

DEPARTMENT FORESTRY

PREMIUMS: Purple-\$3.50; Blue-\$3.00; Red-\$2.50; White-\$1.50

- The official reference for all forestry projects is the Tree Identification Manual (4-H 332) which was recently revised and is available for purchase from UNL Marketplace. Other helpful forestry references include Trees of Nebraska (EC 1774), Leafing Out (4-H 431), and Plant a Tree (EC 17-11-80).
- prevent warping.
- Display "boards" must be made from wood or wood composite, i.e., 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
- Display "posters" must be made from a material, e.g. foam board or poster board, 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 5, must be from the list of 60 species described in 4-H 332. Samples must be from 10 different tree species. For example, Emerald Queen Maple and Crimson King Maple are both varieties of the same species (Norway Maple), and thus have the same genus and species name, i.e. *Acer platanoides*. All samples must be from trees, NO shrubs. If more than 10 samples are included in the display, only the first 10 samples from the current year will be judged.
- Due to emerald ash borer infestation, no true ash species (Green Ash, White Ash, Black Ash, or Blue Ash) may be included in any collections. Inclusion of a true ash species will result of the project being disqualified.
- Remember that other general labeling standards apply. For example scientific names are always italicized or underlined. Also, the first letter of a Genus name is always capitalized. The first letter of a species name is always lower case. When required, always indicate complete scientific names (Genus and species) and common names, (e.g. Norway Maple) 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.
- How well the exhibitor follows written directions is an important factor in judging.

DIVISION 320 – FORESTRY

- D320001.* **DESIGN YOUR OWN EXHIBIT** - Prepare an educational exhibit about some aspect of trees, forests or forestry that is of special interest to you. Possible topics include paper recycling, wild fire, forest products, forest wildlife, or forest pests. The only requirement is that the display must be no larger than 24" by 24" by 24". Photographs, drawings, samples, charts, posters, etc. can be used, but include enough information to adequately explain the topic. Your display should be substantially different from other display classes. Be as creative as you like.
- D320002.* **LEAF DISPLAY** - The leaf display must include samples of "complete leaves" from at least 10 different tree species. The display must include at least two samples of simple leaves, compound leaves, and conifer leaves. Leaves should be pressed, dried and mounted.
- **Collection:** Whenever possible, collect leaves from mature trees. Collect leaves any time after they have reached full size, usually beginning in early summer. Leaf samples should be in good condition and representative of the average leaves on the tree. Keep in mind that shaded leaves are often much larger than normal. Carefully remove leaves from the twig with the entire petiole or rachis intact. After collection, fresh leaf samples can be temporarily stored within the pages of an old magazine, but they should be properly pressed and dried for display. Be sure to record pertinent information during collection. All collection must be done by the exhibitor.
 - **Mounting:** Leaves may be displayed in a notebook or on a display board. Any method may be used to mount leaves, e.g., wire, glue, tape, staples, plastic bags, but be sure all their features can be clearly identified.
 - **Labeling:** The label for each sample must include:
 1. common name
 2. scientific name
 3. leaf type
 4. leaf arrangement (for broadleaf trees)
 5. leaf composition (for broadleaf trees)
 6. collector's name
 7. collection date
 8. collection location (be specific, state and county at a minimum)
 - If a twig is included with a sample, indicate "twig included" on the label. For example, the twig may be included with an eastern red cedar sample because the leaves are very small and difficult to remove from the twig.
 - Supplemental information, e.g., general uses, common products, fall color, etc., may be included with the display to enhance its educational value.
- D320003.* **TWIG DISPLAY** - The twig display must include twig samples from at least 10 different tree species. The display must include at least two samples of opposite and alternate leaf arrangements from broadleaf trees.
- **Collection:** Twig samples should be collected during dormant season (November—April) when the buds are mature. Twig samples must be at least 6 inches long and exhibit buds. Leaves must be removed and side branches must be trimmed to less than 1 inch in length. All collection must be done by the exhibitor.

- D320004.* **SEED DISPLAY** - The seed display must include seed samples from at least 10 different tree species.
- **Collection:** Tree seeds should be collected at the time of year when they mature, which varies widely depending upon tree species. For example, Silver Maple seeds mature in May while Red Oak acorns do not mature until September. Seed samples should be free of insect or disease symptoms. Remember to display seeds, not fruit. For example, the seed of honey locust is enclosed in a pod. Remove and display the seed, not just the pod. It is acceptable to display the fruit with the seed, but clearly label each. All collection must be done by the exhibitor.
 - **Mounting:** Seeds may be displayed in a variety of ways, e.g. mounted on a display board, displayed in jars in a rack, etc., but they must be securely mounted and easily viewed. Be as creative as you like.
 - **Labeling:** The label for each sample must include:
 1. common name
 2. scientific name
 3. type of fruit, if known (e.g. samara, pod, nut, legume, etc.)
 4. collector's name
 5. collection date
 6. collection location (be specific, state and county at a minimum)
 - Supplemental information, e.g., maturity date, average number of seed in the fruit, etc., may be included to enhance its educational value.
- D320005.* **WOOD DISPLAY** - The wood display must include wood samples from at least 10 different tree species.
- **Preparation:** Samples may be of any shape, e.g. sections from a board, wood cylinders turned on a lathe, horizontal or vertical cross sections of a small log with bark attached, etc., but all samples should be the same shape, e.g. all wood cylinders or all sections of a board. Each sample can be no larger than 4" by 4" by 4". Cut surfaces should be sanded to show the grain. Treating samples with a clear finish (no stain) is optional. All collection must be done by the exhibitor.
 - **Mounting:** Samples may be displayed in a variety of ways, e.g. mounted on a display board, displayed in a box or rack, etc., but they must be securely mounted and easily viewed. Be as creative as you like.
 - **Labeling:** The label for each sample must include:
 1. common name
 2. scientific name
 3. wood type (softwood or hardwood)
 4. collector's name
 5. collection date
 6. collection location (be specific, state/county at a mini)
 - Supplemental information, e.g., common products, wood density, etc., may be included to enhance educational value.
- D320006.* **CROSS SECTION DISPLAY** - A disc cut from a tree species listed in 4H 332. The sample must be collected by the exhibitor, within one year of the state fair judging day. The disc must measure 6 to 12 inches in diameter and 1 to 3 inches thick. The bark should be firmly attached, which may be difficult if the tree was dead when the disc was cut. Sand at least one side of the disc so the grain can be easily seen. If the disc is treated with a clear finish, both sides must be treated to minimize warping. As the disc dries, some cracking or checking can be expected and is allowed.
- **Labeling:** The following parts must be clearly and accurately labeled on the cross section with pins, paper tags, or some other form of identification:

A. pith	D. one growth ring (beginning and end)
B. heartwood	E. cambium
C. sapwood	F. bark
 - A separate label attached to the back of the disc must include:
 1. common name
 2. scientific name
 3. tree classification (softwood or hardwood)
 4. age (of the cross section)
 5. collector's name
 6. collection date
 7. collection location (be specific, state and county at a minimum)
- D320007.* **PARTS OF A TREE - This project is only for ages 8 - 11.**
Prepare a poster, no larger than 24" x 24" that clearly identifies the main external parts of any tree:
- | | | | |
|----------|-----------|------------|---------|
| A. Trunk | C. Roots | E. Flowers | G. Buds |
| B. Crown | D. Leaves | F. Fruits | H. Bark |
- Identifying other internal parts, e.g. phloem, xylem, cambium, annual ring, pith, etc., is optional. Attach a separate label on the back of the poster that includes the exhibitor's name and age.
- D320008.* **LIVING TREE DISPLAY** - A living tree seedling grown by the exhibitor from seed in the display container. The seed must be from a species listed in 4H 332. The seedling must be 60 days to 1 year old (on State Fair judging day). The display container must contain at least 8 inches of soil (potting mix or suitable natural soil), have drainage hole(s), and a drain pan to catch drainage water.
- **Labeling:** A waterproof label must be attached and include:

1. common name	3. seed treatments (if any)	5. emergence date
2. scientific name	4. planting date	6. exhibitor's name
 - Supplemental information about the tree, e.g. - where the seed was collected, growth measurements, uses for that species, etc., may be included in an attached notebook, poster, etc. to enhance educational value. Supplemental information will be an important factor in judging.

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- D320009.* **FOREST PRODUCT DISPLAY** - Prepare a visual display and/r collection tracing the origin of one non-lumber product that comes from trees and/or forests. The display must be no larger than 24 inches by 22 inches by 28 inches. Photographs, drawings, samples, charts, posters, etc. can be used. Posters submitted may be no larger than 22" x 28" and may be either vertical or horizontal. The contestant must identify what species of tree the product is derived from and where the product is harvested, grown, or otherwise collected. The product listed must be partially or fully derived from trees; if partial the approximate percentage should be articulated in the display.
- D320010.* **FOREST HEALTH DISPLAY** - Prepare a visual display outlining a specific forest health issue such as a tree disease, insect pest, animal- or human-caused damage, or an abiotic issue such as weather damage. The display must be no larger than 24 inches by 24 inches by 24 inches. Original photographs, drawings, samples, charts, posters, etc. can be used. Actual specimens are strongly encouraged but must be properly preserved, i.e. insects pinned or placed in vials of alcohol, leaves pressed and dried. Posters submitted may be no larger than 24 inches x 24 inches.
- Explain through the display what species of trees the health issue affects, diagnostic features of the issue (symptoms in trees, identifying features of the pest, etc.), and management options.
 - Include common and scientific names of trees and pests.
 - Supplemental information about the tree or forest health issue: e.g. origin, proliferation in Nebraska/United States, and physiological effects on the tree may be included to enhance educational value. Supplemental information will be an important factor in judging but should not exceed three printed pages of text. Cite sources of information.
 - Attach a separate label on the back of the display that includes the exhibitor's name and age.
- D320011.* **WILDFIRE PREVENTION POSTER** - Prepare a poster, no larger than 24 inches x 24 inches that promotes wildfire prevention strategies. Strategies articulated in the poster can include personal and/or land management actions. Attach a separate label on the back of the poster that includes the exhibitor's name and age.
- Supplemental information about wildfire prevention should be attached to the poster: e.g. frequency of wildfires in Nebraska/United States, financial costs of wildfires, environmental factors that contribute to wildfires, etc. to enhance educational value. Supplemental information will be an important factor in judging but should not exceed three printed pages of text. Cite sources of information
- D320012.* **SUSTAINABLE LANDSCAPE DIORAMA** - Box must be no larger than 24" x 24". The exhibit must show a Nebraska landscape that includes elements such as windbreaks, fields, pastureland, CRP, public lands, community/municipal landscapes. The goal of this exhibit is for students to articulate conservation and sustainability best-practices that can be implemented on a landscape, while addressing landowner and other stakeholder interests.
- Label point/nonpoint sources of pollution, carbon sequestration, water-wise practices, wildfire prevention strategies, renewable energy sources, and other conservation practices as well as at least 10 species of plants included in the diorama.
 - Attach to the exhibit a brief report including supplemental information describing the diorama, defining conservation practices, and outlining opportunities for landscape improvements to enhance educational value. Supplemental information will be an important factor in judging but should not exceed three printed pages of text. Cite sources of information.
- D320013.* **TREE PLANTING PROJECT DISPLAY** – Plant a tree in your community. Prepare a visual display where the student articulates proper tree planting techniques, why the individual tree species was chosen, as well as steps taken to continue care for the tree after initial planting. The display must be no larger than 24 inches by 24 inches by 24 inches. Photographs, drawings, samples, charts, posters, etc. can be used. Posters submitted may be no larger than 24 inches x 24 inches. The tree must have been planted 60 days to 1 year before State Fair judging day. Students must obtain permission from necessary authorities and property owners before planting any trees.
- Labeling: the following information about the tree must be included in the display:

1. common name	2. scientific name	3. planting location	4. planting date	5. tree source
6. planter's name	7. proper tree planting steps	8. tree care (after planting)		
 - Supplemental information about the tree: e.g. why the species was chosen, growth measurements, uses for that species, etc., may be included in an attached notebook, poster, etc. to enhance educational value. Supplemental information will be an important factor in judging but should not exceed three printed pages of text. Cite sources of information.

DEPARTMENT RANGE MANAGEMENT

PREMIUMS: Purple-\$3.50; Blue-\$3.00; Red-\$2.50; White-\$1.50

The purpose of this category is to help 4-H'ers identify and collect range plants. In addition, participants will learn the basics of range management, and Nebraska's range. Through the creation of range boards 4-H'ers will become more proficient in knowledge of Nebraska's range. For more resources and materials in this category refer to the resource section at the bottom of the page.

GENERAL INFORMATION

- Each exhibit must be properly identified with Unit and Class.
- All plant displays and display covers must be the result of the current year's work.
- Plant identification and lists of appropriate plants in each category (grasses, forbs, shrubs, and grass-like plants) can be found in the Range Judging Handbook and Contest Guide (EC150, Revised July 2009), Common Grasses of Nebraska (EC 170), and Common Forbs and Shrubs of Nebraska (EC118).
- The purpose of these exhibits is to demonstrate to the public the benefits from the study and application of crop, weed, range and soil sciences to solving problems in management, conservation, sustainability and environmental protection. For guidelines on specific projects, refer to appropriate project manuals.
- s, forms, contest study materials, and additional resources can be found at <http://go.unl.edu/ne4hrange>.

DIVISION 330 - RANGE MANAGEMENT

BOOKS

- For books, plants must be mounted on sheets that are no larger than 14" wide by 14" high. Plants should be glued rather than taped and the mounts should be protected with a clear cover. Proper plant mount should include root as well as stem and leaf tissue.
- Exhibits will be judged based on completeness of plant mount, accuracy of identification, labeling, neatness and conformation to project requirements.
- Each completed mount must have the following information (see example below) in the lower right corner of the mounting sheet:
 1. Scientific name (in italic or underlined), with authority
 2. Common name
 3. County of collection
 4. Collection date
 5. Collector's name
 6. Personal collection number, indicating order that plants were collected in your personal collection
 7. Other information, depending on class selected, i.e., value and importance, life span, growth season, origin, major types of range plants. This information should be typed or printed neatly.

Scientific name: <i>Schizachyrium scoparium</i> (Michx.) Nash
Common name: Little bluestem
County of collection: Boone County
Collection date: 6 August 2019
Collector's name: Joe Smith
Personal collection number: 37
Value and Importance: Livestock Forage: High, Wildlife Habitat: High, Wildlife Food: Medium OR Life Span: Perennial OR Season of Growth: Warm Season OR Origin: Native

- D330001.* **VALUE & IMPORTANCE FOR LIVESTOCK FORAGE & WILDLIFE HABITAT AND FOOD BOOK** - A collection of 12 different plant mounts, with 4 classified as high value, 4 as medium value, and 4 as low value for livestock forage, wildlife habitat, or wildlife food. Value and importance classifications can be found in the Range Judging Handbook and Contest Guide, Appendix Table 1 (EC150, Revised July 2016) starting on page 42. Plants can consist of any combination of grasses, grass-like plants, forbs, or shrubs. Assemble plant mounts in order of high, medium, and low value and importance. Label each plant mount with its value and importance classifications for each of the three areas: Livestock Forage, Wildlife Habitat, Wildlife Food. SF260
- D330002.* **LIFE SPAN BOOK** - A collection of 6 perennial plant mounts and 6 annual plant mounts selected from grasses or forbs. SF260
- D330003.* **GROWTH SEASON BOOK** - A collection of 6 cool-season grass mounts and 6 warm-season grass mounts. SF260
- D330004.* **ORIGIN BOOK** - A collection of plant mounts of 6 native range grasses and 6 introduced grasses. Introduced grasses are not from North America and often used to seed pastures. SF260
- D330005.* **MAJOR TYPES OF RANGE PLANTS BOOK** - A collection of plant mounts of 3 grasses, 3 forbs, 3 grass-like, and 3 shrubs. SF260
- D330006.* **RANGE PLANT COLLECTION BOOK** - A collection of 12 range plant mounts with something in common (i.e. poisonous to cattle, or historically used as food by Native Americans, or dye plants, or favorite antelope forage, etc.). Include a short paragraph in the front of the book which describes what the plants have in common and why you have chosen to collect them. SF260

DISPLAYS

- The purpose of the display is to tell an educational story to those that view the display. The display is a visual representation (pictures, charts, graphs) no larger than 28" by 28" on plywood or poster board. The display should be neatly titled. Make sure to label display with exhibitor's name, address, and county on back side.
- D330007.* **PARTS OF A RANGE PLANT POSTER** - Mount a range plant on a poster board. Label all the plant parts. Include the plant label in the lower right corner, including the scientific and common name of the plant. Put your name and 4-H county on the back of the poster.

BOARDS

- Boards should be no larger than 30" wide by 36" tall. Boards should be adequately labeled.
- D330008.* **SPECIAL STUDY BOARD** - A display of the results of a clipping study, a degree of use study, range site study, etc. A short essay must accompany the display to explain the reason for the study, what was learned and study results and should be placed in a sheet cover attached to the board. SF260
- D330009.* **JUNIOR RANCHER BOARD** - This exhibit should include a ranch map with record book or an appropriate educational display on some phase of rangeland or livestock management. A short essay must accompany the display to explain the purpose of the rancher board, what was learned, etc. SF260

DEPARTMENT SHOOTING SPORTS

PREMIUMS: Purple-\$4.00; Blue-\$3.50; Red-\$3.00; White-\$2.00

To participate in these competitions, a 4-H'er MUST have been enrolled in the Nance County 4-H Shooting Sports Club during the current year and MUST have attended at least four meetings or practices in each discipline enrolled during the current year.

To compete in:

- BB Gun & Archery** - Open to all youth age 8 and older before January 1. BB Guns are defined as Any spring gun or air powered gun that shoots BB's. Must be smooth bore, weigh 6 pounds or under, will be shot at 5 meters (17'4 3/4"). No scopes allowed.
- .22 Rifle** - 4-H'er must be age 10 & older before January 1 of the current calendar year, and be pre-approved by a leaders committee to have consistently demonstrated to the leaders that they are physically capable to properly and safely handle the firearm, and are willing to comply with safety rules.
- Shotgun & .22 Pistol** - 4-H'er must be age 12 & older before January 1 of the current year, and be pre-approved by a leaders committee to have consistently demonstrated to the leaders that they are physically able to properly and safely handle the firearm, and are willing to comply with safety rules.
- Dress Code:** Participants are expected to dress appropriately for the events in which they participate. The 4-H'ers are required to wear the county 4-H t-shirt.
- Footwear Policy:** Any participant while on the shooting line or shooting in any outdoor shooting event is required to wear shoes that completely cover their feet. Examples of footwear that are not acceptable include, but not limited to: sandals, clogs, crocks, flip-flops, and bare feet.
- Members are encouraged to use their own firearms at the fair. Club guns will be available to use if needed.