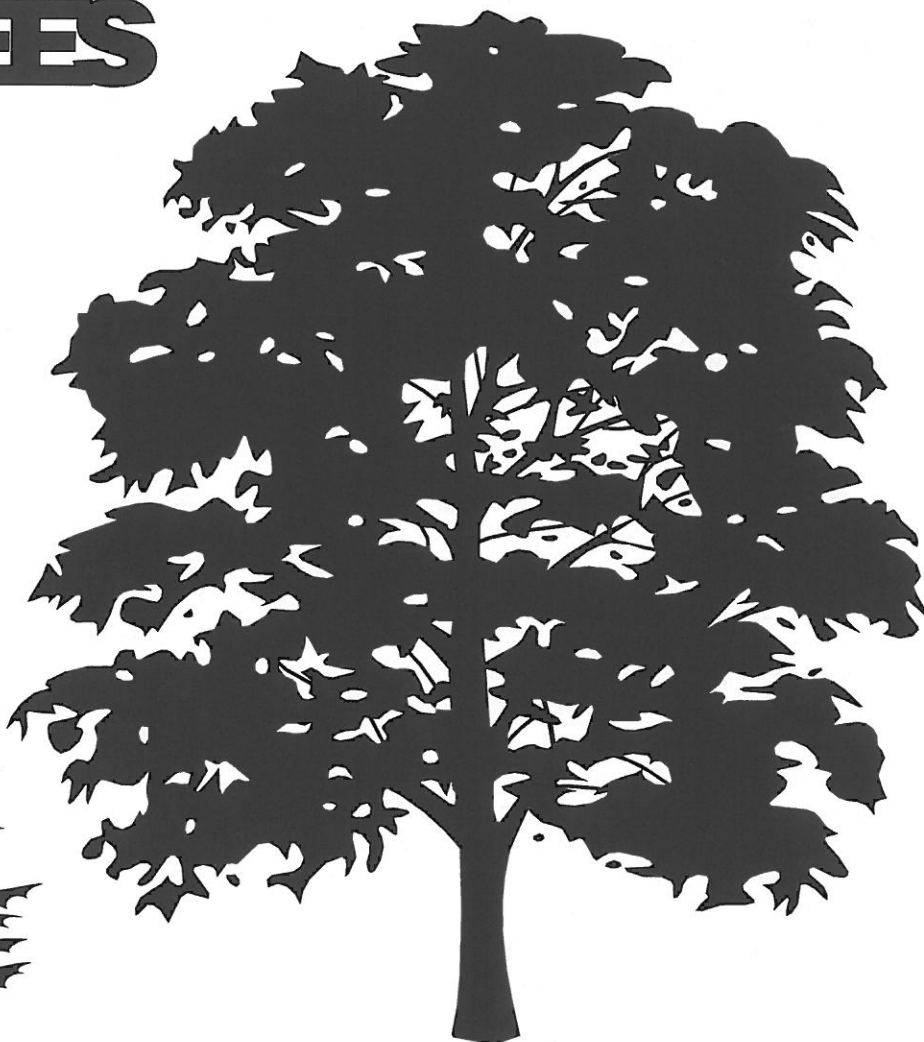




4-H FORESTRY PROJECT INTRODUCING YOURSELF TO TREES

*Prepared by Deborah B. Hill
Extension Specialist, Forestry*



4-H FORESTRY PROJECT

INTRODUCING YOURSELF TO TREES

Trees

*I think that I shall never see
A poem lovely as a tree*

*A tree whose hungry mouth is pressed
Against the earth's sweet flowing breast;*

*A tree that looks at God all day
And lifts her leafy arms to pray;*

*A tree that may in summer wear
A nest of robins in her hair;*

*Upon whose bosom snow has lain,
Who intimately lives with rain.*

*Poems are made by fools like me,
But only God can make a tree.*

—Joyce Kilmer

Suppose you woke up tomorrow and there were no trees or products from trees. What would be missing? You might be surprised to learn how many interesting and useful things in your life come from one of our most valuable natural resources—the forest. Trees are very important to us. They provide the oxygen that we breathe and clean water. They keep our soil from washing away. Trees give us a more comfortable climate and provide shade in the summertime. They contribute homes and food for wildlife, and they supply us with food in the form of fruits and nuts. Also, many products we use are made from the wood of trees. People have depended on the forests for food, shelter, clothing, and medicine since the beginning of recorded time. You are as dependent on the forests today as the pilgrims were when they established our country.

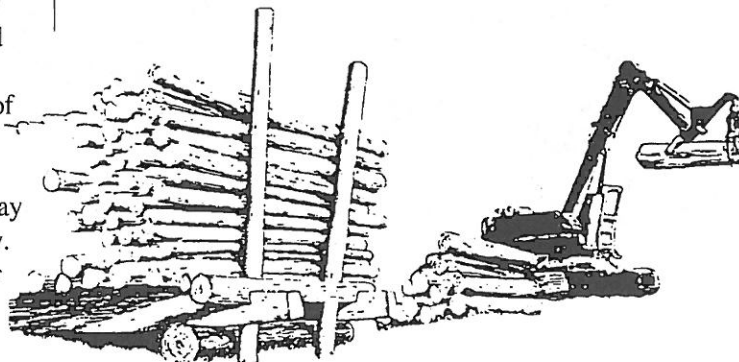
Whether you are a boy or a girl, from the city or

country, you'll find interesting and exciting activities in 4-H Forestry. You'll learn how trees provide recreation, natural beauty, environmental benefits, food, medicine, and thousands of wood products. You'll learn how to identify trees and which trees are the most valuable for different purposes and products. You'll learn why forests are called our most important renewable natural resource. You'll find out how to become a 4-H Tree Farmer. You might even decide to seek a career in forest resources or another natural resources field. Your involvement in 4-H Forestry is limited only by your imagination.

Have you heard the old saying, "You can't see the forest for the trees"? A forest is more than just a group of trees. A forest is a living community of trees and other plants, microorganisms and other animals. Of course a forest would not be a forest without the trees, but we certainly would be wrong if we thought that only trees make up a forest.

A forest is a place of endless activity, but you might have to look closely and quietly to see it. A never-ending cycle of birth, growth, maturity, death, decay, and rebirth is in progress every day in the forest. Grasses, shrubs, herbaceous plants, trees, birds, amphibians, reptiles, fish, invertebrates, and mammals are born, live, and die in the forest community.

As the human population increases every year, more and more pressure is placed on our forests. Forests are cleared to make room for houses, subdivisions, parking lots, highways, shopping centers, industries, airports, reservoirs, and waterways. The



remaining forests are expected to provide all of the timber, wildlife, non-timber forest products, and recreation opportunities our increasing population demands.

The Renewable Resource

As wood products are used in more ways by more people, it is our responsibility to stabilize and even increase the production of timber from our forests. One great advantage of wood as a raw material is that it is renewable. With appropriate and accurate technical information, forest landowners can grow continuous crops of trees. By practicing sound forest resource management, we can grow successive crops and keep up the supply of wood products and other forest community values forever.

The role of the forest in our ecosystems is to protect against soil erosion, provide clean water, and produce food (and sometimes shelter) for us and other animals. Forests also produce oxygen, which all



creatures need for survival. But the demand for wood products (like lumber for floors and houses, toilet paper, books, pencils, and furniture) gives trees an economic value too. This encourages people to grow trees as a crop, just as the use of cloth makes growing cotton a practical enterprise for the farmer.

Balancing the forest's role in our ecosystems with its role in our economy requires appropriate forest management. Forests can be managed for many different purposes, and some forests can be managed for more than one purpose at a time. We have to cut some forests or parts of forests to provide us with the wood products on which we rely. Yet, we need to leave other forests alone or minimize cutting in them to provide habitat for animals, especially endangered species. Some forests grow in such difficult places to reach that they should simply be left alone.

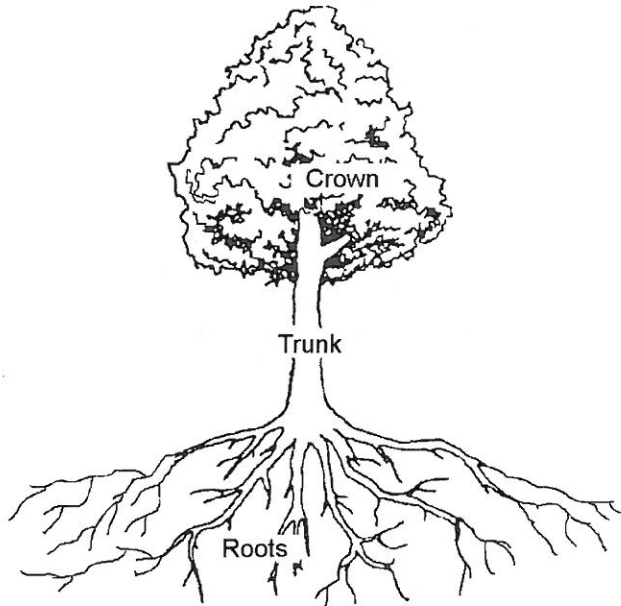
Many people do not like the idea of cutting down trees for the purpose of making lumber, pulp, and other items. What should our viewpoint be toward this? President Theodore Roosevelt, one of the first people to be concerned about environmental conservation, stated, "Conservation of forests means wise use." To **conserve** something means "to keep from harm, decay or loss for future use." So to conserve our forests means to manage them in such a way that we will always have forests for the many benefits they provide—to us and to all life on earth.

How a Tree Grows

A forest contains many different kinds of trees, but all trees have roots, a trunk, and a crown.

The roots anchor the tree in the soil and keep it from falling over. The roots also take up nutrients and water from the soil to be used in making food.

The trunk is the part of the tree that provides most of the wood products we use. The trunk holds up the



crown and acts as a passageway for the water and nutrients that flow up and down the tree. The trunk contains many vessels for transporting water and nutrients to the crown from the roots and transporting manufactured food from the crown to other parts of the tree.

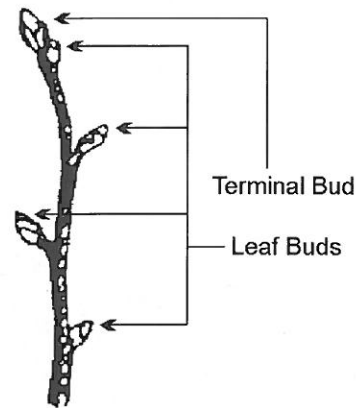
The crown is made up of branches, twigs, and leaves. The leaves are small “factories” that use nutrients and water from the roots and carbon dioxide from the air to produce food for the tree. Sunlight interacts with chlorophyll to provide the energy source for these factories. This process is called **photosynthesis**. Green plants are the only living things that create their own food. For this reason, plants are the first link of the food chain and the living things on which all other creatures depend.

Only three small parts of a tree actually grow on a yearly basis: the root tips, the cambium layer, and the buds.

The **root tips** grow from the tree into the soil both vertically and horizontally in search of water and nutrients. Roots provide support for the tree as it gets taller. Most of the roots that provide water and nutrients for growth (“feeder” roots) are found in the top 6 inches of soil.

The **cambium layer** is a layer of cells just inside the bark in all parts of the tree—the roots, trunk, and branches. You can’t really see this layer of cells between the bark and the wood, but it is what makes the tree increase in diameter. New wood cells are produced on the inside of the cambium layer and new bark cells on the outside of the cambium layer. This explains why the bark of older trees is rough and furrowed or scaly: the old bark does not grow, so it has to crack and break apart as the new bark is produced beneath it.

Buds are the other growth area of a tree. The main stem of the tree and the branches grow in height and length through **terminal buds**. **Leaf buds** grow into leaves. **Flower buds** produce flowers, which later produce fruit and seed.



Variety and Names of Trees

The United States is a big country with areas that have mountains, valleys, and plains. Climate, depending on the season, ranges from extremely cold in the northern portions to extremely warm in the southern areas. Annual rainfall is heavy in some areas and scarce in others. Because of this wide variety of climate and geography, the United States has more than a thousand tree species. The great variety of trees astonished early settlers, who were accustomed to only about 100 species in the lands from which they came.

Learn to recognize and name the different forest trees in Kentucky (see Extension publications FOR-1, *Kentucky Forest Trees: How to Know Them* and FOR-65, *Tree Tips*). Trees can be identified by their leaves, bark, and/or fruit and seed. Like lots of other living creatures, trees have their own names and individual characteristics that help us distinguish one kind from another. The following are some simple ways to identify trees.

Type of Tree

There are two major divisions of trees—**conifers** (cone-bearing or evergreen trees) and **broadleaved** (deciduous) trees. Conifers all have leaves that look like needles (pines, spruces, firs) or scales (junipers, cedars). Conifers are attractive in our environment

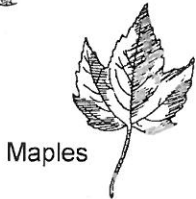
Broadleaves



Hickories

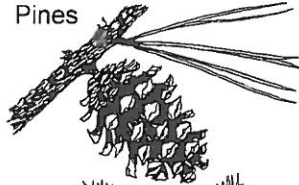


Oaks



Maples

Conifers



Pines



Baldcypress



Redcedar

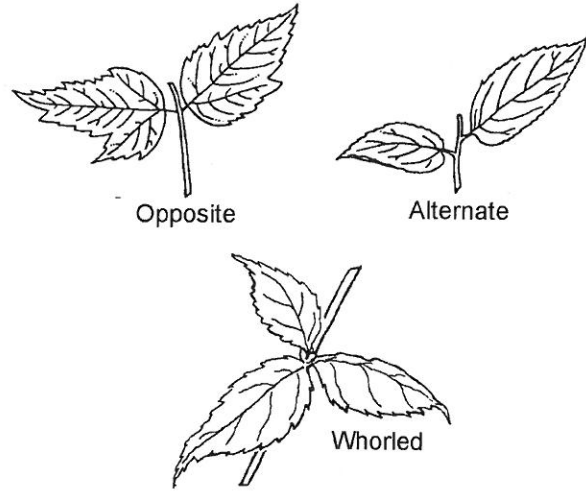
because most of them stay green all year. This is because any particular year of growth produces needles that stay on the tree more than one year (usually two or three years), so even though they lose needles every year, other needles stay on. In Kentucky, only about 10 percent of our forest trees are conifers.

Broadleaved trees generally lose their leaves every autumn. These trees go through the changes of flowering and leafing out; changing color; forming fruits, nuts, and seeds; and dropping leaves before winter. There may be 50 or more species of broadleaved trees in Kentucky, and they comprise about 90 percent of our forests.

Conifers are usually distinguished from one another by their bark; the number of needles in each bundle (**fascicle**); the way the needles are arranged on the twigs; and cone size, shape, and color. Broadleaved trees are most commonly identified by their leaves.

Leaf Arrangement

Leaves occur on twigs in one of three ways. The two most common ways are opposite leaf arrangement and alternate leaf arrangement.



In **opposite leaf arrangement**, leaves occur opposite one another in pairs along the twig. The tree's twigs are also usually opposite one another on the branches, and its branches are opposite one another. Five types of trees in Kentucky have opposite leaf arrangement. They are:

- Dogwoods
- Ashes
- Maples
- Paulownia
- Buckeyes (or Horse chestnuts)

An easy way to remember these tree types is by the letters **D, A, M, P (DAMP)** and **BUCK** for buckeye or **HORSE** for horse chestnut. If a tree does not belong to one of these groups, it does not have opposite leaf arrangement. If you find a tree that does have opposite leaf arrangement, it has to be one of these tree types. Simple, isn't it?

A much larger group of trees have **alternate leaf arrangement**. In this type of arrangement, leaves do not occur in pairs. Instead, a leaf occurs on one side of the twig and another leaf occurs on the other side some distance down the twig.

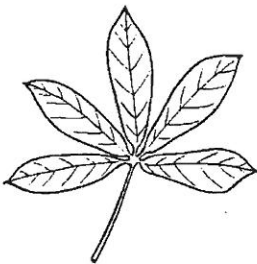
The third type of leaf arrangement is **whorled**. This is when several leaves come out—usually from the tip of a twig—in a circle, looking a little like a palmately compound leaf (explained below). A catalpa tree has a whorled leaf arrangement.

Leaf Composition

A leaf is either **simple**, which means there is only one leaf per stem (or petiole) attached to the twig, or **compound**, which means there are several units, or leaflets, per petiole. There are two types of compound leaves. **Pinnately compound** leaves are paired along the leaf stem with or without a leaflet at the tip so they look a bit like the barbs on a feather (for example, ash). **Palmately compound** leaves spread out in a group at one end of the leaf stem like the fingers on the palm of your hand (for example, buckeye). Sometimes, usually only when they are pinnately compound, leaves can be doubly compound (for example, Kentucky coffeetree).



Simple



Palmately Compound



Pinnately Compound

Leaf Characteristics

Leaf margin (edge): The edges of leaves often can help you identify trees. There are four margin types for you to learn:



Margin Entire



Lobed



Toothed and Serrate



• **Entire**—the margin of the leaf is smooth, with no teeth or indentions. Example: dogwood.

• **Serrate**—the margin of the leaf has a jagged edge like a saw. Example: sweet birch.

• **Doubly-serrate**—the margin of the leaf has both big and little sawtooth indentations. Example: Eastern hophornbeam.

• **Toothed**—the margin of the leaf has big teeth, bigger than on a serrated leaf. Example: beech.

Leaf lobes: Many tree species have leaves with distinctive shapes. This usually means the leaf shape is indented into lobes. The two main types of lobes are pinnate and palmate, like the leaf arrangement terms.

Pinnate means the cuts occur regularly along both sides of the long axis of the leaf. Example: red oak.

Palmate means the cuts occur in a more shaped pattern, though there may be even numbers of indentations on each side. Example: sweet gum.

Leaf shape: Many leaves look very much alike, but some general shapes of leaves (other than the



Ovate



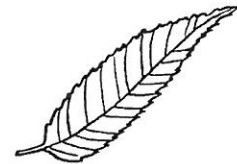
Heart



Linear



Triangular



Lanceolate

lobed varieties) help you tell one from another.

• **Ovate**—this shape is sort of egg-shaped or oval and is very popular. Example: persimmon.

• **Heart**—this shape needs no explanation. Example: redbud.

• **Linear**—this shape is usually long and slender, with little variation in width along its length. Example: willow.

• **Triangular**—this shape also needs no explanation. Example: cottonwood.

• **Lanceolate**—this shape looks like a spearhead, wider at the base and narrower at the tip, but generally long and narrow. Example: black cherry.

So if you find a branch of tree leaves, look to see if the leaves are simple or compound; opposite or alternate; lobed or toothed or oddly shaped. You should be able to identify it easily with some help from a guide book.

Learn to identify trees by name; each one you learn becomes a friend.

4-H Forestry Activities

As a 4-H member involved in forestry, you are challenged to complete several 4-H forestry activities each year. The number you complete depends on your interest and the number of years you have been involved in the 4-H forestry project.

One of these activities could double as a forestry fair exhibit. See the section in this publication on Kentucky State Fair exhibits. The following pages outline activities you can complete. For many of the activities, there are *options* you can do in your own project. For some activities, there are *requirements*. When something is *required*, it will be in **bold type**, and if the project is not done according to the requirements, it will NOT be eligible for competition.

4-H Forestry Activity No. 1: Leaf Collection

Trees are like people: they all have first and last names and various characteristics that help us tell them apart from each other. Good collections of plant specimen mounts for tree identification help club members get acquainted and stay acquainted with trees and enable members to help others learn to identify trees. They provide a good visual for discussion of trees and what they do for us.

Use the following five steps to make a collection of high quality tree identification mounts.

1. Gather good materials.

Collect fully grown leaves in the early part of the summer. New spring leaves are not representative of size, and they often darken in the press because of their high moisture content. If collecting is delayed until late summer, it is more difficult to find leaves not damaged by the wind and sun, insects, or diseases. Collect twigs of deciduous forest tree species while the trees are bare of leaves. Flowers should be fully developed in their prime, and fruits or seeds should be mature or nearly so.

Select materials that look average or typical for the species. Avoid choosing damaged leaves.

2. Keep collected items fresh before pressing.

If you go collecting before you have a press, one of these methods will help keep your materials in acceptable condition until they can be pressed:

A. Take one or two magazines with you when collecting. Carefully place specimens in the magazine(s) until you get back to the press. This method works best if you cut two pieces of stiff cardboard the same size as your magazine(s). Keep the magazine(s) between the pieces of cardboard. Use two or three strong rubber bands to hold the packet together.

B. Make a temporary field press as follows: Cut several pieces of cardboard into 9-inch by 12-inch pieces. Place paper towels or sheets of newspaper between the cardboard pieces. Put collected specimens between the towels or newspaper. Hold these together with two or three strong rubber bands.

3. Press specimens to retain fresh, natural appearance.

The first condition for success in this step is to have a satisfactory press. The easiest press to make is the temporary field press described above. Use corrugated cardboard and cut the 9-inch by 12-inch pieces so that all corrugations run parallel to the 9-inch (shorter) side. If possible, get enough blotting paper to have at least one sheet for each plant expected in the press at any time. Put the plant specimens between sheets of newspaper; then put a blotter between each two plants. Insert a piece of cardboard every third or fourth plant. Use rubber bands (or straps with rubber sections inserted) to hold the press packet together. When the press is loaded, keep it dry and warm with air circulation around it. Put it on a hard surface and place about 50 pounds of weight on it. This weight can be a box of books, rocks, sand, bricks, or metal scrap.

4. Mount the pressed specimens securely and attractively.

Leaves should be mounted on 8½-inch by 11-inch paper or cardboard. The stiffer or heavier the paper is, the easier it is to keep the pressed leaves flat. **Place only one entire leaf on each sheet.** If trees have compound leaves, make sure you have the whole leaf. **Sassafras and mulberry** are exceptions to the one-leaf rule, because they normally have more than one leaf shape and **all shapes should be represented.** **Print the following information in the lower right hand corner of the sheet:**

- **Common name of the tree** (for example, white oak)
- **Scientific name of the tree** (for example, *Quercus alba* or Quercus alba)

- **Most common purpose for this species** (for example, furniture, wildlife food)
- **County where collected**
- **Date collected (month/year)**
- **Tree habitat (where growing)** (for example, ridgetop, riverbank, hillside)

One of the most effective methods of mounting the pressed specimens to the cards is to spread a milk-based (casein) glue (Elmer's Glue, for example) on the back, or underside, of each specimen. Place the specimen (glued-surface down) in the exact position desired on the mounting card. Lay a sheet of wax paper over it, and then place a loosely filled 12-pound bag of sand so that the sand bag can spread over the entire specimen. Let the sand bag remain on the mount until the glue has had time to dry.

5. Protect the mounted specimens against breakage, insects, or other damage.

After you have collected, pressed, and mounted some attractive tree identification aids, you'll want to protect them from damage—scuffing and breaking, insect damage, and discoloration from light.

The best way to protect your specimens is to use acetate or cellophane sheet protectors for the mounting sheets. Often two mounts can be placed back to back in one cover. Not quite so satisfactory is plastic kitchen wrap to cover the front of the mount. The wrap can be taped down on the back of the mounting card if it will not stick to the card.

A stiff-backed three-ring notebook cover offers the best protection against bending and crushing. However, using flexible three-ring covers or home-made covers and assembling mounts with string, leather thongs, or metal rings between covers made of heavy paper or thin cardboard is also acceptable for exhibits. A good collection deserves a good protective cover.

Make sure you have the correct number of tree leaf specimens for the project number you are entering for competition.

NOTE: The purpose of leaf collections is to familiarize 4-H'ers with the diversity of Kentucky's forests. FOR-1, the tree ID book, lists 87 species. The second year collection, therefore should be 20 new species different from the first year collection of 10. Using leaves from the first year collection will be grounds for disqualifying the collection for awards.

4-H Forestry Activity No. 2 Leaf Prints

Making leaf prints is a fascinating pastime for anyone interested in trees. It is also a good method of making a permanent collection of leaves. All you need is a stamp pad, (the larger the better), white paper (8½ x 11 regular bond), newspapers, and your leaves. Press the leaves for an hour in a press as described in Activity No. 1. This flattens them, making them easier to print. Then place the leaf *under-surface down* on the stamp pad. Cover the leaf with one thickness of newspaper, and rub it firmly to get ink on the margin, stem, and veins. If the leaf is larger than the stamp pad, move the leaf around to get ink over the entire under-surface. Place only one inked leaf on each paper. Cover the leaf with one thickness of clean paper, and rub thoroughly. Be sure to rub the whole leaf. Do not let the leaf slip or you will spoil the print. Remove the leaf from your paper, and the print remains.

To add creativity and beauty to your leaf prints, try the following method. Mix oil paints to match the colors of the leaf you want to print. Apply these colors to the underside of the leaf, copying the exact colors from the brighter upper side. Work fast so that the first colors put on do not dry before the last are applied. Then place the leaf, vein- or painted-side down, on a sheet of white paper with another sheet of paper on top of it. Hold the leaf very still and rub it hard with your fingers. When the upper sheet of paper and the leaf are removed, a copy of the form and colors of the original leaf is on your paper.

Place your prints (**one print per page**) in a flexible two- or three-ring notebook or cover. **Print the following information in the lower right hand corner of each leaf print page:**

- **Common name of the tree** (for example, white oak)
- **Scientific name of the tree** (for example, *Quercus alba* or Quercus alba)
- **Most common purpose for this species** (for example, furniture, wildlife food)
- **County where collected**
- **Date collected (month/year)**
- **Tree habitat (where growing)** (for example, ridgetop, riverbank, hillside)

4-H Forestry Activity No. 3: Branch, Leaf, and Fruit/Seed Display

Project Materials:

- a 22-inch by 28-inch piece of poster board
- a 2-foot by 3-foot piece of stiff cardboard, fiberboard, or thin ($\frac{1}{4}$ -inch thick) plywood
- a black crayon or felt-tip marker
- wood glue
- an old magazine or catalog; newspaper
- a handsaw
- a small hatchet or heavy knife
- coarse, medium, and fine sandpaper
- 9 feet of $\frac{3}{4}$ -inch molding
- leaves, fruits (pine cones, sweet gum balls) or seeds (acorns, hickory nuts), and a section of branch from five of the *major* forest tree species of Kentucky.

Instructions:

1. Get help locating an area in which you can collect leaf, seed, and stem samples for your display. Make sure you have the landowner's permission to collect samples.
2. Collect one to three leaves and fruits or seeds from each tree you want to include in your exhibit. Refer to a tree guide to make sure which trees have compound leaves.
3. You should be able to collect 2½-inch or 3-inch diameter sections from large branches of trees. Try to find a larger tree with a 2-inch or 3-inch limb you can reach with your saw. You can remove a limb without killing the tree. Make sure you cut the branch off very close to the larger branch or tree trunk from which it is growing.
4. Cut the sections of wood 4 inches long. Make cuts "A" and "B" as evenly and smoothly as possible.

5. Make cut "C" lengthwise with the hatchet or heavy knife, splitting off about one-third of the section to make a flat surface. This allows the wood sample to lie flat on the board.

6. Make cut "D" at a 30-degree angle to cut "C" to show both the grain of the wood and the bark. The diameter (width) of this section should be 1¾ inches. Soak the freshly cut sections in a solution of one pound of sugar per half gallon of water.

7. Let the sections dry for one week. Smooth all cut surfaces with sandpaper until you can see the grain of the wood clearly. Start sanding with coarse sandpaper, then switch to medium and fine.

8. Make your exhibit board by gluing the white posterboard to one side of the heavy cardboard, fiberboard, or plywood. This gives your exhibit enough strength to hold its shape.

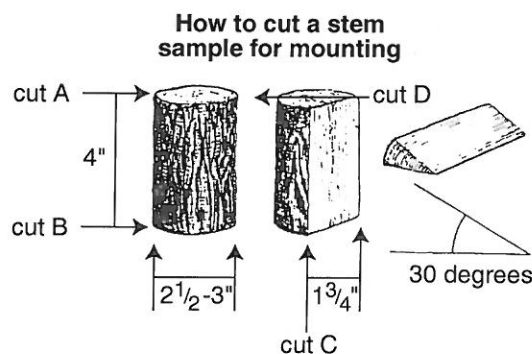
9. Title your exhibit *KNOW YOUR TREES*. Write the title in block letters 1½ inches high, 2 inches from the top of the board.

10. Frame the exhibit with the $\frac{3}{4}$ -inch molding.

11. Place the leaves, fruit, and wood on the board without glue first. Make sure your specimens fit on the board in the proper arrangement.

12. Mount the fruit or seed 1 inch above the wood sections. You will have to split some fruits and seeds in half before mounting them. Pine cones, hickory nuts, and sweet gum balls can be split with a fine-toothed saw or sharp knife. After splitting, place the flat sides against the board. Mount small seeds by putting glue directly on the board and placing the seeds in the glue. Use plenty of glue, and let it dry for several hours.

13. Mount the leaves directly above the fruit or seed. Make sure the leaves have been dried and pressed (see directions in Activity No. 1) before gluing. Put a thin, even coat of glue on the underside of the leaf. Place the leaf on the board and press it



How to cut a fruit sample for mounting



down firmly. Make sure when using pine or cedar you have only one bundle (fascicle) of pine or one scale of cedar and all parts are glued enough to fasten them securely to the board.

14. Write the common name of each tree just below each wood section. The letters should be ½ inch high.

15. Now that your exhibit is complete, get some good use from it. Use it in a visual presentation at a club meeting or at school. You might want to use it as a window display or at a county fair.

16. If possible, have someone take a snapshot of you and your finished exhibit. You might want to include a photograph in your 4-H member's record.

17. If possible, get a local forester to check your exhibit and sign your record sheet when your project has been completed. Clip the record sheet and include it in your current year's record book.

18. Save this project and other materials for future reference as you continue in other 4-H forestry projects.

Glossary of Woods Words

Bole—lower, usable or merchantable portion of the trunk.

Cambium—soft layer of living cells, one row thick, between the inner bark and living wood of the tree. These cells divide and form wood tissue and bark tissue.

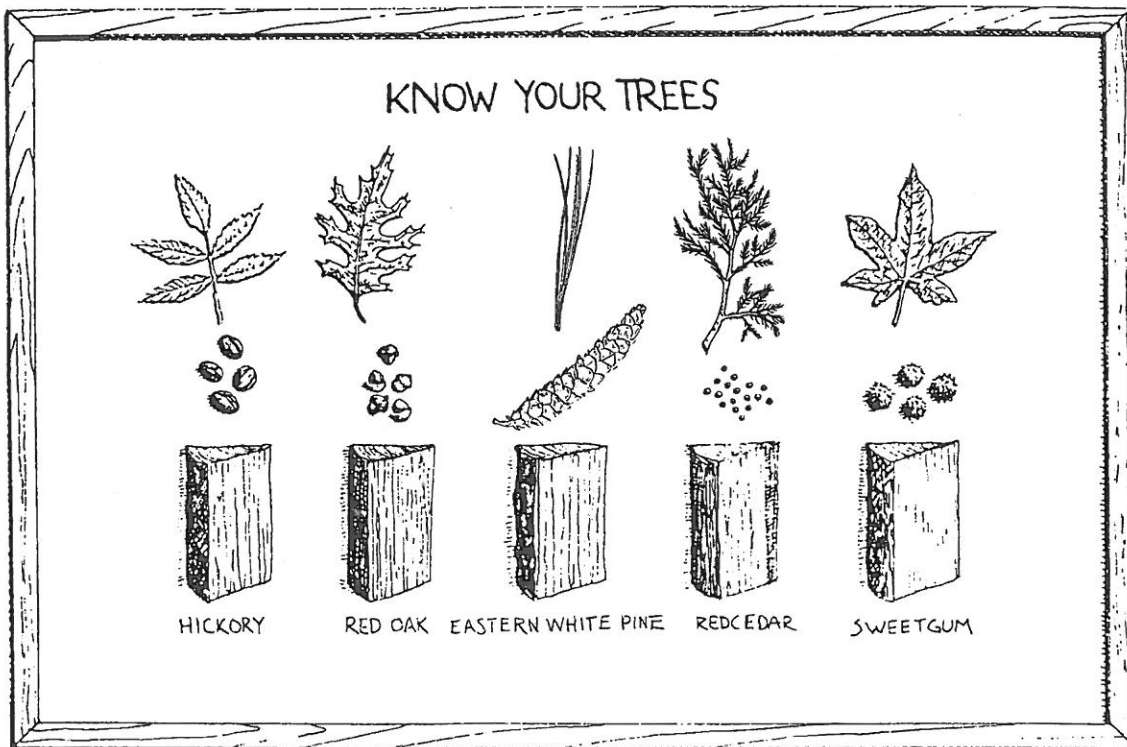
Cord—unit for measuring volume of stacked wood. The standard cord is 4 feet high, 4 feet wide, and 8 feet long.

Crown—upper part of the tree, including the branches with their leaves or needles.

DBH—diameter at breast height. Assumed to be 4½ feet above the average ground line, normally measured outside the bark.

Heartwood—central portion of the trunk of a tree. It is inactive and usually darker and less likely to decay than the outer portion of sapwood.

Photosynthesis—food-making process of a plant in which carbohydrates or sugars are made from carbon



dioxide in the air and water in the soil in the presence of sunlight and chlorophyll (the green pigment of plants).

Reproduction—young trees growing in an area from self-sown seed of older trees in or near the stand. New trees also can be planted or intentionally seeded by people.

Sapling—young tree, usually between 2 and 4 inches in diameter and less than 20 feet tall.

Sapwood—outer, light-colored wood of trees in which certain cells are still alive and serve to conduct water (sap) from the roots to the leaves.

Suppressed tree—small, often unhealthy tree that ultimately dies from lack of light, nutrients, and water. It is overcrowded and overtopped by its neighbors.

Shade tolerance—ability of a tree to grow under shade.

Whorl—group of limbs or leaves growing from the same level of the branch.

Kentucky State Fair 4-H Forestry Exhibit

1. Only one entry per child permitted in the Forestry Section.
2. Exhibitors are **NOT** to exceed the number of specimens listed for each class. If numbers are exceeded, *only the specimens mounted first in the collection up to the maximum will be judged and the entry will NOT be eligible for a blue ribbon or a championship ribbon.*
3. See State Fair Book for complete details.

First Year

Leaf Collection:

Collect **10** leaves representing **10 forest** (not ornamental) trees *native* to Kentucky. Follow mounting instructions in Activity No. 1.

Leaf Print Collection:

Collect and print **10** leaves representing **10 forest** (not ornamental) trees *native* to Kentucky. Follow instructions in Activity No. 2.

Second Year

Leaf Collection:

Collect **20** leaves representing **20 forest** (not ornamental and different from species collected for first year) trees *native* to Kentucky. Follow mounting instructions in Activity No. 1.

NOTE: The purpose of leaf collections is to familiarize 4-H'ers with the diversity of Kentucky's forests. FOR-1, the tree ID book, lists 87 species. The second year collection, therefore should be **20 new species different from the first year collection of 10**. Using leaves from the first year collection will be grounds for disqualifying the collection for awards.

Educational Exhibit:

Develop a creative educational exhibit on some phase of forestry. The exhibit may utilize any visual technique. **The total exhibit is NOT to exceed dimensions of 2 feet by 2 feet or 4 square feet.**

Third Year and Over

Educational Exhibit:

Develop a creative educational exhibit on some phase of forestry. The exhibit may utilize any visual technique. **The total exhibit is not to exceed dimensions of 3 feet by 3 feet or 9 square feet.**

Branch, Leaf, Fruit/Seed Display:

Collect and mount **five** branches, leaves, and fruits or seeds representing **five major forest** (not ornamental) trees *native* to Kentucky. Follow instructions in Activity No. 3.

4-H Project Record for Forestry

Name _____ Date _____

Name of 4-H or project group _____

Age _____ Grade in school _____

- What are the most important things you learned in this project?

- How many project group meetings did you attend? _____

- List educational tours in which your group participated:

- List assistance you gave to other 4-H'ers with their forestry projects:

- List talks and demonstrations given that relate to this project (include radio and television appearances):

<u>Topic</u>	<u>Number in audience</u>	<u>Number of times given on each level</u>
--------------	---------------------------	--

- List awards and recognition received in this project; type of award. (Indicate level.)

- Write a story telling what you did and learned in your forestry project.