

WILDFIRE PREVENTION SCHOOL PROGRAM

Grade 6

Minnesota Department of Natural Resources

Division of Forestry

Basic Fire Prevention Concepts

Presentation Introduction

Grade 6 Lessons

Lesson I - The 1987 Oregon Disaster

Lesson II - Forests Are More Than Trees (Part I)

Lesson III - Forests Are More Than Trees (Part II)

Presentation Conclusion

Handouts

Forest Crossword

Mother Nature Leaf Identification

Credits

Ministry of Natural Resources
Fire Prevention School Program, Ontario, Canada

National Wildlife Federation
1400 Sixteenth Street, N.W., Washington, D.C. 20036-2266

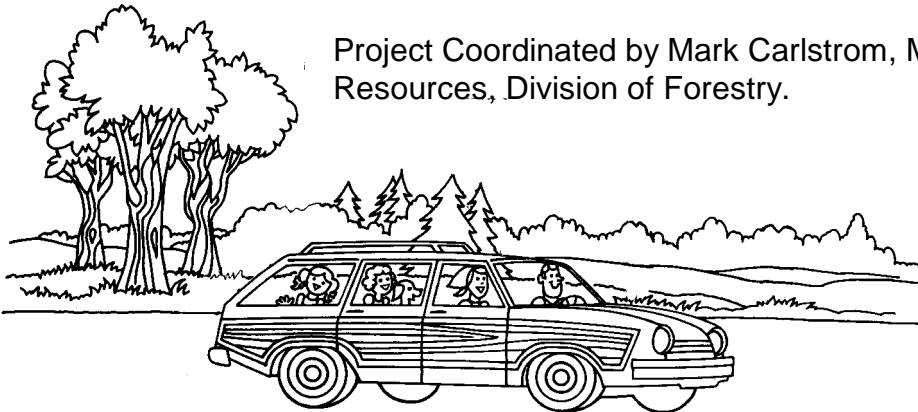
Project Wild
Salina Star Route, Boulder, Colorado 80302
Western Regional Environmental Education Council

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Video List

Your school may order videos by contacting: DNR Information Center, 500 Lafayette Road, St. Paul, MN 55155-4040, number 651-297-6157. Please order by catalog number.

Introduction To Fire

11 min. VHS Cat. No. V926 Ages 4-6

Provided by DNR, Division of Forestry, Wildfire Prevention Committee. Slide-tape on video narrated by a child who discusses how trees are important to us in our everyday lives. Explains how fire, used properly, can be used to cook our food, heat water, and can be our best friend. Fire used carelessly can damage our homes and forests. Concludes with how children can be safe and avoid dangerous situations with fire.

“Ouch” Said the Tree

6 min. VHS Cat. No. V927 Ages 5-9

Provided by DNR, Division of Forestry, Wildfire Prevention Committee. Slide-tape on video narrated by a child. Storyline is in “Ouch Said The Tree” song. Shows fires started by kids playing with matches, unattended campfire, trash burning, and cigarettes. Many slides of fires and fire suppression activities.

Please Don't Light That Fire

7 min VHS Cat. No. V928 Ages 5-7

Provided by DNR, Division of Forestry, Wildfire Prevention Committee. Grade 2 lesson plan, narrated slide show. Nicholas and Jennifer go for a picnic in the forest. They find some matches and decide to start a campfire. Oakley the oak tree stops them and tells a story of how dangerous fires are to the trees in the forest.

Smokey's Fire Safety Tips

8 min VHS Cat. No. V929 Grade 3

Provided by DNR, Division of Forestry, Wildfire Prevention Committee. Four children go for a hike in the woods; find animal sign and matches. As they try to light a campfire, Smokey comes and tells them about fire prevention and how the forest is home to animals.

Smokey Bear

18 min. VHS Cat. No. V249 Ages 8-12

Provided by DNR, Division of Forestry, Wildfire Prevention Committee. Grandpa (Denver Pyle) and children play in forest through the seasons, have a campfire and tell the story of Smokey Bear. Ends with what Smokey means today. Smokey Bear song at the end.

Forest Fire

8 min VHS Cat. No. V931 Ages 9-12

Provided by DNR, Division of Forestry, Wildfire Prevention Committee. Slide-tape on video. Minnesota oriented. Campfire, debris, and children caused fires; explanation and safety. Results of forest fires (i.e. losses).

Forests Are More Than Trees

19 min VHS Cat. No. V932 Ages 10-18

Provided by DNR, Division of Forestry, Wildfire Prevention Committee. Slide-tape on video. Video covers: wildfire sign in the forest, different parts of forest used by different animals, tree rings, life cycles, tree types, tree ranges, tree and animal adaptation to climatic zones, logging history, old growth and preservation, public and private forest lands, distribution and use, timber products, watershed management, photosynthesis, carbon cycle, multiple use management, reforestation and deforestation due to development, acid rain, fire limiting forest use and recycling.

The Oregon Fire Disaster - 1987

18 min. VHS Cat. No. V933 Ages 10 - Adult

Provided by DNR, Division of Forestry, Wildfire Prevention Committee. The 1987 Oregon fire season had some of the worst fire conditions in recent history. During the fire season two people died, many homes were lost, and many people were evacuated. Federal, state and private agencies and companies combined forces to work together to control these forest fires. Assistance came from across the nation to help out in one of the largest mobilizations of fire suppression resources in history. Good description of the job of fire fighters and the support effort necessary to bring major forest fires under control.

Basic Fire Prevention Concepts

Some fire is good for the forest. It is nature's way of:

- Ž Eliminating diseased and dying stands of trees
- Ž Increasing pasture land for animals
- Ž Allowing trees to grow
- Ž Preparing a seed bed for new trees to get started
- Ž Putting minerals and nutrients back into the soil

In the days before people lived on this continent, forest fires started naturally by lightning.

Today, the Department of Natural Resources burns some small areas of the forest under carefully controlled conditions, being very careful to keep the fire from spreading into healthy stands of trees. The Department performs these burns to:

- Ž Reduce fire hazard on high risk sites
- Ž Prepare the site for new trees to grow
- Ž Control insects and tree disease
- Ž Improve or develop wildlife habitat
- Ž Maintain ecosystems.

People depend on the forest for recreation, providing us with building materials and supplies, and providing jobs for many types of workers.

It is the Department of Natural Resources' job to protect the forest to make sure it stays healthy and is used wisely so we have enough forested land for recreation, enough wood to provide us with building materials and supplies, and to protect the jobs of those people who depend on the forest or forest products for their work.

Although some forest fires are good for the forest, each year there have been many fires occurring which serve no useful purpose and destroy valuable and healthy forested areas, and sometimes people's homes.

Lightning causes some forest fires.

People are the main cause of forest fires, either through carelessness or because they haven't learned how to be fire safe. People cause 9 out of 10 fires. Campers, berry pickers, hunters, homeowners, and children are some of the groups of people who commonly start forest fires.



There are things we should know that will help us to prevent forest fires:

- Ž Children should never play with matches. Many children have been hurt playing with matches. Many forest fires have been started as the result of children playing with matches.
- Ž People should compost their yard debris and leaves. If that is not possible, they should burn their yard debris using large metal barrels covered with a screen.
- Ž A campfire should be built on rock or sand – never on anything that could burn such as grass, needles, or leaves. Do not put rocks around a campfire, as they could hide burning embers. Keep the fire small. Don't build campfires under overhanging branches.
- Ž Put a campfire out when you are finished with it. Do not go away and leave it burning.
- Ž To properly extinguish a campfire, pour water on it, stir the ashes with a stick, then pour more water on it. Do these steps until everything looks wet, the ashes don't hiss anymore, no more smoke comes from the ashes, and the ashes feel cold.
- Ž Forest workers should never smoke while they are working. Their equipment should be in good working condition and fire safe.

If you find a fire burning, tell an adult right away. The fire should be reported to the nearest Department of Natural Resources office or call 9-1-1. If you have any information that might help the Department of Natural Resources determine what caused the fire, you should report it.

Vocabulary

The following words are listed for the purpose of providing a vocabulary guide for your presentation. Students should become familiar with these words when presented to them in a fire prevention context. A few of these terms may be completely new to students (e.g., prevention), so the meaning should be made clear to them at the point in the presentation the word is used.

campfire
careless
cigarettes
coniferous
controversies
debris
deciduous
destroy
ecosystem

educate
equipment
forest fire
hazard
industry
lumber
mineral soil
perspectives
prevention

protect
railway
recreation
supplies
smokers
suppression
value
weather conditions



Presentation Introduction

Introduce yourself if you are not the student's regular teacher. Give a simple description of what you do.

Explain to the students that you will be talking about fire prevention and that they will be learning how to be fire safe. Ask the class if anyone knows what prevention means - if not, explain it to them.

Explain to them briefly what you have planned for the program.

Tell the students they will have a chance to ask questions at the end of the program.

Lesson I: The 1987 Oregon Disaster

Introduction	5 min. maximum
Video: <i>The 1987 Oregon Disaster</i>	20 min. maximum
Discussion of the Video	10 min. maximum
Activity: Fire Prevention Message	30 min. maximum
Student/Teacher Handouts	5 min. maximum

Objectives

- | | |
|--|--|
| Ž Develop an awareness of forest fire prevention. | Ž Develop a general understanding of the DNR's role in forest fire prevention and responsibility for putting out forest fires. |
| Ž Develop a concern for the protection of our forests. | Ž Understand some of the ways we can prevent fires and become fire safe. |
| Ž Develop responsible attitudes with regards to forest fire prevention. | Ž Develop the realization that we all have an individual responsibility to help prevent forest fires. |
| Ž Develop a realization that people are dependent on the woods industry for supplies and jobs. | |

Materials

- | | |
|--|--|
| Ž Video: <i>The 1987 Oregon Disaster</i> | Ž Art Materials: Glue, markers, scissors, string, tape, large paper, colored paper, etc. |
| Ž Video Player (VCR/TV) | |

Oregon Disaster

Before you begin, tell the students they are going to watch a film called “The 1987 Oregon Disaster”. Explain that the fire scenes were filmed at an actual forest fire that occurred in Oregon in 1987. Tell them to watch and listen very carefully, because you will be asking them questions after the program. Tell them to look for reasons why we try to prevent forest fires.

Questions:

1. What were some of the conditions that made Oregon highly susceptible to fire? (Low moisture, lack of snow and rain)
2. Could those conditions occur here? (Discuss the conditions that would make Minnesota susceptible to fire - lack of spring rain, low moisture from lack of snow, continued drought and high temperatures through summer)
3. What was the first priority of the Oregon Department of Forestry in controlling the fires? (Protect homes and lives)
4. One of the scenes in the movie showed a house that burned in the fire. Why wasn't that house saved? (No fuel break)

At this time, discuss the term “fire prone property.” Mention that this does not mean forest homes only. Fire prone property could occur in the city, on a farm, or at a lake home. Any building with tall grass growing next to it, or has no firebreak between it and the forest, is considered “fire prone property.”

5. What was the cost per day for one of the fires in Oregon? (1.5 million dollars)
6. Who pays for this? (In Minnesota, the person responsible for starting the fire pays. If that person is unknown – we all pay through taxes.)
7. The cost of putting the fire out is not the only cost. What are some other things that need to be done after the fire is over and the fire fighters have left? (Salvage timber, protect the watershed, reforestation)
8. What can we do to help prevent forest fires? (Get a burning permit, control the size of your fire, be sure your fire is out cold, stay with your fire at all times, don't burn on windy, dry days)

Activity: Fire Prevention Message

Supply the entire class with a variety of art materials, paper, and plenty of work space. Have the students divide into groups of 4 students per group. Explain to the students that their task is to communicate the idea of fire prevention to the rest of the class. (For example: They might make a poster – with or without words; write a poem, slogan, or bumper sticker; dance the idea; act it out a la charades; design a chart; paste up a collage; string up a mobile, etc.)

Be sure to tell the students to be creative and to use their own ideas and not rely on the Smokey Bear slogans.

After the groups have finished preparing, have them present their ideas to the class and discuss them.

Lesson II: Forests Are More Than Trees (Part I)

Introduction	5 min. maximum
Video: <i>Forests Are More Than Trees</i>	20 min. maximum
Discussion	20 min. maximum
Student/Teacher Handouts	5 min. maximum

NOTE: The program “Forests Are More Than Trees” has been broken into parts due to the length of each lesson. It is recommended that the lessons be done in two separate sessions.

Objectives

- Ž Develop an awareness of forest fire prevention.
- Ž Develop a concern for the protection of our forests.
- Ž Develop a realization that people are dependent on the woods industry for supplies and jobs.
- Ž Develop responsible attitudes with regards to forest fire prevention.
- Ž Understand some of the ways we can prevent fires and become fire safe.
- Ž Develop a general understanding of the DNR’s role in forest fire prevention and responsibility for putting out forest fires.
- Ž Develop the realization that we all have an individual responsibility to help prevent forest fires.

Materials

- Ž Video Player (VHS)/Monitor
- Ž Video: *Forests Are More Than Trees*

Forests Are More Than Trees

Begin by telling the students that they will be watching a video called *Forests Are More Than Trees*. Prepare them for the program by telling them what to watch for. Tell them to come up with things that they can do to protect the forest. Tell them you will be asking questions after the program.



Questions:

1. What is a forest? (an interacting community of plants and animals that covers a large area of land in which the dominant members are trees)
2. How can you tell a tree's age? (by counting the rings)
3. What is a coniferous tree? (a tree that bears its seeds in cones and has needle-like leaves)
4. What happens to deciduous trees each year? (They shed all their leaves at a certain time)
5. What are some factors that determine the kinds of trees that grow in a certain area? (temperature, rainfall, soil, elevation)
6. Name some animals that live in forests. (examples include bears, pine martens, deer, wolves, turkeys, opossums, goshawks, owls, salamanders, snakes and many insects)
7. Name some things people can do in forests. (hunt, tap maple trees for syrup, pick berries, climb trees, camp, bike, ski and snowshoe are some examples)
8. What is an old-growth forest? (a forest made up of very old, large trees)
9. What are some of the reasons early settlers cut down forests? (to clear land for crops and to obtain lumber for homes and furnishings)
10. Name some things in your classroom and/or home that are made of wood (furniture, paper, pencils, etc)
11. Name some of the "free services" we get from forests. (forest plants give off oxygen, and they cushion the flow of water, preventing erosion and flooding)
12. What is multiple-use management? (managing forests for more than one use at a time)
13. Name some threats to forests. (examples include deforestation, air pollution, uncontrolled fire, and certain types of insects like gypsy moth)



Now discuss the basic fire prevention concepts listed before this lesson. End the discussion by asking this final question:

14. What are some things you can do to help protect forest for the future? (recycle paper, be careful with campfires, learn all you can about forests and educate others)

Lesson III: Forests Are More Than Trees (Part II)

Introduction	5 min. maximum
Discuss Basic Fire Prevention Concepts	20 min. maximum
Activity: Designing A Forest	30 min. maximum
Student/Teacher Handouts	5 min. maximum

Objectives

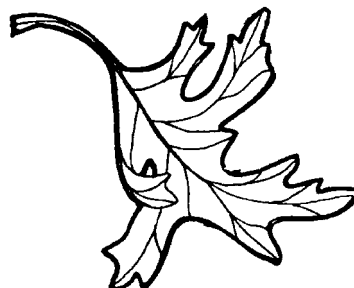
- Ž Develop an awareness of forest fire prevention.
- Ž Understand some of the ways we can prevent fires and become fire safe.
- Ž Develop a concern for the protection of our forests.
- Ž Develop a general understanding of the DNR's role in forest fire prevention and responsibility for putting out forest fires.
- Ž Develop a realization that people are dependent on the woods industry for supplies and jobs.
- Ž Develop the realization that we all have an individual responsibility to help prevent forest fires.
- Ž Develop responsible attitudes with regards to forest fire prevention.

Materials

- Ž Copies of the Habitat Descriptions, Forest A and B and the Animal card sheets that follow
- Ž String or yarn, glue, scissors and large sheets of construction paper – one for each group.

Forests Are More Than Trees

Begin by discussing forest management using the background information following this lesson as a resource. Also, include the concepts listed in the "Basic Fire Prevention Concepts" section for this grade. Discuss how fire is used in management situations. Also, include how this differs from wildfire.



Activity: Designing a Forest

A forest is more than just trees. It's wildlife too. The purpose of this activity is to demonstrate that diverse forests – forests with many types of habitats – will satisfy the needs of many kinds of animals.

Forest A has a variety of habitats and thus can support a variety of animals. Forest B is a young forest and does not have the habitat variety of Forest A. (For instance, a young forest will not have the snags (dead trees) needed by a barred owl or pileated woodpecker.)

Before beginning the activity: 1) make copies of the animal pages, the habitat descriptions and forest A and B, 2) then make one set of animal cards by pasting the descriptions of the animals to the backs of the pictures and cutting them out. These can then be put aside for later use.

Next, distribute copies of Forest A to the students. Using the description of the forest habitats as a guide, discuss the different kinds of animals that live in each habitat.

After you and the class have discussed all the different habitats, divide the class into groups of two or three. Assign each group to one of the 16 animal cards you made earlier. Ask each group to be the class “experts” on their particular animal. After reading the material on the animal cards, the “experts” can give the class a short report, talking about where their animal lives and what it eats, as well as any other interesting facts they may know. Following these expert reports, ask the class which animals would live in Forest A and where in the forest they would live. Keep the same groups and distribute copies of Forest B. Ask which of the animals would live in Forest B, and which forest, A or B, could provide habitat for the most animals.

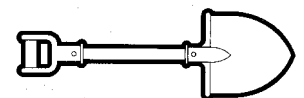
Now the students will have a chance to create their own forests. First, have them cut out Forest B, and the habitats shown below forest B. Ask them to glue Forest B to a large sheet of construction paper, and then glue some or all of the habitat cutouts to Forest B. Then, taking their animal cards, they can glue them around the drawing, using string or yarn to connect the animals to their habitats. When their forests are complete, have the groups each explain why they designed their forests in the way they did, which animals they wanted to attract with each particular design, and what each forest has to offer.



Extended Activity:

Students could research information about animals and their habitats and then address one or more of these questions:

1. What if there was a decision to cut down part of a large, old forest over a period of 20 years?
2. What if a lake was added to the forest?
3. What if a recreation development with ski trails was added?
4. What if a large campground with roads was built?
5. What if the forest was completely protected, and no roads or human activities were allowed?



Background Information for “Forests Are More Than Trees”

Forests and Forestry

Today, most forests are managed to meet many different needs. Some have large wilderness areas that are managed to emphasize conditions that occur naturally. But most forests are managed for specific uses, such as timber, recreation, hunting and fishing. In their jobs, forest managers try to meet peoples’s needs for forest products and recreation. At the same time, they protect the living places – called habitats – of plants and animals by planting and harvesting trees, improving wildlife areas, and preventing accidental fires.

Forests Are Always Changing

Like all living things, a forest grows in stages – its physical structure changes over time. From bare ground to shrubs and small trees, and then from young forests to mature forests. At each stage of growth, the forest supports different sizes and kinds of trees. As the forest slowly changes, the wildlife slowly changes as well, with different kinds of animals moving in as other move on to more suitable areas.

Every stage of a forests’s growth is important to wildlife. Just as the living tree helps support the forest, the dead tree also does it’s part. For instance, a forest filled with young trees is not good for the woodpecker. The woodpecker prefers to peck away at dead or diseased trees, searching for insects hiding under the soft bark or in the dead wood. Woodpeckers also raise their young in the holes of dead, broken-topped trees called snags. Snags are important for a forest’s diversity. Diversity means the variety of plants and animals that live in a forest. Without snags, for instance, a forest will have few woodpeckers. Likewise, without marshes, a forest will have few ducks.

A forest can grow and change naturally, or it can be changed by people. During the early development of America, European settlers cleared much of the forested land for pastures and cropland they needed to produce food. But the settlers also benefitted from the forests’s gifts: fish and game for table and clothing, wood for their homes and furniture – and of course, for firewood. Animals responded in different ways to these habitat changes. Rabbits, quail, deer and other animals that could adapt to a farm setting began to flourish. But other animals didn’t fare so well. Some such as wolves and cougars, were pushed out by the steady growth of the early settlements and towns. Still other animals became extinct, one reason being that they slowly lost the kinds of forest areas they needed to live; that is, they lost their habitats.

Toward the beginning of this century, people began to realize that the growing scarcity of trees, as well as the decline and disappearance of certain animals, was becoming a problem. This led to new ideas — forest management and wildlife management. Rather than just cut trees down, people began to plant and even farm them.

By properly managing this natural heritage, we can also keep our air and water clean and provide natural places for us to enjoy now and in the years ahead.

Because many forests do not have these varied species and foods, people often must work to protect, manage, and even create wildlife habitats. This basic principle – helping create the habitats that certain animals need – can be used to encourage countless plants, mammals, birds, and reptiles.

It is important to emphasize that timber harvesting is the main tool of managing and creating wildlife habitat.

Habitat Description – Student Handout

The Habitat Puzzle

Wildlife habitat management is something like a big puzzle. In this puzzle, foresters and wildlife managers try to put the pieces together to find the best possible fit of plants and animals. Here are some of the main pieces of the habitat puzzle:



Meadows and Openings:

Meadows and openings are alike in that they are basically open spaces within forests. But meadows, strictly speaking, are naturally occurring habitats that usually don't favor tree growth. Openings is a more general term: it might refer to an area created by humans, as in the case of an old farm, or one that resulted from natural phenomena, such as a fires started by lightning. While openings can be created or maintained for wildlife by mowing or special controlled burning, openings will return to forest given time. But a meadow tends to stay a meadow.



One animal found in meadows and openings, especially while feeding at night, is the white-tailed deer. Another common inhabitant is the meadow mouse, which moves through the grass, feeding on seeds, fruits, and grasses. Many birds feed on insects and seeds from the abundant plants around and in the meadows and openings. Birds also hide or nest in the tall grass here. Meadows and openings often draw nature's hunters as well – animals such as the barred owl or the red fox, which prey on meadow mice and other rodents.



These and many other animals also strongly favor the edges where two or more habitats come together. One example of an edge might be where an opening turns into a forest – or, where a marsh turns into dry forest.

Shrub and Small Trees:

This habitat, which commonly occurs after a fire or tree harvest, is more open to the sunlight than more mature forests. The increased sunlight stimulates plant life, and deer come here to feed on the young stems and buds of the small trees and shrubs springing up. Fruit, such as the blueberries and blackberries that grow in these areas, also provides an important food source for many birds and the black bear. In addition, this habitat provides cover – hiding places – for large and small animals.

Young Forest:

Young forests can grow up either from natural growth or from trees that have been planted – planted, say, after timber has been cut or after a wildfire.

Since the trees in young forests do not crowd out all the sunlight, these forests are filled with shrubs and other plants that support a wide variety of wildlife, ranging from reptiles, such as the box turtle, to small mammals, such as rodents. These areas are also prime habitat for deer and bear, which use these areas for both food and cover. Young forests are home for many birds too.

Mature Forest:

As the forest matures, the tree canopy – the leafy roof of branches – keep the forest floor shady and cool, even on sunny days. With so little sunlight below, few ground plants live here. As a result, there is little to eat for those animals that cannot climb or fly to the upper branches, where most of the food is found. Animals that can reach this food are the gray squirrel or birds such as the blackcapped chickadee.

Habitat Description – Student Handout (cont.)

Old Forest:

An old forest differs from a mature forest in that its trees are different sizes and much older. The large trees that are living provide cones, seeds, and nuts. Standing together, they also break the wind and thin the snow, protecting large and small animals from the weather. Old forest also contain many dead, dying and fallen trees. As we've seen, these large, dead trees are needed by birds such as the pileated woodpecker which depend on them for nesting sites an food. Old trees are also important to barred owls, hawks, and other birds of prey, which use them for lookout towers – places to swoop down on their next meal.

Whether standing or fallen, dead trees are also important because they help open the forest to sunlight. With more sunlight, shrubs and plants on the forest floor will grow and provide food for ground dwellers and other animals. So old forests are not dead forests. Rather, they are changing forests that support a variety of wildlife on the ground and in the trees.



Streams and Rivers:

Besides helping supply the forest with water, streams and rivers also stimulate a variety of vegetation that, in turn, supports many kinds of insects, fish and other animals. Many animals also feed on the creatures found in streams and rivers – fish, frogs, and salamanders, just to name a few.



One animal that depends on these areas is the river otter, an agile swimmer that glides through the water, snatching fish or feeding on fresh water clams. Water birds and reptiles also come here to feed. Cool, rushing streams and rives bubbling with air are prime habitat for rainbow trout. Rivers and streams are perfect for many other fish too.



Ponds, Lakes, and Wetlands:

Ponds and lakes will attract many of the same species as rivers and small streams. The largemouth bass, which eats frogs, fish and even small snakes, likes warmer ponds and lakes. Where a river or stream runs into wetland, this can be prime spot for wood-gnawing beavers, which cut down small trees to make dams for their underwater dens. In fact, by damming free-flowing streams, beavers can actually create wetland habitat necessary to waterfowl and other wildlife. In more remote ponds and lakes, you can even hear the eerie call of the loon.

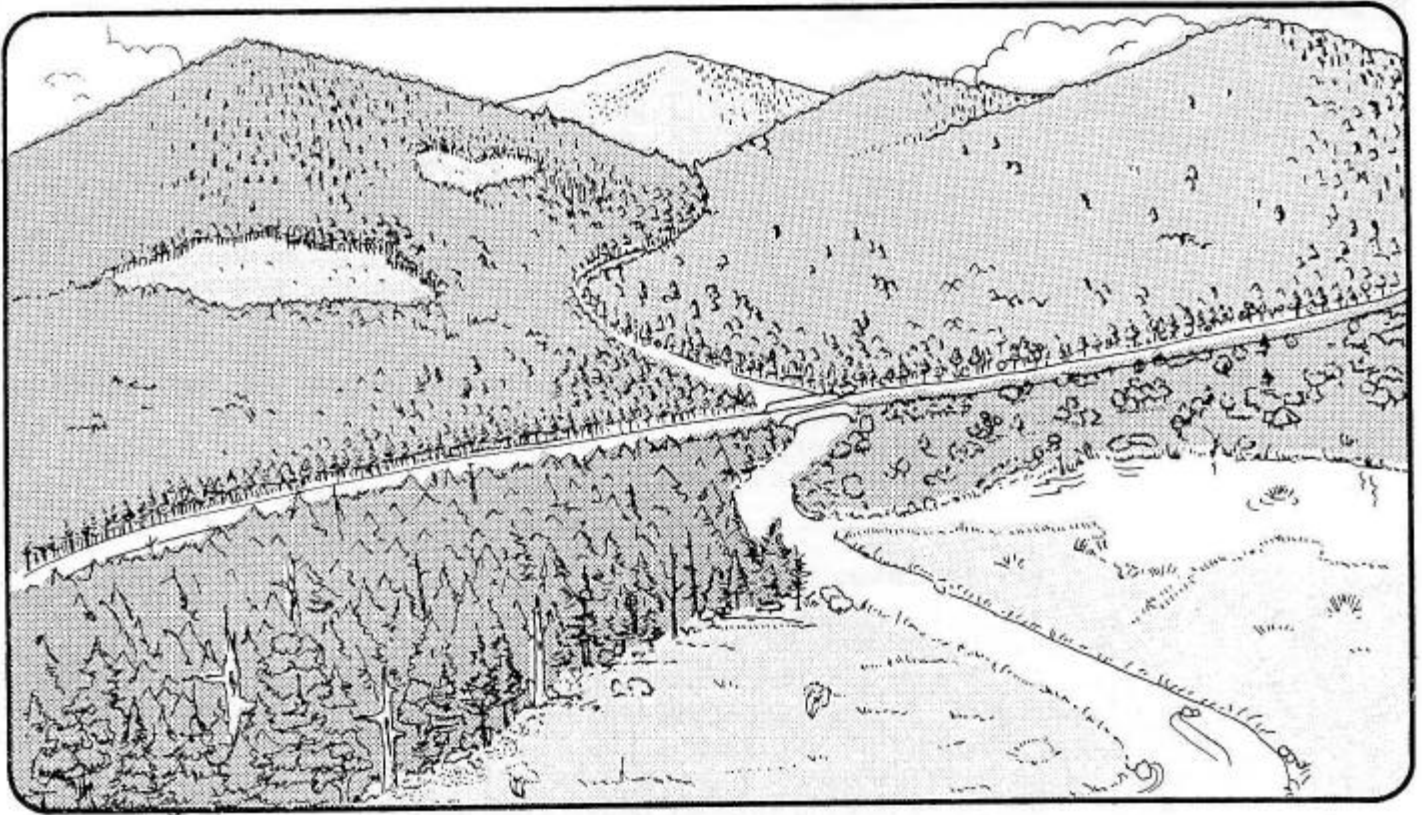


Areas Managed by Burning or Harvesting Trees:

Much work goes into preventing and putting out wildfires, yet it is well known that fire is one of nature's own forest management techniques. Planned fire is thus one way to cause change and diversity on a forest's plants and animals.

A common management technique is harvesting – cutting down the trees in a carefully chosen area. By carefully planning tree cuts, foresters and wildlife managers can create a network of forest lands in different stages – diverse lands that can support a variety of wildlife. Remove the trees and new growth emerges – food for animals ranging from deer mice to white-tailed deer.

Forest A



1 Meadows, openings



2 Shrubs, small trees



3 Young forest



4 Mature forest



5 Old forest



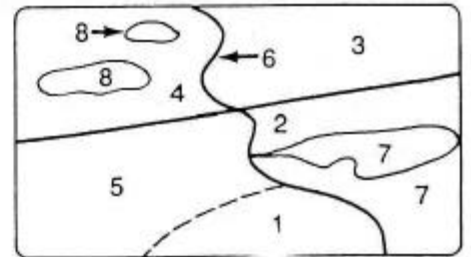
6 Streams, rivers



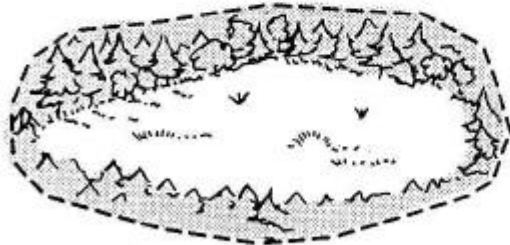
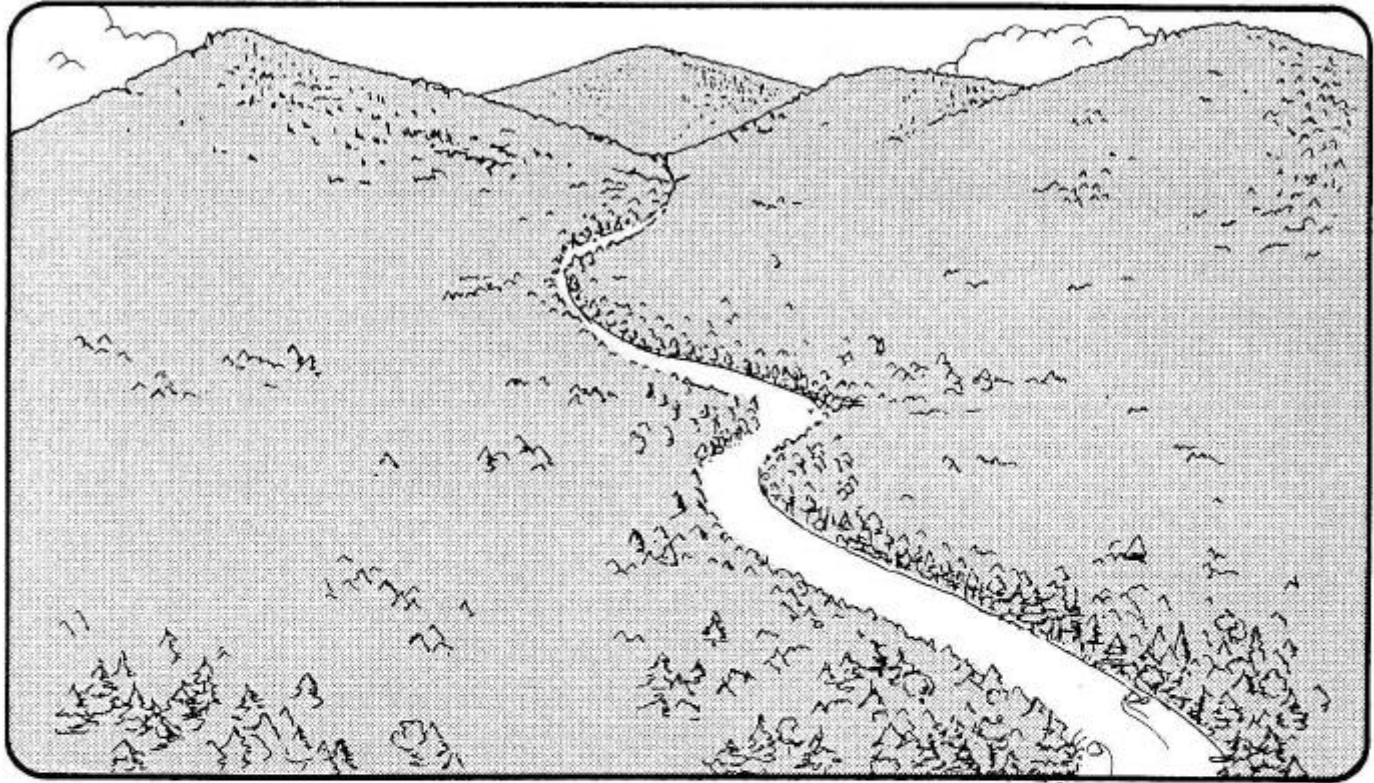
7 Ponds, lakes, wetlands



8 Burned or harvested areas



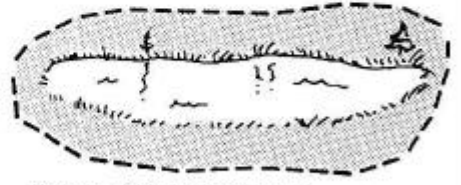
Forest B



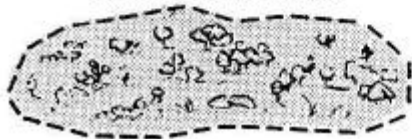
Meadows, openings



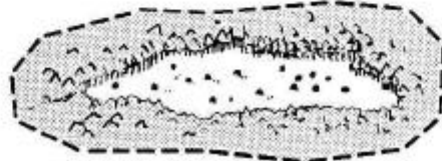
Mature forest



Ponds, lakes, wetlands



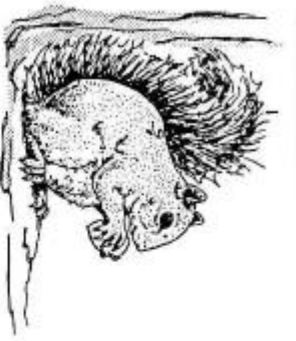
Shrubs, trees



Burned or harvested areas



Old forest



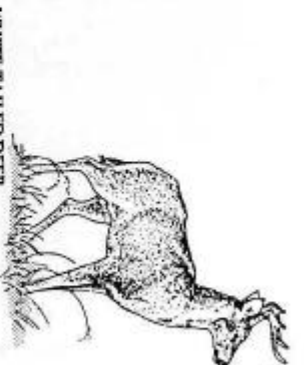
GRAY SQUIRREL (EASTERN)



DEER MOUSE



RED FOX



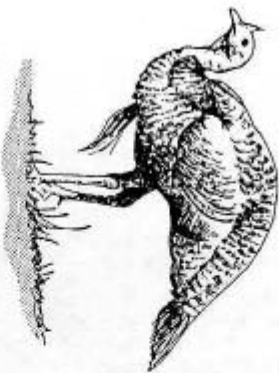
WHITE-TAILED DEER



PILEATED WOODPECKER



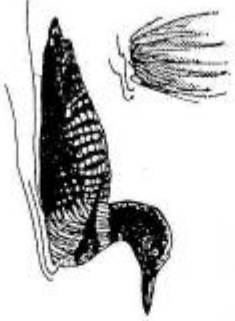
CHICKADEE (BLACK-CAPPED)



WILD TURKEY



BLACK BEAR



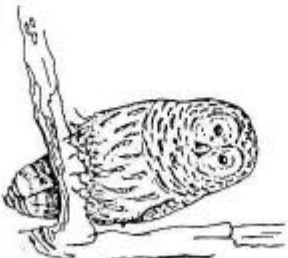
COMMON LOON



BEAVER



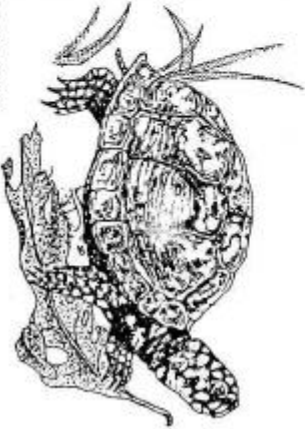
RIVER OTTER



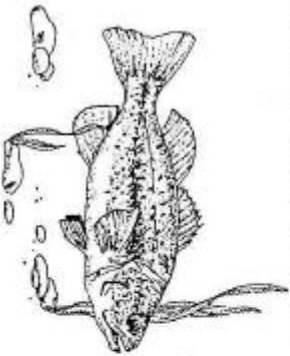
BARRED OWL



GARTER SNAKE



BOX TURTLE



LARGEMOUTH BASS



RAINBOW TROUT

<p>WHITE-TAILED DEER</p> <p>Deer can live almost anywhere in a forest. When necessary, they can make do on little, eating buds, corn, and acorns—even briars. Unlike cows, which have permanent horns, male white-tailed deer (bucks) have “antlers.” Antlers are like the leaves of a tree—every winter they fall off, and then they grow back again.</p>	<p>RED FOX</p> <p>The red fox likes open areas often near a forest and eats small creatures, ranging from mice and rabbits to insects. While the red fox may dig its own den, it would rather let some other animal do the work. Why dig a burrow when the fox can find one already dug by a badger or a woodchuck?</p>	<p>DEER MOUSE</p> <p>The deer mouse likes the edges of meadows, forest openings, and old fields near farmhouses. The deer mouse eats seeds, fruit, and insects—and it, in turn, is an important food source for owls, foxes, and snakes. That’s why the mouse slays under cover, racing through the tall grass and weeds.</p>	<p>GRAY SQUIRREL (EASTERN)</p> <p>For food and den sites, the gray squirrel likes good stout trees, especially old oaks with plenty of acorns. The squirrel also eats buds and fruit, and even birds’ eggs. Rarely does a squirrel lose its footing; its tail serves the same purpose as a circus tightrope walker’s pole—balance.</p>
<p>BLACK BEAR</p> <p>The black bear likes young and old forests and rugged country. It eats almost anything—nuts and berries, fish, insects, dead animals—even garbage. Although black bears may weigh from 150 to 400 pounds, they are born hairless and helpless and weigh less than one pound. But not for long!</p>	<p>WILD TURKEY</p> <p>The wild turkey prefers large old forests with scattered clearings, and plenty of water. Adult turkeys eat acorns, nuts, seeds, insects, and roots. Young turkeys, or “poults,” feed on protein-rich insects, which are good for fast growth—important in their ability to survive.</p>	<p>CHICKADEE (BLACK-CAPPED)</p> <p>The chickadee, which eats insects, seeds, and fruit, prefers old forests, with many standing dead trees (called “snags”) where it can find holes to build its nests. Though not a member of the woodpecker family, the little chickadee often pecks out its own nest holes in dead or rotten trees.</p>	<p>PILEATED WOODPECKER</p> <p>The pileated woodpecker prefers old forests with many dead trees. These woodpeckers like fruit, nuts, and insects—especially ants, which make up more than half their diet. Woodpeckers have special air chambers in their heads. These air pockets are much like the shock absorbers in cars—they keep the hammering bird from getting headaches!</p>
<p>BARRED OWL</p> <p>The barred owl lives in old forests and needs dead trees that have nest holes. Owls commonly hunt along forest edges, perching in trees near meadows and openings, where they can swoop down on small animals like mice and rabbits.</p>	<p>RIVER OTTER</p> <p>The river otter lives in streams and rivers, lakes and wetlands, where it feeds on fish, frogs, and crayfish. From the time the first settlers arrived in this country, the thick, durable pelts of river otters have been highly valued. The river otter is also known for its playful antics and swimming ability.</p>	<p>BEAVER</p> <p>Dam-building beavers, often called “nature’s engineers,” are found in rivers, lakes, and wetlands. Beavers make dams so they can have protected homes near the leaves, stems, and inner bark of the trees they eat. In remote areas, these furry engineers are sometimes brought in to create ponds and wetlands for waterfowl and other wildlife.</p>	<p>COMMON LOON</p> <p>The loon prefers remote ponds and lakes—places with open water needed for the loon’s long, running take-off. The loon, often called the “Great Northern Diver,” can dive up to 60 feet deep in its search for clams, fish, or crabs.</p>
<p>RAINBOW TROUT</p> <p>The rainbow trout is the most widely found trout in America, living in fast-moving rivers and streams and even cold-water ponds and lakes. Rainbow trout eat many types of small fish and freshwater insects. Many fishermen try to catch this colorful fish using “flies”—lures made to look like insects.</p>	<p>LARGEMOUTH BASS</p> <p>The largemouth bass prefers warm lakes and ponds. Largemouth bass eat insects, frogs, and fish—some large bass have been known to gobble up mice and ducklings. The bass’s appetite, fighting spirit, and ability to live in the warm waters of many regions of the country have helped make it the most popular freshwater gamefish in America.</p>	<p>BOX TURTLE</p> <p>The box turtle is rarely seen in water. It lives in older forests, in meadows, or along streams, where it eats worms, insects, and berries. The box turtle is the only turtle that can “box” itself up. In fact, it gets its name from its ability to completely close up its shell, just like a box, at the approach of trouble.</p>	<p>GARTER SNAKE</p> <p>The garter snake is mostly found in young forests, often near wetlands, ponds, or rivers—places with enough water or moisture. The garter snake eats earthworms, frogs, and small fish. This snake has many fine, sharp teeth that are angled back toward its throat, like fish-hooks, helping the snake hold its wriggling prey until it can be swallowed.</p>



Presentation Conclusion

If there is any area you have failed to cover, you may wish to do so at this point. By the end of the presentation, the students should have an understanding of the basic fire prevention concepts. You may wish to ask a few general questions to ensure the students have understood the main concepts.

At this point, you can answer any questions the students may have.

Thank the students for being attentive listeners.

Student/Teacher Handouts

When a forester visits, they will usually bring a small token or handout for each student to remind them of the visit. Most students will show this to their parents. This encourages the students to talk to their parents about what they have learned and to bring the fire prevention message home.

The number and types of handouts given to each child should be kept to a minimum. It has been found that when too many handouts are passed out, many are discarded.

Handouts

The handout pages following can be photocopied and handed out to students after any of these lessons. Contact your DNR Forester for a classroom poster.

FOREST CROSSWORD

Use the clues to fill in the blanks of the crossword puzzle!



ACROSS

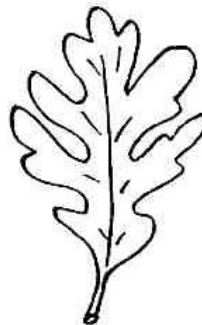
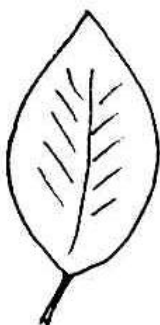
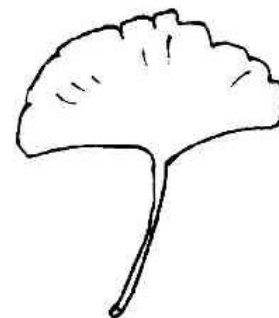
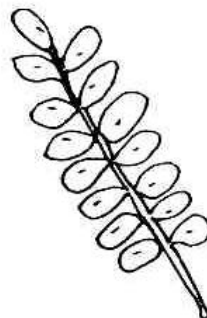
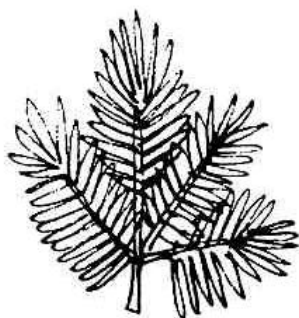
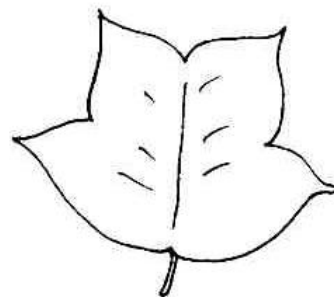
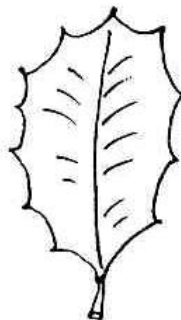
2. Stone flame encirler
4. One color of fire
7. Weed & leaf remover to be used around your house
11. Shade-giver vulnerable to fire
12. Better than a "bucket brigade"
13. Often coiled in rest; should stretch to all parts of your home
16. Famous fire prevention symbol
19. "Arrester" which prevents fires, not crimes
21. "Hood" one can live in but not wear; can be made firesafe
25. Firefighting tool whose name describes what it does
27. Campers must not allow theirs to go out on its own
28. Firefighter's forest "clean-up"
29. Dangerous objects; to be handled ONLY by adults
30. Falling leaf season
32. Fireplace fuel; store it away from your house
33. Where dead branches shouldn't be; in relation to your roof (Ant. of below)
36. Dangerous as matches, with an explosive personality
37. "Only _____ can prevent forest fires!"
38. Troughs to collect water, not leaves
39. "Before" (+ st = answer to no. 36 down)
40. Opposite of "cause"
42. Fire radiates this
43. Surroundings, climate, atmosphere, etc. (ecosystem. earth)

DOWN

1. An alarm to protect you from fire
2. Firefighter and engine abode
3. Smokey co-worker in forest protection
5. Once lost by a tree, shouldn't be left laying around
6. Describes both forest animals and the fire they flee from
8. Like us, fire needs this to survive
9. Kind of numbers that should be kept near the telephone
10. Number of exits every home needs, in case of fire
14. Flammable house frame material
15. Fire's favorite season (Syn. of "parched")
17. Baby Smokey
18. Without concern (Describes many fire starters)
19. Smokey carries one
20. Synonym of "creature" (can't start fires, but can be a victim of them)
22. Wildfires can strike here
23. Proper kind of container for barbeque coals
24. Conflagration combatant
26. Thirst and fire quencher
27. "Arms" of a fire
31. Should be firesafe before used
34. It burns everyone
35. Kind of person to tell if you find an out-of-control fire
36. Flammable tree gathering
41. Time you can begin helping Smokey

Mother Nature

Can mother nature fool you? From the list of trees below, locate the foliage or leaf that grows from that tree. Write your answer in the space below the drawings.



Tulip Poplar
Oak
Rocky Mountain
Juniper

Locust
Douglas Fir
Ginkgo

Black Cherry
Red Spruce
White Ash

White Pine
American Holly
Sugar Maple

Mother Nature



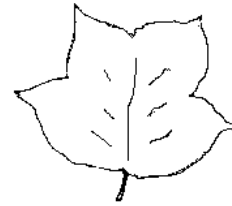
White Ash



Rocky Mountain Juniper



American Holly



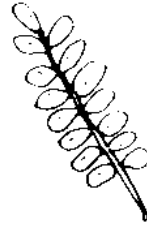
Tulip Poplar



Douglas Fir



Sugar Maple



Locust



Ginkgo



Black Cherry



White Pine



Oak



Red Spruce