

2010 Nebraska State Fair

Department D – Environmental & Earth Sciences (Forestry)

Superintendent-Dennis Adams, Lincoln

GENERAL INFORMATION

The official reference for all forestry projects is The Tree Identification Manual (4-H 332). Other helpful forestry references include Trees of Nebraska (EC 92-1774-X), Leafing Out (4-H431) and Plant a Tree (EC 17-11-80).

Display "boards" must be made from wood or wood composite, e.g. plywood, fiberboard, or masonite, 1/4" to 1/2" thick and no larger than 24" x 24". Display boards may be coated, e.g., painted or varnished, on both sides to prevent warping.

Display "posters" must be made from a material, e.g. foam board or posterboard, that will stand upright without buckling, and be no larger than 24" x 24".

Display "books" must measure no more than 16" x 16".

At least 5 of the 10 samples in Class 2, 3, 4, and 6, Exhibits must be from the list of 60 species described in 4-H 332. If more than 10 samples are included in a display, only the first 10 samples of the current year will be judged. All samples must be from trees, NO shrubs. The 10 samples to be judged must be from 10 different species, e.g. Emerald Queen Maple and Crimson King Maple are varieties of Norway Maple, but both have the same genus and species name, i.e. Acer platanoides.

Remember that other general labeling standards apply, i.e. scientific names are always italicized or underlined. When required, always indicate complete scientific names and common names, even when "variety names" are included. For example, the scientific name of Emerald Queen Maple is Acer platanoides and the common name is Norway maple. "Emerald Queen" may be included as the variety name, but variety names are not required.

Division 320, FORESTRY

CLASS 1 Design-Your-Own Exhibit

Select a topic of special interest to you and prepare an educational exhibit about some aspect of trees, forests or forest products. Examples include displays on paper recycling, forest fire, color and trees, or the importance of forest products. The only requirement is that the display be no larger than 24 inches by 24 inches by 24 inches. You can use photographs, drawings, samples, charts, posters, etc. Include enough information to adequately explain the subject to the viewer. Be as creative as you like.

CLASS 2 Leaf Display

This display should include samples of complete leaves from 10 trees. Include both simple and compound broadleaves, and conifer leaves (needles, scales, etc.) Leaves should be pressed, dried and mounted.

Leaf collection: As much as possible, collect leaves from mature trees. Leaves should be healthy and representative of the average leaves on the tree. Keep in mind that shaded leaves often are much larger than normal.

Separate leaves from the twig with the entire petiole or rachis (if compound) attached. If you must include twig material, as with an eastern red cedar twig where leaves are very small, indicate this on the sample label.

Collect leaves any time after they have reached full size, usually early summer. You also can display leaves collected during fall color change.

You can temporarily store samples in an old magazine while you are collecting, but they should be pressed and dried properly for display. Be sure to have a notebook with you when collecting to keep track of location and other important facts.

Mounting leaves: Use wire, glue, tape, staples or other means to mount the leaves on the board. You also can mount leaves on paper in a notebook. If necessary, seal the leaves in plastic but be sure all their features can be identified.

Labeling leaves: You must have a label for each sample that includes the:

- 1) common name
- 2) scientific name
- 3) leaf type (broadleaf, needle-like, scale-like, awl-like), arrangement for broadleaves (opposite, alternate, whorled) and composition of broadleaves (simple, compound),
- 4) exhibitor's name
- 5) date collected
- 6) where collected (be specific-include county and other relevant information)

The above information must be included. Other supporting information can be included on the label as well.

CLASS 3 Twig Display

This display must include twig samples from 10 different trees. Include twigs from both opposite and alternate leaf arrangements.

Collecting twigs: Samples must include buds, so do not collect twigs in late spring when last year's buds have opened and new buds have not yet formed. Samples should not include leaves or petioles. Trim any side branches to less than 1 inch. Twig samples should be at least 6 inches long, so collect longer ones, which can be trimmed for mounting. The terminal end, with buds, must be part of the twig sample.

Mounting: Mount twigs on the display board with wire, glue, etc. Cut the non-terminal twig ends at a slant so the pith can be seen. Arrange twigs as you want on the board, but be sure everything is visible and clearly labeled.

Labeling: Each sample must have a label that includes:

- 1) common name
- 2) scientific name
- 3) leaf arrangement for broadleaves (opposite, alternate, whorled)
- 4) exhibitor's name
- 5) date collected
- 6) where collected (be specific-include county and other relevant information)

CLASS 4 Seed and Fruit Display

Collect and display mature, dried seeds from 10 different species of trees.

Collecting seed: Collect seeds at any time of year they are available. Trees vary widely in when their seeds are ripe. Silver maple seeds, for example, are ripe in May while oak acorns are not ripe until fall. Collect seeds that are ripe and free of insect or disease problems. Remember to display seeds and not fruit. For example, display seeds removed from a honey locust pod, not just the pod itself. It is fine to display the fruit with the seed, but label each clearly.

Mounting: You can mount and display seeds in many different ways. You can put seeds in bags or jars attached to a board, in jars with a rack or box, etc. Make sure seeds can be easily viewed. If you use jars, mount them firmly on a board or place them securely in a rack or box.

Labeling: Labels for each sample must include:

- 1) common name
- 2) scientific name
- 3) type of seed or fruit, if known (example-samara, pod or legume)
- 4) other information about the seed (when mature, how many in a fruit, etc.)
- 5) exhibitor's name
- 6) date collected
- 7) where collected (be specific-include county and other relevant information)

CLASS 5 Leaf Print Display (DELETED)

CLASS 6 Wood Identification Display

This display requires samples of wood from 10 tree species, five of which come from the 60 included in this manual.

Preparing samples: Samples can be of any shape or dimension but can be no larger than 4 inches by 4 inches by 4 inches. They can be cubes, flat rectangles, turned on a lathe, etc. They do not have to be the same shape. You can use cross-sections through small branches and include bark. Sand or otherwise smooth the surfaces of the samples so the grain is visible. You can finish the samples with a clear finish (no stain) or leave them unfinished.

Mounting: You can mount samples on a board, in a box, etc. Fasten samples securely so they can be stored and easily viewed.

Labeling: Label each sample with:

- 1) common name
- 2) scientific name
- 3) wood type (softwood or hardwood)
- 4) number of growth rings on sample

- 5) exhibitor's name
- 6) dated collected
- 7) where collected (be specific-include county and other relevant information)

CLASS 7 Champion Tree Display (DELETED)

CLASS 8 Cross Section of a Tree

Display a cross-section of a tree that is 1 inch to 2 1/2 inches thick and 6 inches to 12 inches in diameter. Leave the bark on and make sure it is firmly attached. This may be difficult if the tree was dead when you cut the disc. Sand or smooth at least one side so the grain can be seen. You can use a clear, colorless finish but cover both sides to minimize warping. Some cracking or checking can be expected and is allowed.

Labeling: Label the following parts clearly and precisely on the section with pins, paper tags, etc.

- a) pith
- b) heartwood
- c) sapwood
- d) one growth ring
- e) cambium
- f) bark

Include a label on the back of the sample or attached with a string to include:

- 1) common name
- 2) scientific name
- 3) wood type (softwood or hardwood)
- 4) age of section (count growth rings)
- 5) exhibitor's name
- 6) location of tree where the section was collected from

Note: The diagram in the Tree ID manual (4-H 332) is incorrect. Please consult Trees of Nebraska (EC92-1774-x) or other references, or contact the Superintendent for correct labeling information.

CLASS 9 Parts of a Tree

Prepare a poster, no larger than 24 inches square, showing at least six tree parts (trunk, leaves, roots, fruit, flowers, buds, xylem, phloem, bark, cambium, annual rings, etc.) Clearly label the parts on the poster. Include the exhibitor's name and age. This project is only for ages 8 - 11.

CLASS 10 Living Tree Display

A live tree seedling, 60 days to 2 years old (on State Fair judging day), grown by the exhibitor from seed in the display container. The container must have drainage holes, a drain pan to catch drainage water, and contain at least 8 inches of soil. Soil should be a potting mix or natural soil high in organic matter.

Labeling: The waterproof label must include the tree's:

- 1) common name

- 2) scientific name (underlined)
- 3) date of planting
- 4) seed treatments (if any)
- 5) date of emergence
- 6) exhibitor's name

Supporting information (such as where the seed was collected, growth measurements, uses for that species, etc.) may be included on the label or in an attached notebook, poster, etc. Supporting information will be an important factor in judging.