

Talk About Trees Primary Activity Packet

Dear Educator:

Thank you for requesting a Talk About Trees program. Enclosed you will find two activities to help you prepare your students for the on-site program. These two activities are designed to introduce your students to some basic scientific processes. Have your students save these activities. They will become Page 1 and Page 2 of a TREE BOOK they will create after your on-site program.

On the day of your classroom visit, your Talk About Trees facilitator will provide you with four follow-up activities that will reinforce the concepts of the Talk About Trees program. These activities will become the remaining pages of your student's TREE BOOK.

These activities and the on-site program have been designed to correlate with the grade three benchmarks established by the State of Oregon. The Science Benchmarks are delineated below. In addition to the Science Benchmarks, these activities also address some English and Math State Benchmarks.

Please adapt these activities to provide your students with the optimal learning experience. Your Talk About Trees facilitator is available to answer any questions.

Science Benchmarks

- Identifies examples of change. (On-site program, Activities #1-3, 6)
- Arranges parts of a cycle. (On-site program, Activities #1, 6)
- Identifies examples of change over time. (On-site program, Activities #1, 3, 6)
- Classify organisms based on a variety of characteristics. (On-site program, Activities #1, 2, 4/5)
- Identify how some animals gather and store food, defend themselves and find shelter. (On-site program, Activity #4/5)
- Plan a simple investigation. (Activities #1, 4/5)
- Collect data for an investigation. (Activities #1, 4/5)
- Use data collected from an investigation to explain the results. (Activities #1, 4/5)
- Conduct procedures to collect, organize and display scientific data.

Common Curriculum Goals**

- Understand the relationship that exists between science and technology. (On-site program, Activities #4/5, 6)
- Understand the processes of technological design to solve problems and meet needs. (On-site program, Activities #4/5, 6)
- Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems, and natural resource supplies. (On-site program, Activities #4/5, 6)

** Specific Benchmarks have not yet been developed for these Common Curriculum Goals.



tir

oak

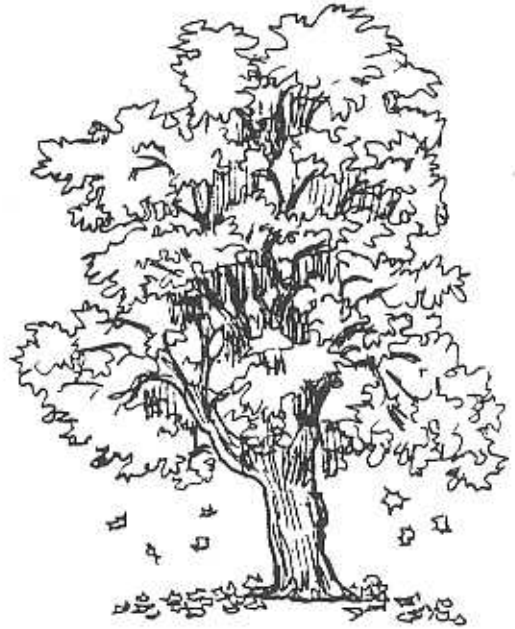
apple

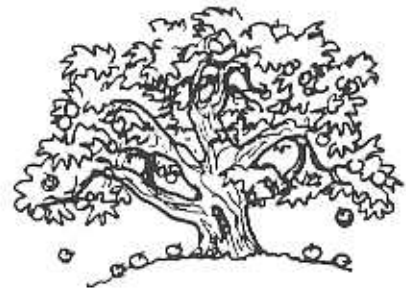


Cut and paste the apple, acorn and cone onto the correct tree.

Can you name each tree? Cut and paste your answers.







(cut here)

Name _____

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Teacher's Guide

Activity 2 - Primary

GOAL:

To understand the structure of a tree.

OBJECTIVES:

1. Identify tree parts
2. Explain the function of each tree part
3. Compare and contrast broadleaf and coniferous trees

VOCABULARY:

trunk, roots, branch, leaves, needles. (For advanced learners: broadleaved deciduous, coniferous)

MATERIALS:

tree branch with leaves, tree branch with needles, coloring materials, scissors, glue

BACKGROUND:

All trees have parts with specialized functions. The roots hold the tree in place and take water and nutrients from the soil. The trunk holds the tree up. The branches support the leaves or needles. The leaves or needles take in and release air and make food for the tree.

In Oregon, we have trees that lose their leaves each fall. These trees are called broadleaved deciduous or deciduous trees. We also have a number of trees with needles and cones. These trees are called coniferous trees. Most coniferous trees are green all year long. In Oregon we have a small number of trees that have broad leaves and stay green all year long. These trees are called broadleaved evergreen trees.

SUGGESTED PROCEDURE:

1. Review: Trees are living things and grow from seeds.
2. Using **STUDENT ACTIVITY PAGE #2**, describe the function of the following tree parts: roots, trunk, and branches. Have students correctly label the tree parts.
3. Have students examine your tree branch with leaves and your tree branch with needles. Determine if the tree on **STUDENT ACTIVITY PAGE #2** has leaves or needles on its branches.
4. Have students add other things to the picture that they might find in a forest (grass, mountains, sky, sun, plants, animals and maybe themselves!)

EXTENDED LEARNING ACTIVITIES:

- Act out "Build A Tree" — from Ranger Rick's Naturescope "Trees Are Terrific."
- Build a tree in your classroom. Use string or yarn for roots, rough cardboard for bark and tissue paper for leaves.
- Introduce these terms and definitions: broadleaved deciduous or deciduous, coniferous, broadleaved evergreen.
- Using your tree collection, separate trees into the above categories.



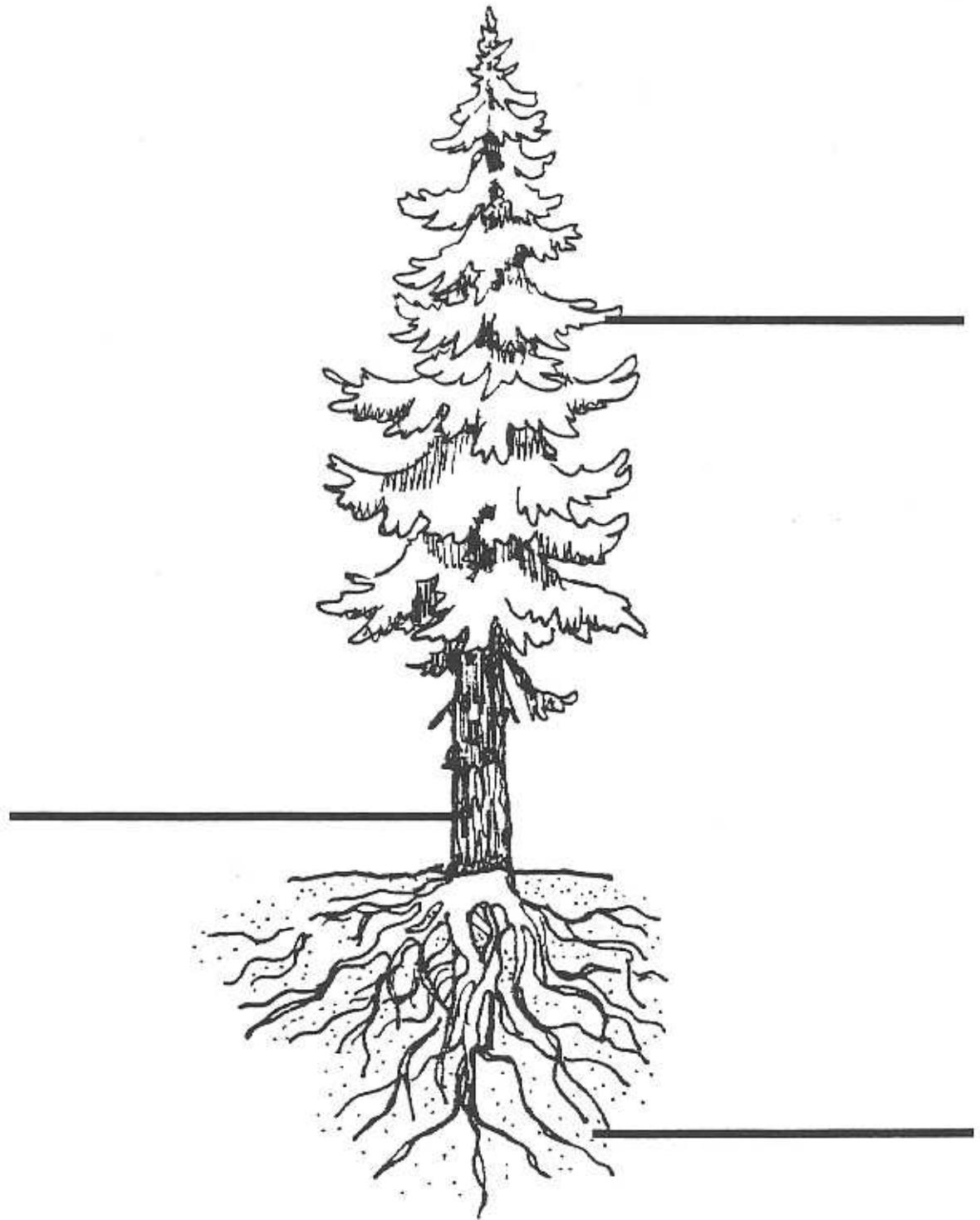
Can you label these tree parts?
Cut and paste your answers.

roots

trunk

branches

(cut here)



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Activity 3 - Primary

GOAL:

To understand the process of photosynthesis.

OBJECTIVES:

1. List the elements trees need to make food.
2. Explain the function of each tree part as it relates to the process of photosynthesis.

VOCABULARY:

nutrients, soil, water, air, sun, sap. (For advanced learners: chlorophyll, photosynthesis, carbon dioxide, CO_2 , oxygen, O_2 .)

MATERIALS:

coloring materials, celery, red food coloring, large leaves, magnifying glass

BACKGROUND:

Like all living things, trees need food. Trees make their own food through a process called photosynthesis. The tree roots pull water and nutrients from the soil. This mixture is pulled up the trunk of the tree out to the branches, then to the leaves or needles of the tree.

The leaves contain chlorophyll. The chlorophyll uses the air (carbon dioxide, CO_2) which the leaves absorb through tiny holes. The leaves also release the oxygen, (O_2), into the atmosphere.

Sunlight is the energy source for the food making process. The leaves or needles soak up sunlight and activate the chlorophyll and the tree makes sap in its leaves or needles. The sap is then carried down the tree through the inner bark, all the way to the roots.

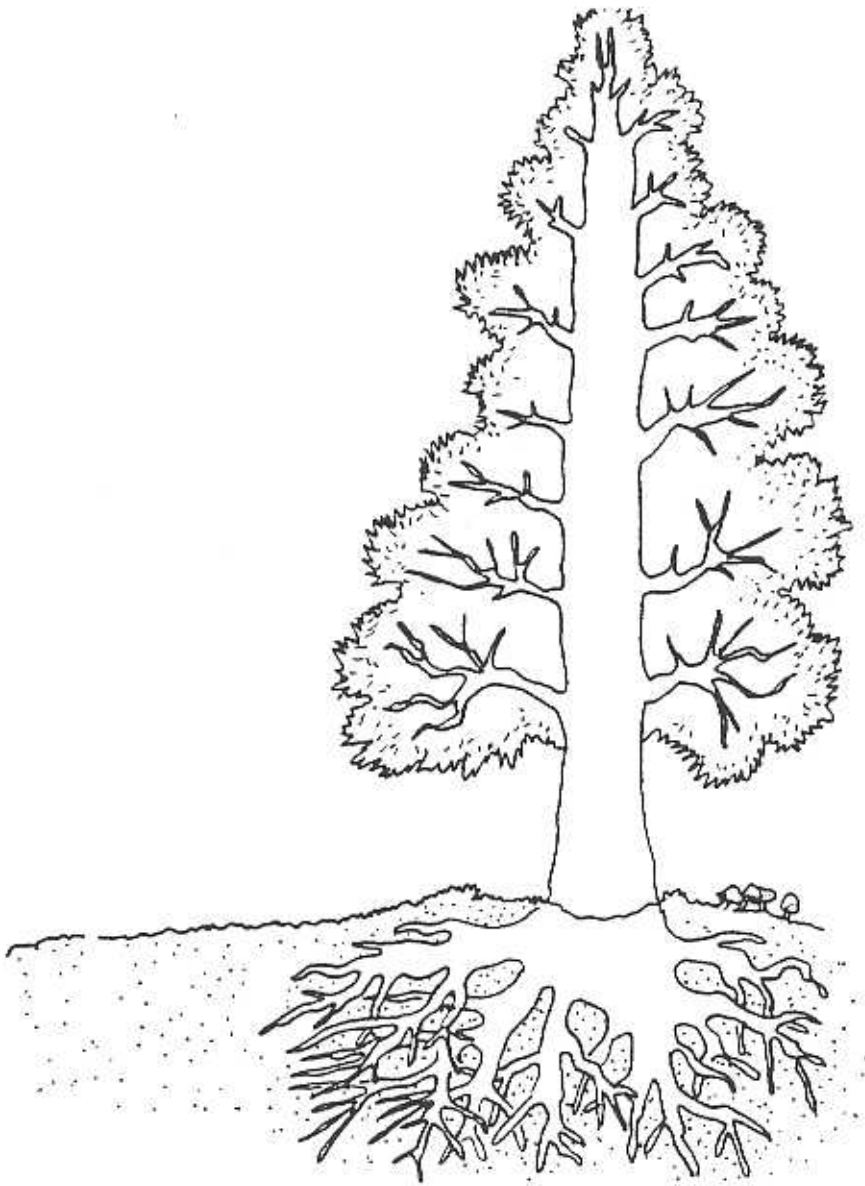
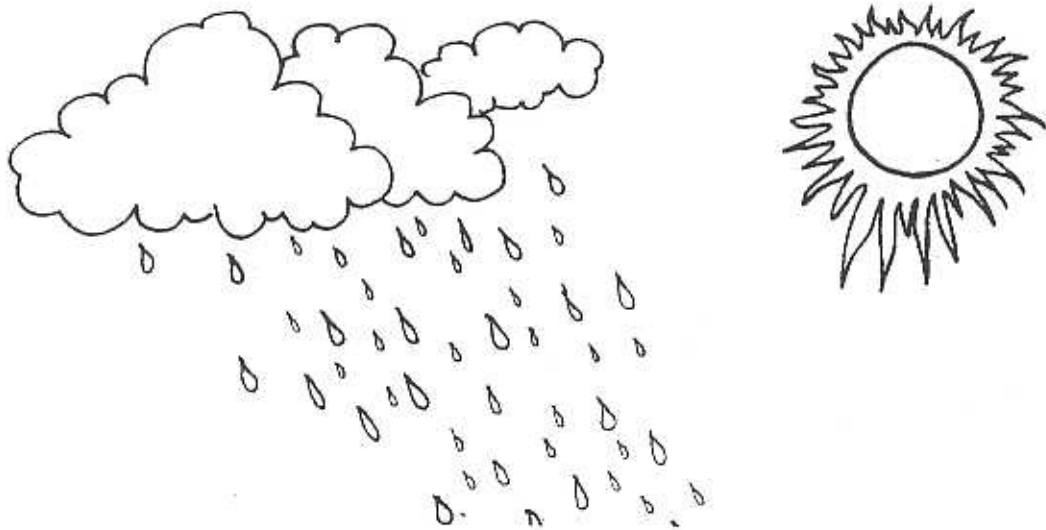
SUGGESTED PROCEDURE:

1. Review: Trees are living things and all living things need food. Trees have special parts that help them make food. Review: roots, trunk, branches, leaves, needles.
2. Ask students how they think trees get their food. List the four elements trees need to make food (air, water, soil, sun). Using STUDENT ACTIVITY PAGE #3, have students write the four elements needed to make food next to the appropriate part of the picture.
3. Using STUDENT ACTIVITY PAGE #3, describe the process of photosynthesis. Have students color as follows:
 - Yellow — the part of the tree that takes in the water and the nutrients from the soil.
 - Brown — the part of the tree that carries the water.
 - Green — the part of the tree that makes the food.

EXTENDED LEARNING ACTIVITIES:

- Demonstrate how plants can soak up water. Place a stalk of celery into a clear container partially filled with water and red food coloring. Have students observe the phenomena of the celery absorbing the red water and changing color.
- Use a magnifying lens and have students try to locate tiny air holes in large leaves.





Name _____

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Activity 4 & 5 - Primary

GOAL:

To increase awareness and appreciation for how people and wildlife rely on trees.

VOCABULARY:

wildlife, products, resource, reduce, reuse, recycle

OBJECTIVES:

1. Describe benefits that are provided by trees.
2. Illustrate how people use trees.
3. Illustrate how wildlife use trees.

MATERIALS:

magazines, scissors

BACKGROUND:

Trees are beneficial to both people and wildlife. When it rains, tree roots and overhanging branches help keep soil in place. This keeps streams and rivers cleaner. Trees and clearings between groups of trees provide food and shelter for animals. Trees in the forest provide us with places to picnic, hike, fish, hunt, ski and camp.

People around the world use trees as a resource. Wood makes cheerful campfires and can heat our homes. Houses, schools and other buildings often are made from wood. In our homes and schools we find furniture, toys, games, books, pencils and a multitude of other products.

SUGGESTED PROCEDURE:

1. Define resource and wildlife. Brainstorm ways that wildlife use trees as a resource.
2. Define product. Brainstorm ways that people use products from trees as resources.
3. If students do not mention that paper is a tree resource, add it to the list of products.
4. Using magazines (a tree resource), have students create two collages on STUDENT ACTIVITY PAGE #4 and STUDENT ACTIVITY PAGE #5. PAGE #4 will illustrate wildlife and PAGE #5 will illustrate tree products.
5. In the creation of the collage, the students reused the resource of paper. Discuss other ways to reuse, reduce and recycle products.

EXTENDED LEARNING ACTIVITIES:

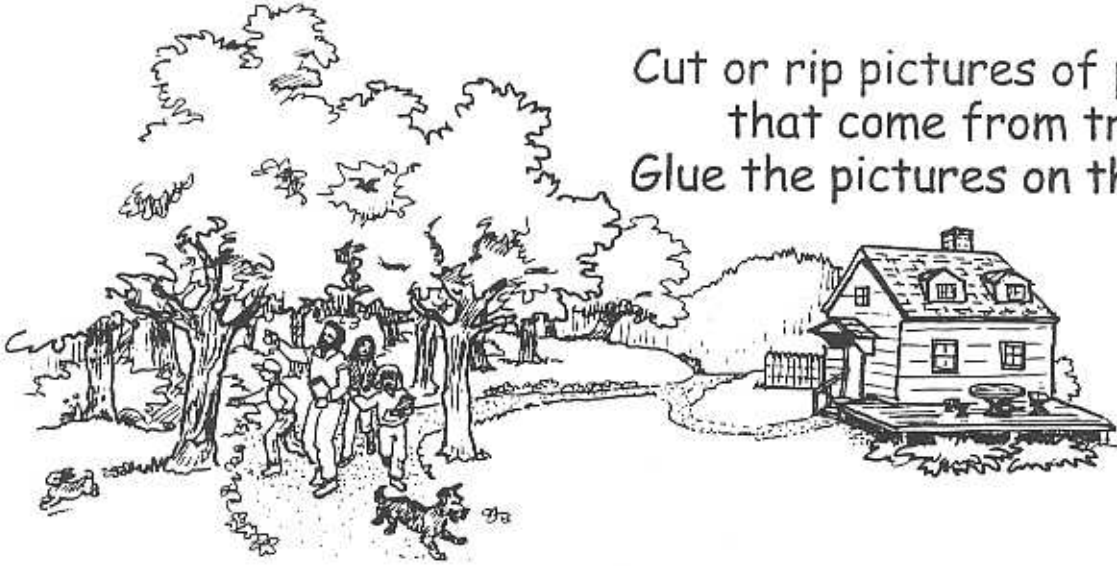
- Have students save all their waste paper for one week. Measure and weigh the paper. Investigate how much space this paper would fill in a landfill. Instead of a landfill, where should this paper go?
- Develop a classroom plan to increase reuse, reduction and recycling of all classroom resources.
- Make a list of classroom items. On a chart, determine the raw material that produced each (wood, plastic, steel, etc.) Determine which items could be recycled.
- Ask your Talk About Trees facilitator if he or she can visit your classroom and make paper with your students.



Cut or rip pictures of animals that use trees in Oregon's forests. Glue the pictures on the paper.



Cut or rip pictures of products
that come from trees.
Glue the pictures on the paper.



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Activity 6 - Primary

GOAL:

To increase awareness of the work involved in renewing a forest.

VOCABULARY:

seedling, forester

OBJECTIVES:

1. Illustrate how people and nature work together.
2. Demonstrate the forest's renewing cycle.

MATERIALS:

coloring materials, scissors, brads

BACKGROUND:

The US government owns most of Oregon's forests. Some of this land is reserved as parks and wilderness areas. We also have many state and local parks. These areas are set aside for people to visit and enjoy. These areas also provide habitat for wildlife. Rangers work in parks to help keep them clean and safe for the public.

Families or companies own other forests. These forests, along with some national, state and county forests, may be growing trees to make wood products. When trees on these lands are harvested, state law mandates that they be replanted. Foresters work in private and government forests, ensuring that trees are grown in the best possible environment, while giving attention to the other elements of the forest, such as wildlife, fish, soil and watersheds.

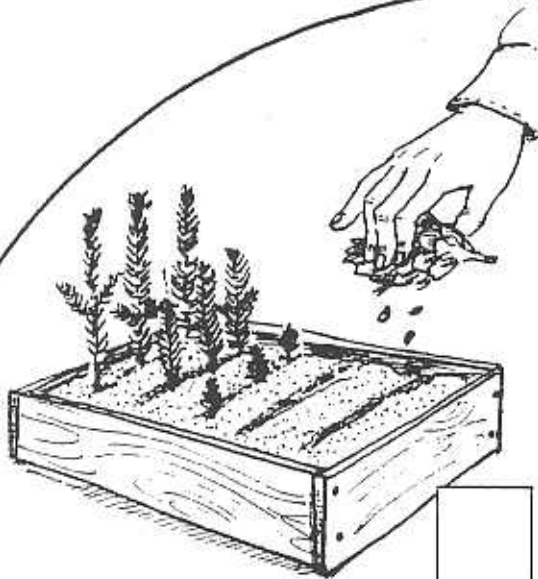
To ensure that the healthiest trees are replanted, foresters grow seedlings in nurseries. These trees are nurtured until they are mature enough to be planted in the forest.

SUGGESTED PROCEDURE:

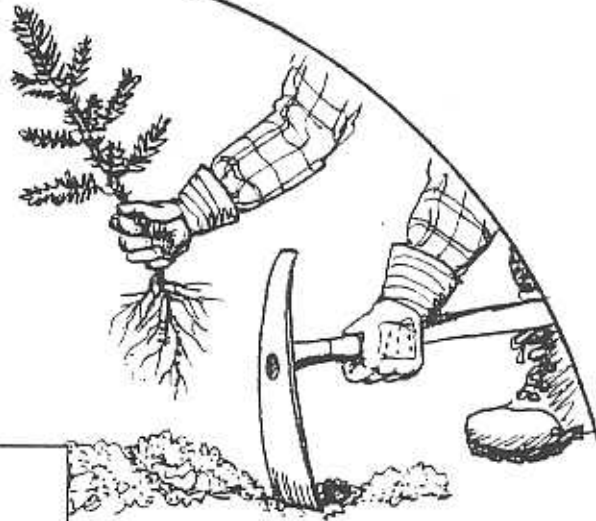
1. Review how wildlife and people use trees and forests.
2. As a group, read the captions under the pictures in STUDENT ACTIVITY PAGE #6. Discuss each activity, defining seedling and forester. Determine which activity takes place first, second, third and fourth. Number the pictures in the boxes provided. Color the pictures. Cut out the circle. Insert a brad in the center of the circle. Attach to another piece of paper. This is the sixth and final page for student's Tree Books.
3. Have student assemble their Tree Books. Pages can be stapled, hole-punched or spiral bound.

EXTENDED LEARNING ACTIVITIES:

- Research other forest related workers and the tools and machines they use.
- Invite a forester to come to your class to talk about growing trees.
- Plant Douglas-fir seeds. Record the progress of their growth in a class journal.
- "Adopt" a tree on your school grounds. Describe it in a journal and record the changes throughout the school year. Using a tree identification book, learn more about your tree.
- If your school grounds or local park need a new tree, plan a tree planting ceremony.
- Make a list of classroom items. On a chart, determine the raw material that produced each (wood, plastic, steel, etc.) Determine which items could be recycled.



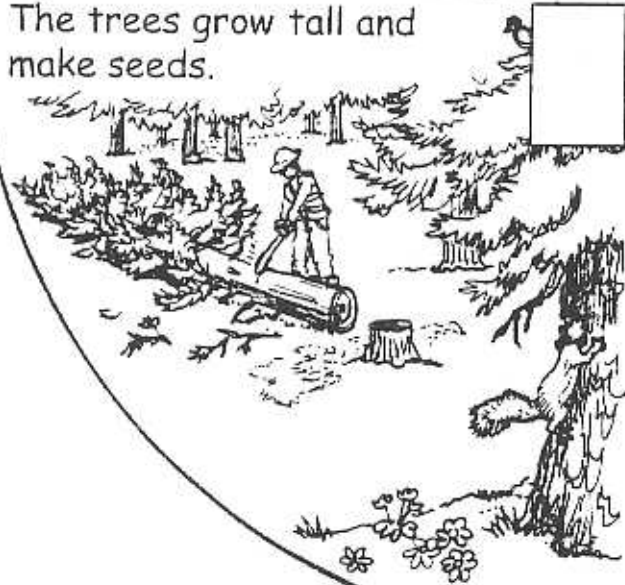
Seeds become seedlings.



Seedlings renew the forest.



The trees grow tall and make seeds.



Young forests are cared for.



My Tree Book

Name _____

