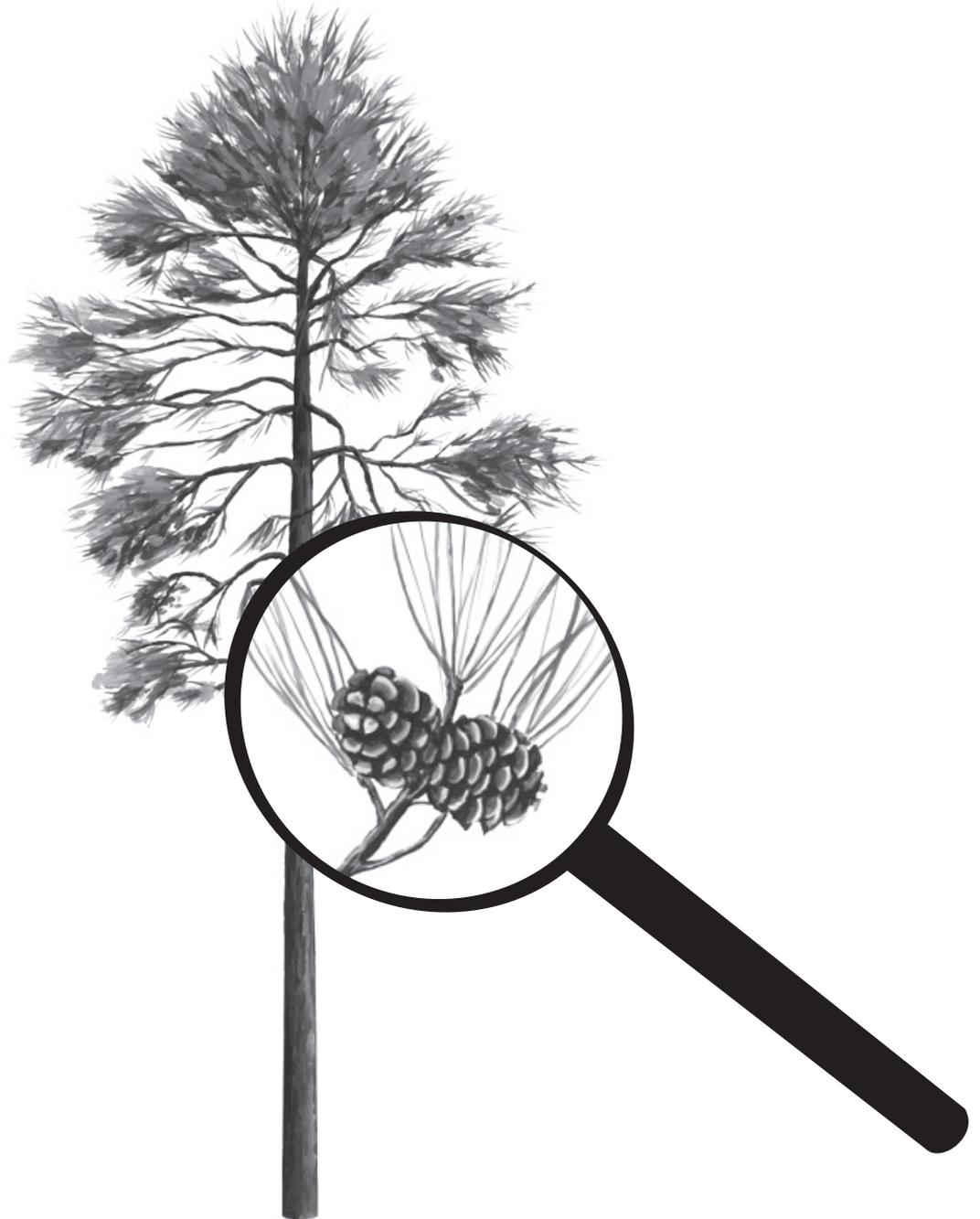


MINNESOTA STATE PARKS

JR. PARK NATURALIST

PINELANDS



NAME _____



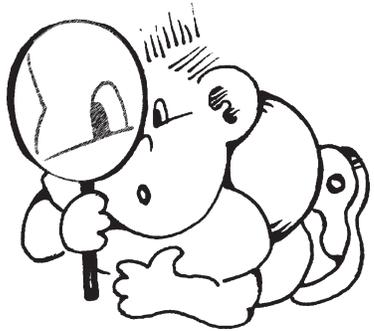
Jr. Naturalist kids
were created by
Stephen Seefeldt.

WHAT ARE THE PINELANDS?

Welcome to Minnesota's Pinelands biome. What makes the Pinelands different from the Hardwoods and the Prairies? Attend an interpretive program, hike a self-guided trail and complete the activities in this booklet to find out!



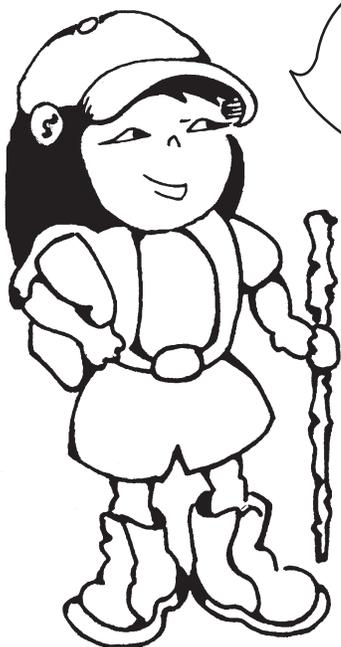
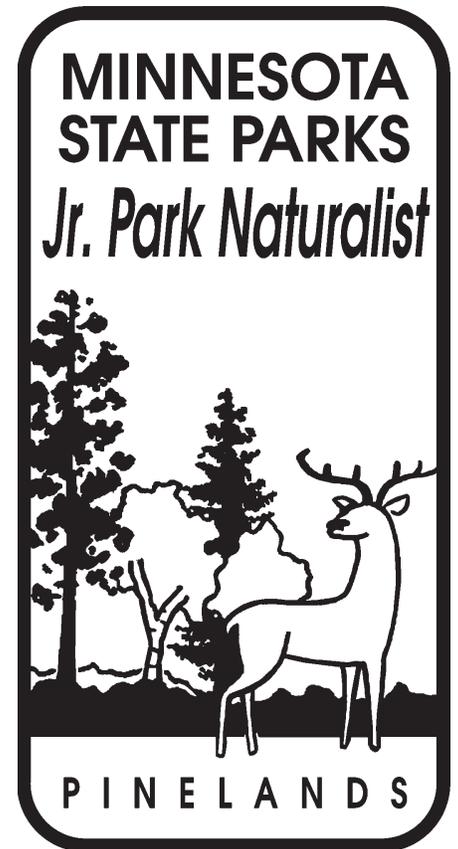
What's a biome? Think of it as a large area of plants and animals that live together.



BECOME A JUNIOR PARK NATURALIST IN THE PINELANDS

You can work on this program at this park, or any other state park in Minnesota's Pinelands. There is no deadline for completing the program.

When you have completed all the requirements to become a Junior Park Naturalist in the Pinelands, bring your completed scorecard to any Pinelands state park office or visitor center to receive your patch and a certificate.



Remember...there's a Junior Park Naturalist program in the Hardwoods and the Prairies, too!

Role of Adults

After a child completes an activity, an adult should review the activity with the child. The adult should then record the appropriate information in the scorecard and initial the box for the child to receive credit.

SCORECARD

To earn your patch and certificate, complete all of the activities listed in this scorecard.

Some parks have their own specific activities, self-guided trails or exhibits for you to enjoy. Ask about them at the visitor center or park office.

Interpretive Program or other activity _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
Interpretive Program or other activity _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
Interpretive Program or other activity _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
Park Protector Pledge, page 6 _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
Let's Start with Plants, page 8 _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
Match the Tools With the Bird, page 10 _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
Animals of the Pinelands, page 12 _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
What is a Habitat?, page 14 _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
People are part of the Pinelands, Too! page 16 _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
Get to Know a Tree, page 18 _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
Supermarket in the Park, page 20 _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
Call of the Lumber, page 22 _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
Ground's Eye View by a Deer Mouse, page 24 _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>
Parks are Always Changing, page 26 _____ Park _____ Date _____	Adult's Initials	<input type="checkbox"/>



JUNIOR PARK NATURALIST PARK PROTECTOR PLEDGE

So future generations can enjoy Minnesota State Parks, it is important to take good care of them now. As a friend of our Minnesota State Parks, I want to do all that I can to protect them. When I visit the parks, I pledge that...

1. I will stay on the paths and trails in the park.
2. I will not litter. I will pick up any trash I see and leave the park cleaner than when I arrived.
3. I will not feed, chase, or scare birds or other animals.
4. I will not pick wildflowers, break off limbs, peel bark off trees, or harm any plants.
5. I will talk to my friends and family and encourage them to protect the park with me.

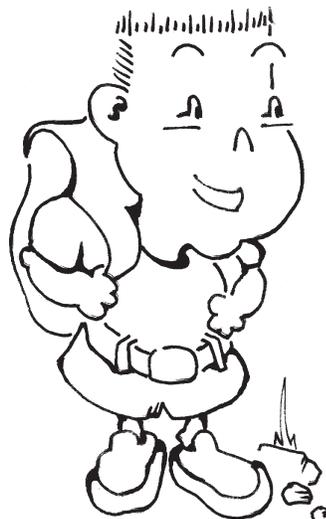
Signature of Park Protector

Witness to the Park Protector Pledge:

Signature of Adult

WHAT TO DO

- Read the **Park Protector Pledge**.
- Explain the pledge to the others visiting the park with you.
- Clean up your campsite or the area you are using.
- Adult: Review and fill in the Scorecard on page 5.



Remember...

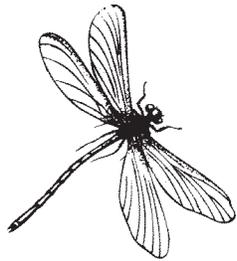
- Take an adult with you as you do these activities.
- Move slowly and quietly—you'll have a better chance to see animals.
- Don't pick or collect anything.
- Be careful! Some plants are poisonous.
- Never touch or feed any animal in the park.

JUNIOR PARK NATURALIST ACTIVITIES

Naturalists study plants and animals. As a Junior Park Naturalist, you will observe and study the plants and animals found in the Pinelands.

You might not know the name of every plant or animal you observe — don't worry! The important thing is that you saw it! If you can't identify it, make up a name based on what you saw! That's how the names of some plants and animals were chosen. Some examples are black-backed three-toed woodpecker for a bird, and large-leaved aster or lady slipper for plants.

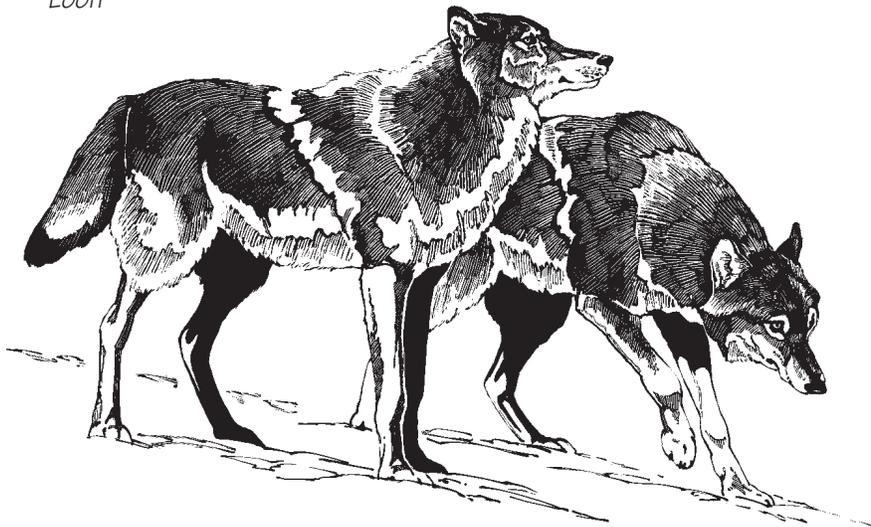
If you still want to find out the name that other people call it, ask someone for help, or look it up in a field guide.



Dragonfly



Loon



Timber Wolf



Red Pine



Showy Lady Slipper

LET'S START WITH PLANTS

MY PLANT IN THE PINELANDS

Find a plant that you like. The plant can be short, the same height as you, or tall!

Describe the shape and edge of its leaf or needles.

Do you see any flowers, seeds, or fruit? What do they look like?

What does it smell like?

How could animals use this plant?

Describe the area where you found your plant. Is it wet or dry? Is your plant growing in the open or in a forest? Is the soil rocky, sandy, or black?

Do you know the name of this plant? If not, what name would you give it?



Remember...

Do not pick or collect any plants. They provide homes for wildlife.

WHAT TO DO

- Find a plant.
- Answer the **My Plant in the Pinelands** questions.
- Draw your plant on page 9.
- Adult: Review and fill in the Scorecard on page 5.



White Pine



Bunch Berry



Large-leaved Aster

DRAW YOUR PLANT HERE



MATCH THE TOOLS WITH THE BIRD!

TOOLS OF THE BIRDS

Birds have special bills or beaks to help them get food. These can be thought of as “tools” like a nut cracker, a knife, or a drinking straw.

Birds also use their feet as “tools” like paddles for swimming, meat hooks for grabbing prey or rakes for scratching seeds and bugs from the ground. These “tools” are called adaptations because they help birds survive in, or “adapt” to the Pinelands.

In this next activity, you will match tools of Pinelands birds with common human tools.

WHAT TO DO

- Read **Tools of the Birds**.
- Study **Birds of the Pinelands**.
- Complete the **Match the Tools with the Birds** activity on page 11.
- Adult: Review and fill in the Scorecard on page 5.

BIRDS OF THE PINELANDS



Loon

Minnesota’s State Bird is large with black and white feathers and a white ring around its neck. It’s a great diver and propels itself underwater with powerful webbed feet. It searches for fish, which it grabs with its long beak.

Bald Eagle

These very large dark-bodied birds have white heads and tails when they become adults. They have great eyesight, and can see fish while soaring high above a lake or river. They swoop down and catch fish in their powerful claws, called “talons.” Their sharp beaks help them to tear or “carve up” their food.



Evening Grosbeak

This black and yellow bird is a bit smaller than a robin. It searches for seeds in the forest of the Pinelands. Its powerful jaws and heavy beak help it crack tough seeds for its meal.



White-throated Sparrow

This small bird, known by the yellow spots by its eyes (known as “lores”) and its white throat, makes its living by scratching for seeds on the ground of the Pinelands.



Hummingbird

This tiny bird is a real “stunt-flier.” It can hover in mid-air, and can even fly back-wards. This helps it find the food it needs. It uses its long beak to suck nectar from deep within flowers of the Pinelands.

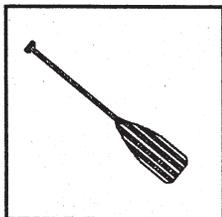
Great Blue Heron

This blue, gray, and white bird is one of the tallest in Minnesota. It is often seen wading in shallow waters of the Pinelands lakes and marshes, where it uses its long sharp beak to spear fish.



Draw a line connecting the tool to the bird that uses it. Write the name of the tool and the bird under the picture.

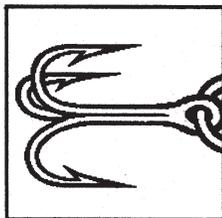
THE TOOLS



Paddle



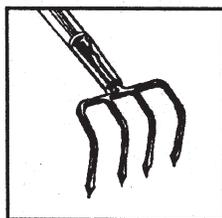
Carving Knife



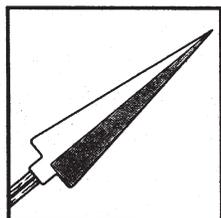
Fish Hook



Drinking Straw



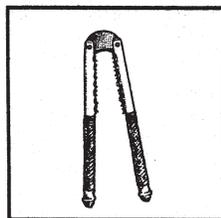
Rake



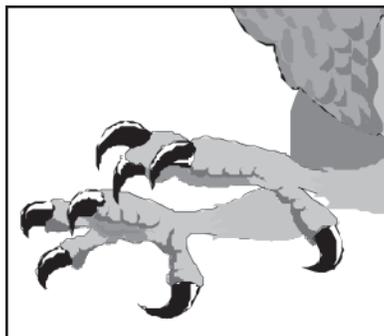
Spear



Waders

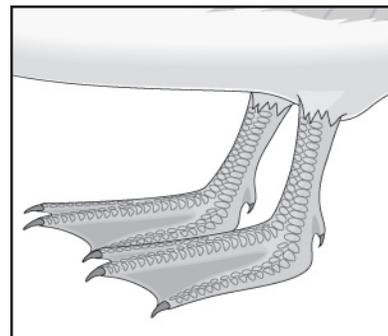


Nutcracker



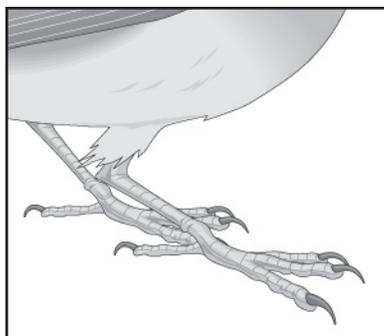
Tool: Fish Hook

Bird: Bald Eagle



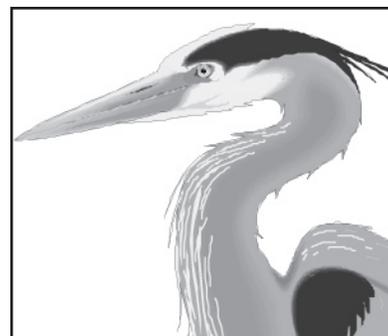
Tool: _____

Bird: _____



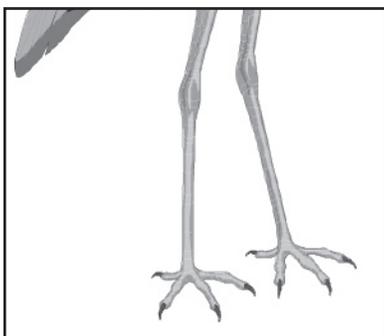
Tool: _____

Bird: _____



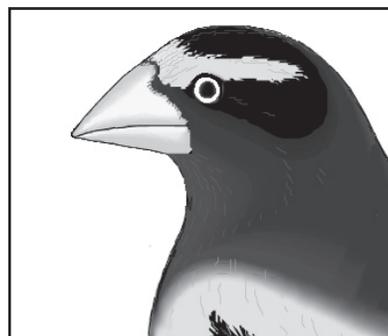
Tool: _____

Bird: _____



Tool: _____

Bird: _____



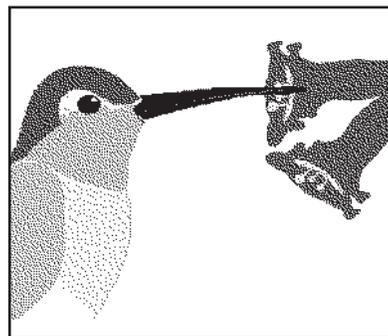
Tool: _____

Bird: _____



Tool: _____

Bird: _____



Tool: _____

Bird: _____

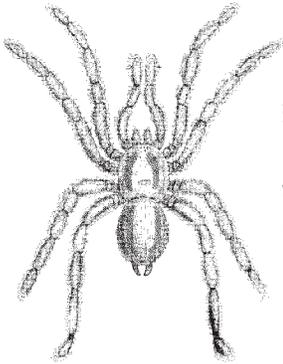
ANIMALS OF THE PINELANDS

How many animals do you think live in this park? There might be more than you think! An animal is any living creature except plants. Here are a few of the animals you might see in the Pinelands.

WHAT TO DO

- Read **Animals of the Pinelands**.
- Write your notebook entry on page 13.
- Draw an animal and its home on page 13.
- Adult: Review and fill in the Scorecard on page 5.

ANIMALS OF THE PINELANDS



Forest Wolf Spider

Like all spiders, the forest wolf spider has eight legs. It uses venom to kill its prey.

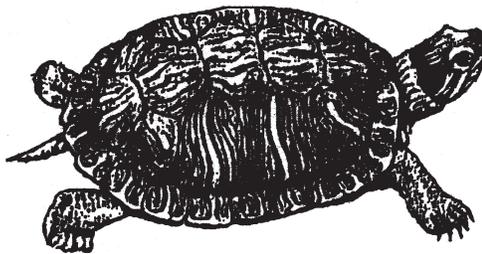
Dragon Fly

This insect lives near water and eats other insects that it catches in mid-air.



Painted Turtle

This common turtle can be seen basking in the sun on rocks or logs to absorb heat from the sun.



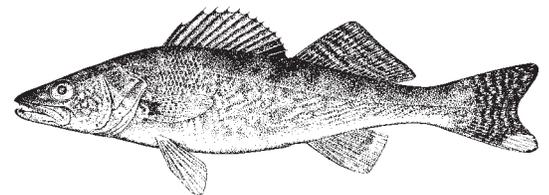
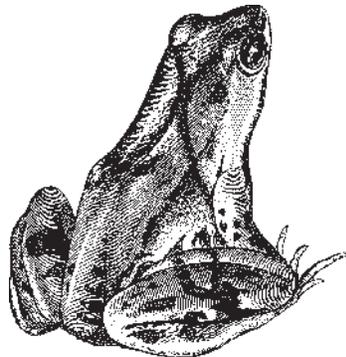
Porcupine

Did you know that porcupines have over 30,000 needle-sharp quills on their bodies? They climb trees and eat bark, leaves, and buds.



Spring Peeper

This tiny, one-inch long frog has a very high pitched call or "peep" that can be heard in early spring. Spring Peepers like to eat small insects.



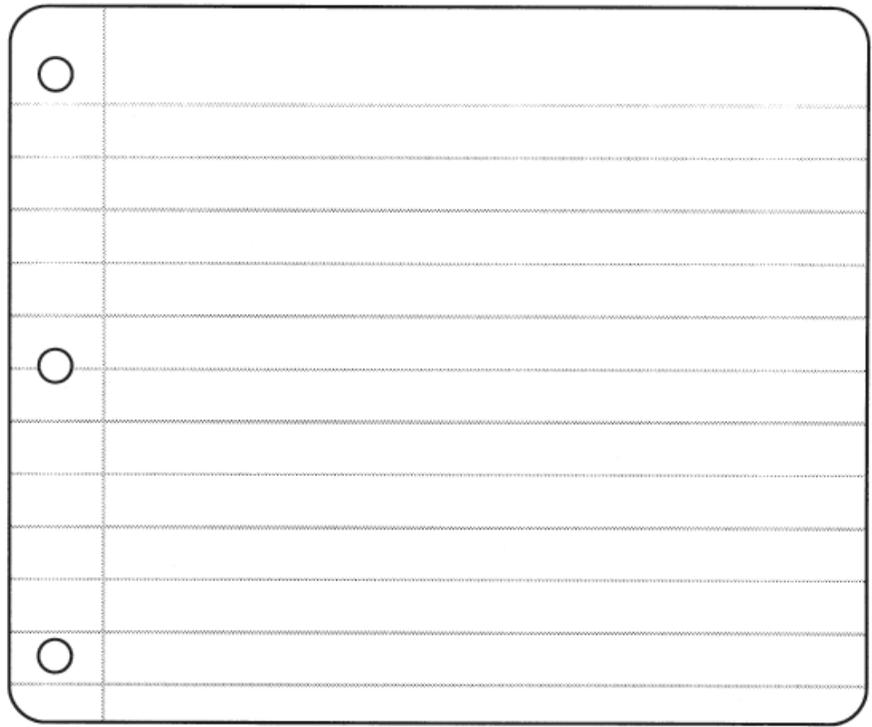
Walleye

The walleye is a common fish in the lakes and rivers of the Pinelands. Walleyes eat minnows and other small fish.

NATURALIST'S NOTEBOOK

One of the things
naturalists do is
keep notes on
animals they see.

On the notebook page
to the right, write down
your description of an
animal you saw and
what it was doing.



MY PINELANDS ANIMAL

Now, make a drawing of your animal. Include plants, water, and any other things around the animal that you saw.

WHAT IS A HABITAT?

A habitat is where plants and animals find the food, water, space, and shelter they need to live.

Pine forests are one type of habitat in the Pinelands. However, there are more than just pine forests in the Pinelands!



This picture shows 17 animals:
bear, chipmunk, deer, eagle,
frog, grouse, jay, loon, moose,
mouse, pike, squirrel, trout,
turtle, wolf, woodpecker,
and worm.

WHAT TO DO

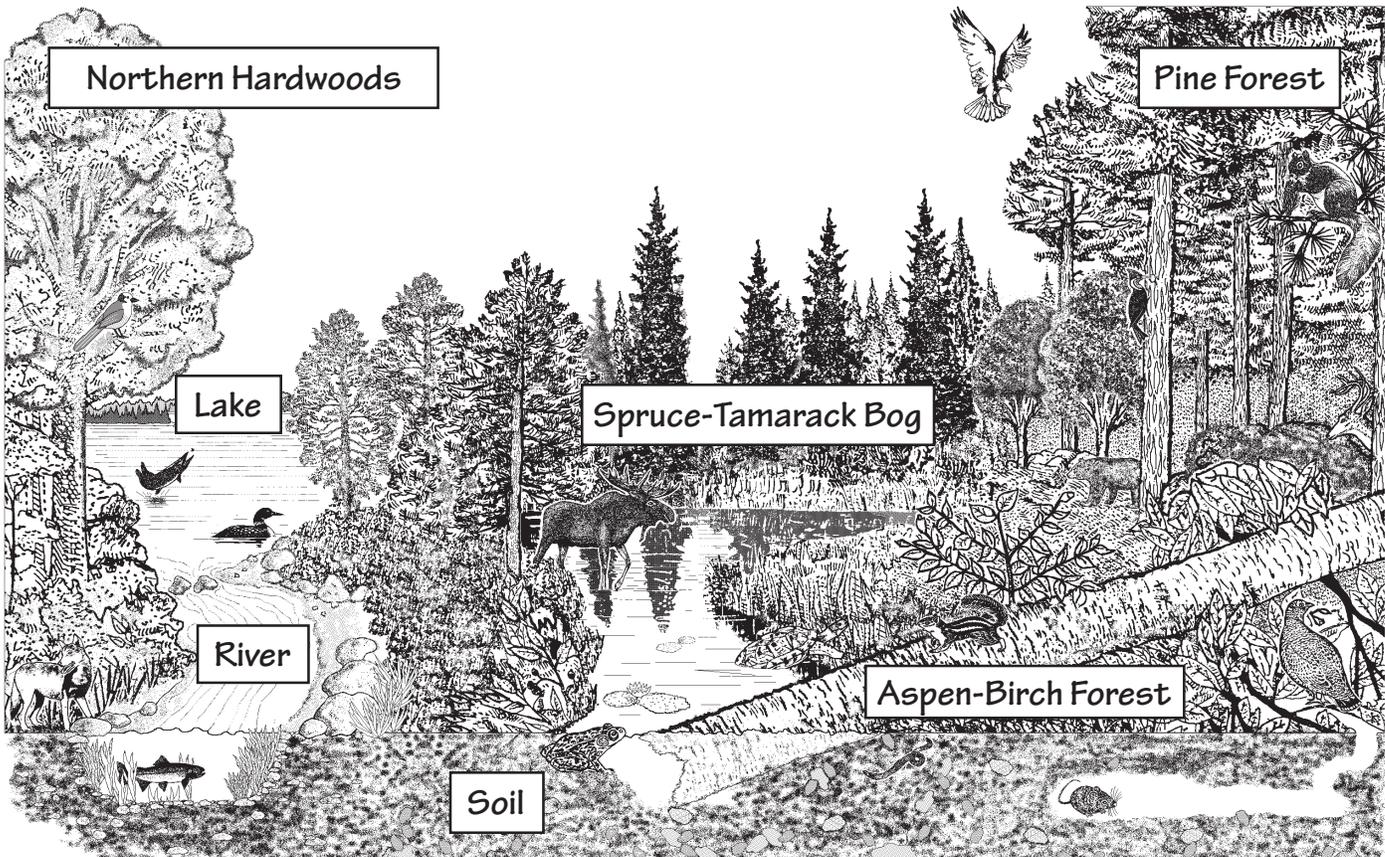
- Read **What is a Habitat?** and study the picture.
- Find the animals in the picture and write them in the correct habitat box.
- Adult: Review and fill in the Scorecard on page 5.

Northern Hardwoods

Pine Forest

Spruce-Tamarack Bog

Habitats of the Pinelands



Look closely at this picture. Do you see the animals in each habitat?
Write each animal you find in the correct habitat box below.

Aspen-Birch Forest

Soil

Aquatic (Lake, Rivers, Wetland)

PEOPLE ARE PART OF THE PINELANDS, TOO!

THE EARLY PEOPLE

People first learned to use the resources of the Pinelands thousands of years ago for shelter, tools, and food.

Rocks were used to make knives, spear points, axes and hammers. Clay was made into pottery for cooking and storing food. Wild rice, berries, roots, and herbs were enjoyed as vegetables, while waterfowl, fish, moose and other animals were used for meat.

FOLLOWING THE FUR TRADE

Traders and explorers arrived from Europe in the 1600s. They met American Indians known as the Dakota and Ojibwe. The Europeans were interested in trading metal tools, glass beads, and guns to the Indians in exchange for furs. Fur was in demand back in Europe for making hats and clothing.

Like the Indians, Europeans found canoeing to be the best method for travelling the lakes and rivers along the fur trade routes.

HARVESTING THE TREES OF THE FOREST

In the 1800s, people came to the Pinelands to find jobs in the lumber industry. Loggers cut down trees and hauled them away for lumber. Some loggers sent money back to their families in other countries, while others brought their families with them to settle in the Pinelands.



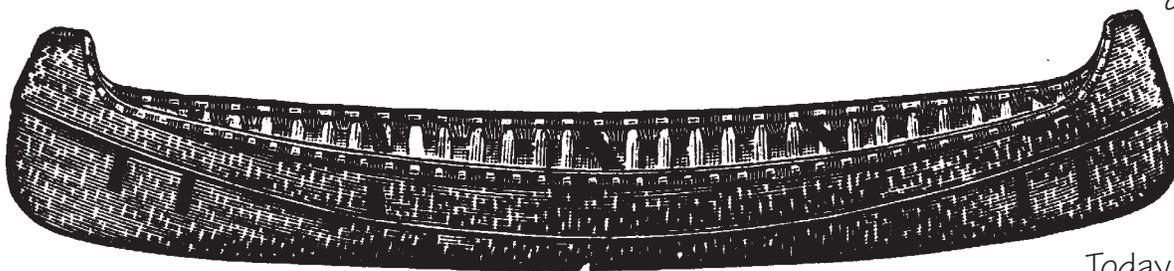
WHAT TO DO

- Read *The Early People, Following the Fur Trade, Harvesting the Trees of the Forest, and "Red Gold"*.
- Fill out the Journal on page 17.
- Adult: Review and fill in the Scorecard on page 5.

THE "RED GOLD" OF THE IRON INDUSTRY

In the late 1800s, iron ore was found in the Vermilion, Mesabi, and Cuyuna Ranges of the Pinelands. Miners were needed to dig and operate equipment in the mines. Iron was needed to help build a developing nation and, every year, more miners arrived and settled in the Pinelands.

Today, at Soudan Underground Mine and Hill Annex Mine State Parks, you can see where "red gold" was mined and experience life as a miner.



YOU ARE PART OF THE PINELANDS, TOO!

Explorers, traders, and “settlers” wrote about their lives in journals. They were all an important part of Pinelands History. You are a part of this history too.

Here’s your chance to write about your visit to the Pinelands in a journal, just like the people of the past. It’s also a fun way to see how your life is different from those who lived in the Pinelands before us.

MY PINELANDS JOURNAL

My name is _____

Today’s date _____

Town you live in (or near) _____

How did you get to the State Park you are in today? _____

If these were the 1600s, how would you have gotten here? _____

Did you have a meal or a snack while you were in a Pinelands State Park? What did you have?

Where did you get this food? _____

What do you think you would have eaten if you lived here hundreds or even thousands of years ago? _____

Where and how would you have gotten the food? _____

Describe something you did while you were in a Pinelands State Park: _____

What do you think you would have done in the area of this State Park if it were the 1800s?

GET TO KNOW A TREE

Find a tree that you really like. Look at it as though you'd never seen a tree before! Use the eye of a photographer. Take "pictures" in your mind of the parts of a tree. Use an artist's eye to see colors, shapes, and shadows. Use an ant's-eye-view to examine roots, fallen leaves, or pine cones.

Step back to see the tree sway in the wind. Walk around the tree. Lie down under the tree's branches and look up.

Trees come in many different shapes and sizes.

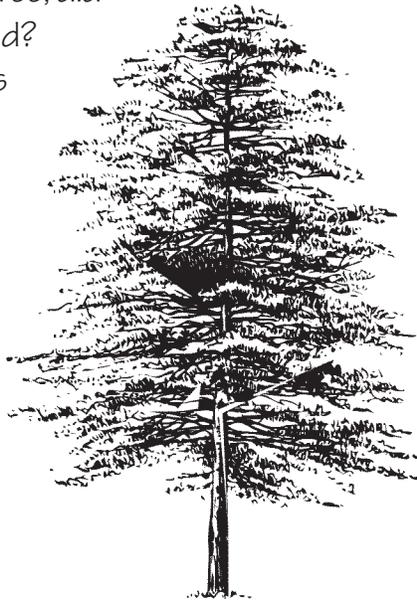
What did you notice about the tree's trunk? The trunk is important for two reasons. It holds the tree up and gives it shape, and it carries water and food from the roots to the leaves and back again. The outer layer of the trunk is the tree bark.



Tree bark can be smooth, scaly, rubbery, flaky, craggy, or bumpy. Some tree bark has holes, scratches, or nicks in it. These may be caused by animals, disease, or injuries. What do you think caused them in your tree?

While you were looking at your tree, did you notice what kind of leaves it had? Some are needle-leaved and others have "broadleaves." All plant leaves have the same job — to make food for a tree. During this food-making process called photosynthesis, the leaves release the oxygen we need to breathe.

Trees are also important because they provide homes and food for wildlife, help stop soil erosion, and much, much more.



WHAT TO DO

- Read **Get to Know a Tree and Sharing Corner...**
- Draw your tree and answer the questions on page 19.
- Adult: Review and fill in the Scorecard on page 5.

SHARING CORNER...



You may know that trees are used for wood products like boards, furniture and baseball bats. You may also know that trees are used to make paper. But did you know that many medicines, makeup, rubber and different types of food also come from trees?

Now that you know more about trees, draw your tree and answer these questions:



Do you see any **animals** in your tree? Don't forget birds and insects.

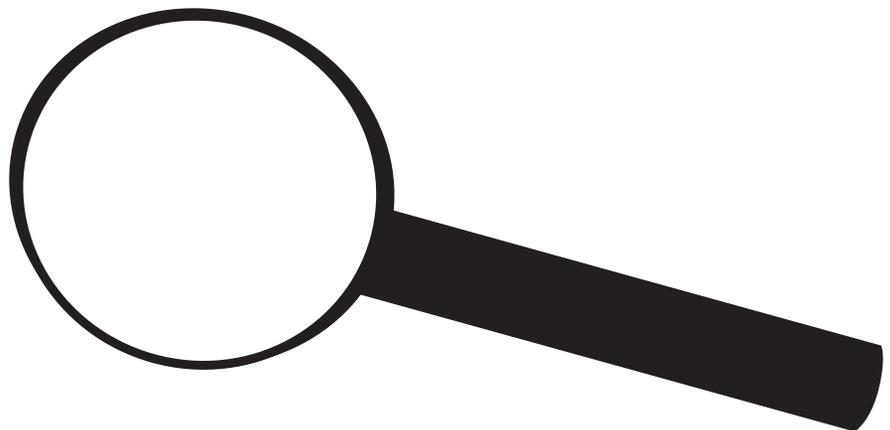
Do you see any **fruit, flowers, seeds,** or **cones** on your tree or on the ground?

Are there any holes, scratches, or nicks on the **bark**?

Feel the **trunk** of your tree. List 3 words that describe what you feel.

Closely examine a leaf or the needles. Draw them under the magnifying glass.

Can you think of 4 words that describe this **leaf**?



SUPERMARKET IN THE PARK

When you see ants trying to carry off your picnic lunch, or a raccoon trying to get your food, you may think they only like the same kinds of food that we do. Actually, animals like many different kinds of food. Parks provide a variety of their favorite foods — almost like a supermarket.

During this activity, you will go “shopping” to find food for some of the animals that live in this park. How will you know what kind of food to look for? It will depend on the kind of animal you are shopping for:



Herbivores are plant eaters. Mallards, deer, beaver, and rabbits are herbivores.



Insectivores eat insects and other tiny animals. Insectivores include moles, shrews, some birds, and many of the bats.



Carnivores eat other animals. Wolves, foxes, weasels, and spiders are carnivores.



Omnivores eat both plants and animals. They include bears, raccoons, turtles, many insects, and human beings!

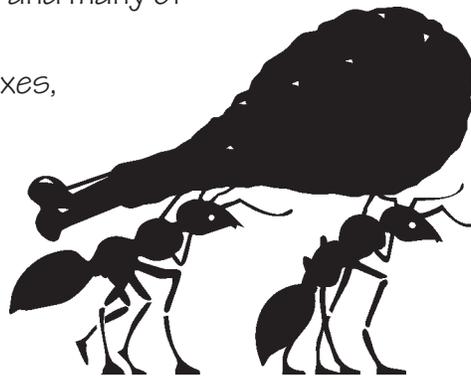
To help you shop, look for food clues.

Bitten stems on plants show rabbits or deer have been eating; shredded pine cones might be from squirrels or jays; stripped bark might be caused by deer or porcupine; holes in trees could be woodpeckers digging out bugs; holes in the ground could be shrews digging out insects or worms.

There are many other places to find food in the pinelands supermarket. Some ducks depend on the duckweed and other plants in the wetlands and along the edges of lakes for their food. Herons like the fish and tadpoles of the wetlands. You might see an eagle or an osprey catching fish in one of the lakes. Dead logs provide centipedes and grubs for snakes. Wetlands and lakes provide the favorite food of the moose — twigs and leaves.

WHAT TO DO

- Read **Supermarket in the Park**
- Do the **Food for Who** on page 21.
- Adult: Review and fill in the Scorecard on page 5.



FOOD FOR WHO?

As you follow the trails in the park, how many kinds of food can YOU find for the animals? Circle 10 items from the food groups listed below as you find them. Then answer the questions in the boxes.

FOOD GROUP 1

Toad Mudpuppy
Frog Salamander
Rabbit Treefrog
Snake Squirrel
Mouse Fish

Did you see any **animals** feeding on these foods?

Name them: _____

Did you see any signs of an animal feeding from these foods? _____

What kind of animal eats these foods?

C _____

FOOD GROUP 2

Cattail Blueberry
Birch Ragweed
Fern Mushroom
Acorn Pine Cone
Grass Strawberry

Did you see any **animals** feeding on these foods?

Name them: _____

Did you see any signs of an animal feeding from these foods? _____

What kind of animal eats these foods?

H _____

FOOD GROUP 3

Mosquito Moth
Grasshopper Fly
Cricket Ant
Beetle Wasp
Bee Lacewing

Did you see any **animals** feeding on these foods?

Name them: _____

Did you see any signs of an animal feeding from these foods? _____

What kind of animal eats these foods?

I _____

Now — answer this question: What kind of animal might feed on food from all three aisles? Answer: O _____!

FOOD FOR THOUGHT

1. What do you think would happen if all of the mosquitoes in the park disappeared? _____

2. What things that animals need besides food did you find in the park “supermarket”? _____

3. Do you think there is more or less food for animals now than there was before Europeans came to Minnesota? Why? _____

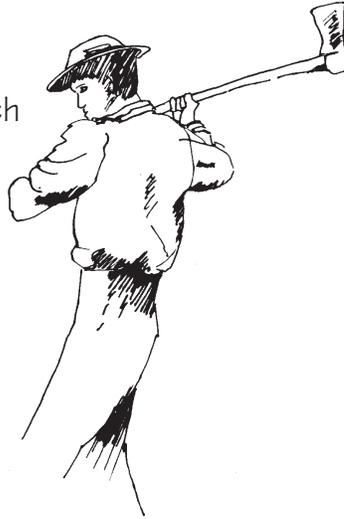
CALL OF THE LUMBER

Minnesota was a natural place for the timber industry. There was a great supply of what was needed — trees! Lumberjacks cut timber in the winter and used horses and oxen to haul it to nearby rivers, where it would be floated downstream. “Jacks” followed the logs downriver to the sawmills, keeping the logs moving in order to prevent log jams. When a log jam occurred, a skilled lumberjack called a “river pig” would search out the key logs and release them so the jam would break up.

Lumberjacks would awaken early and were greeted with the smell of biscuits, doughnuts, molasses, and stacks of flapjacks.

On any given day, a lumberjack might be felling trees, stripping branches, or slashing off bark.

At the end of the day, lumberjacks returned to camp to eat a meal of pork, beans, and biscuits. Afterwards, there was time for smoking pipes, telling stories, singing, and dancing to a fiddle and accordion. At 9 p.m., lights were out — no late nights for these early risers!



WHAT TO DO

- Read **Call of the Lumber** and **Sharing Corner...**
- Do the activities on page 23.
- Adult: Review and fill in the Scorecard on page 5.

SHARING CORNER...



Sharing Corner...

Every lumber company had its own mark that lumberjacks would place on logs before sending them down the river.

The mark was used to sort logs out at the log boom, a barrier that stopped the floating logs

just before they reached a mill. There the lumberjacks would

separate the logs by marks so all of the logs from one company would be milled together. (Twenty thousand different log brands are on record in Minnesota's state archives.)

TWB

Mark of
Thomas B. Walker

CXH

Mark of
Wm. B. Washburn

Answers to Talk Like a Lumberjack: 1. Shanty: Single room, all purpose building for eating, sleeping, drying wet clothes; 2. Go-devil: Crude sled used to haul a tree to river; 3. Timber cruisers: Lumberjacks whose job was to spot areas of trees to be cut; 4. Choppers: Lumberjacks who cut trees; 5. Swampers: Lumberjacks who strip branches; 6. Barkers: Lumberjacks who slash bark from trees; 7. Wanigan: Store; 8. Cooke: Cook's assistant; 9. Shanty-boy: Lumberjack; 10. Hashslinger: Cook; 11. Sky-pilot: Preacher; 12. Swamp water: Tea (favorite drink of lumberjacks); 13. Sinkers: Biscuits; 14. Chuck house: Cook shack; 15. Loggin berries: Beans; 16. Belly Burylar: Poor or bad cook; 17. Cant hook: Canadian tool for rolling logs; 18. Bunkhouse: House that slept up to 80 men.

1. TALK LIKE A LUMBERJACK

Match the colorful vocabulary words of the lumberjacks with their meanings. Write the number of the word in front of its meaning. The answers are on page 22.

Words

1. Shanty
2. Go-devil
3. Timber cruisers
4. Choppers
5. Swampers
6. Barkers
7. Wanigan
8. Cookee
9. Shanty-boy
10. Hashslinger
11. Sky-pilot
12. Swamp water
13. Sinkers
14. Chuck house
15. Loggin berries
16. Belly Burglar
17. Cant hook
18. Bunkhouse

Meanings

- ___ Lumberjacks who slash bark from trees
- ___ Canadian tool for rolling logs
- 1 Single room, all purpose building for eating, sleeping, drying clothes
- ___ Crude sled used to haul a tree to river
- ___ Lumberjacks whose job was to spot areas of trees to be cut
- ___ Lumberjack
- ___ Tea (favorite drink of lumberjacks)
- ___ Preacher
- ___ House that slept up to eighty men
- ___ Cook shack
- ___ Poor or bad cook
- ___ Lumberjacks who cut trees
- ___ Cook
- ___ Lumberjacks who strip branches
- ___ Store
- ___ Beans
- ___ Biscuits
- ___ Cook's assistant

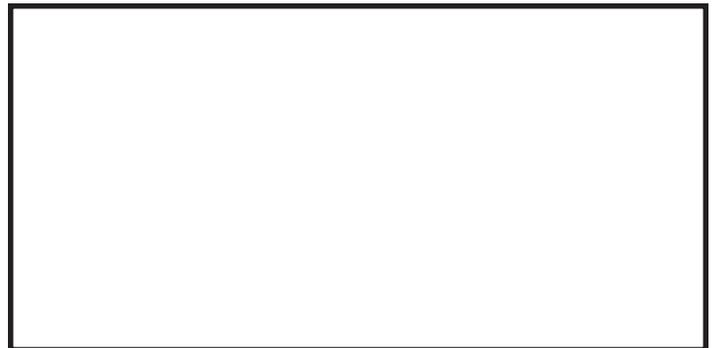
2. CREATE A TALL TALE

Make up a story or “tall tale” about lumberjack life using five to ten words from the list above. Most stories told by lumberjacks included a “jack” of great strength or a ferocious beast of the forest. All stories have a problem and a solution, and many include exaggeration.

Write your story down so you can remember it. Then share your story with your group — maybe around a campfire!

3. DESIGN A LUMBER MARK

If you had owned a lumber company in the 1800s, what would you have used as your own mark? Take some time to think about a design that would best represent YOU and draw it here:



This activity is adapted from *Northern Lights: The Story of Minnesota's Past* by Rhoda R. Gilman. St. Paul: Minnesota Historical Society Press, 1989. The Northern Lights two-volume set is an excellent source of information and activities about Minnesota's peoples and resources.

GROUND'S EYE VIEW BY A DEER MOUSE

The deer mouse is a very active little animal of the Pinelands. The deer mouse might be one of the most common small animals in some woods, but it is not easy to see because it is active mostly at night.



USE YOUR EYES AT A DEER MOUSE'S LEVEL

Looking at the world through the eyes of a deer mouse can show you a lot that you might not otherwise notice. In the activity on the next page, you will examine objects from the deer mouse's eye level!

When you choose a spot to do this activity, be careful! There may be poisonous plants. Know what you're touching.

WHAT TO DO

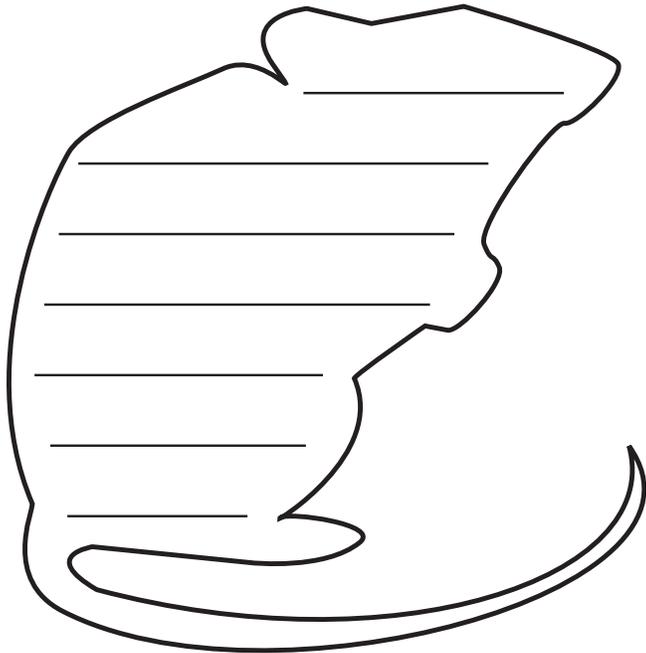
- Read **Ground's Eye View by a Deer Mouse**.
- Do the **See the Park From the View of a Deer Mouse** activity on page 25.
- Adult: Review and fill in the Scorecard on page 5.

SEE THE PARK FROM THE VIEW OF A DEER MOUSE

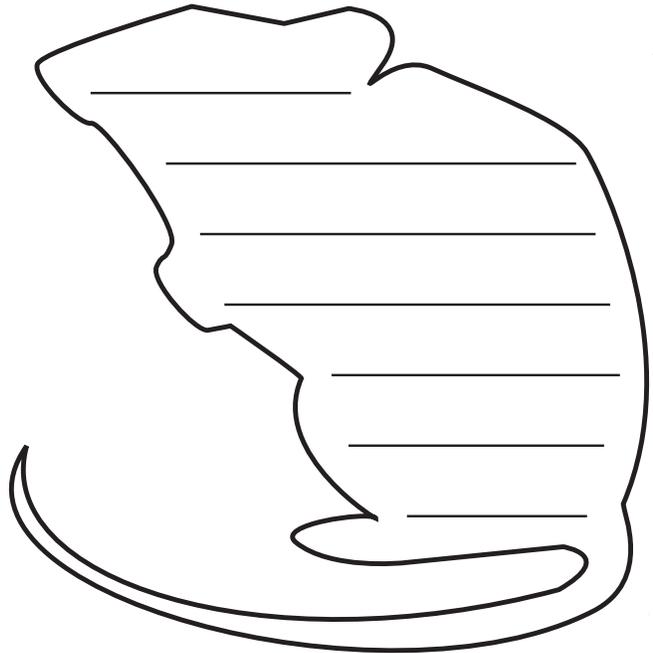
For this activity on the next page, find a place in the park campground or picnic area. Choose a spot and mark the center with a twig or rock. Make a circle 40 inches out from that spot. Use the 10" ruler to measure four times. Mark the boundary of the circle with twigs or leaves.

Use your eyes like the eyes of a deer mouse. What do you see in the circle? Use the first mouse shape to make a list of all of the **natural** things that the deer mouse would see on the ground within your circle. Now use the second mouse shape to list all the "**unnatural**" things it would see.

I saw these natural things:



I saw these UNnatural things:



Choose two of the natural objects and describe where they might have come from originally, and how they might have arrived in the circle. Was a seed blown by the wind? Did a squirrel drop an acorn? Did a bird drop a twig while it was building its nest? Use the boxes below. Do the same thing for one of the unnatural objects. Describe how it might harm animals or plants. When you are through with this activity, carefully clean up all unnatural objects (litter!) in the circle, and remove all evidence of your circle.

Natural object 1

Natural object 2

UNnatural object 3



PARKS ARE ALWAYS CHANGING

DO THE PARKS CHANGE?

Have you visited this state park before? Do you see anything different from the last time you were here? Change is happening all around you.

As a Junior Park Naturalist, you will be a “nature detective,” observing ways that animals, weather, and people cause change in the parks. Here are a few clues to help you understand the changes you see in the parks.

Animals cause changes in the park. For example, squirrels collect pine cones, and eat the seeds or bury the cones. New trees grow from the dropped or buried seeds. Birds and other animals may carry seeds or berries to new places, causing new plants to grow.



Weather causes changes in the park. Lightning can shatter trees and start forest fires. Heavy rain can cause the soil to wash away, creating gullies and carrying soil into the rivers and lakes. Windstorms knock down trees, making new openings in the forest.



People cause changes in the park too. Roads, buildings, paths, and trails affect the habitat.



People visiting or working in the park cause change everyday just by being here! How can you make sure these changes don't damage the park?

WHAT TO DO

- Read **Do the Parks Change?** and **Sharing Corner...**
- Do the **How Do Parks Change?** activity on page 27.
- Adult: Review and fill in the Scorecard on page 5.

SHARING CORNER...

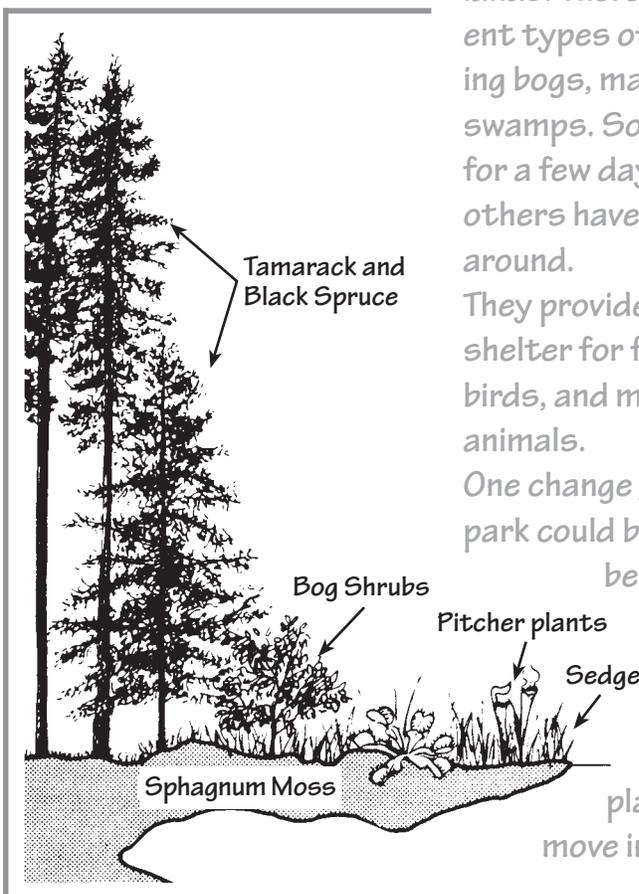


As you look for changes in the park, look for changes in one of the most important habitats we have in Minnesota: wetlands. There are many different types of wetlands, including bogs, marshes, and swamps. Some are only wet for a few days each year and others have water all year around.

They provide food, water, and shelter for frogs, muskrats, birds, and many other kinds of animals.

One change you might see in a park could be caused by beavers damming up a small stream.

As the water collects behind the dam, other plants and animals move in too.



HOW DO PARKS CHANGE?

As you enjoy the park, look around you for signs of change.

Describe the changes you find.



Find something changed by an animal:

What change did you find? _____

What animal do you think changed it? _____

How will this affect other animals or plants? _____

Find something changed by weather:

What change did you find? _____

How do you think weather changed it? _____

How will this affect other animals or plants? _____



Find something changed by people:

What change did you find? _____

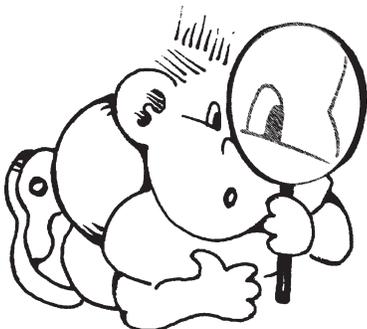
How do you think people changed it? _____

How will this affect other animals or plants? _____

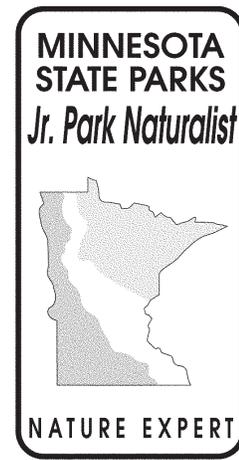
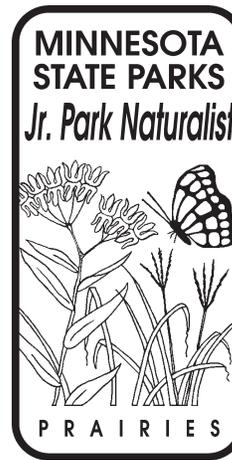
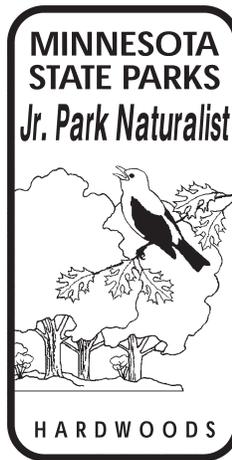


CONGRATULATIONS!

You have completed all the requirements to become a Junior Park Naturalist in the Pinelands. To receive your patch and certificate, present your completed scorecard at any Pinelands state park office or visitor center.



BE A NATURE EXPERT



LEARN ABOUT MINNESOTA'S OTHER BIOMES!

Become a Junior Park Naturalist in the Hardwoods and the Prairies. When you complete all three biomes, you will be a Nature Expert and earn a Nature Expert patch.

HEY KIDS...

Explore more of Minnesota's nature, history and geology with the Explorer Series booklets on sale now at the park office or call the DNR Information Center.

For Minnesota State Parks Information: www.mnstateparks.info

DNR INFORMATION CENTER

Minnesota Department of Natural Resources
500 Lafayette Road

Saint Paul, MN 55155-4039 Twin Cities (651) 296-6157 (Metro Area)
1-888-MINNDNR (646-6367) (MN Toll Free)
www.dnr.state.mn.us

This document is available in alternative formats to individuals with disabilities by calling (651) 296-6157 (Metro Area) or 1-888-MINNDNR (MN Toll Free) or Telecommunication Device for the Deaf/TTY: (651) 296-5484 (Metro Area) or 1-800-657-3929 (Toll Free TTY)



Division of
Parks and Recreation
Interpretive Services



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