

DEPARTMENT D - ENVIRONMENTAL EDUCATION/EARTH SCIENCE

DEPARTMENT D – CLOVER KIDS

- ⇒ 4-H'ers that are 6, 7, or 8 are considered clover kids. Refer to the General Rules and Regulations for additional information.
- ⇒ 4-H'ers will only be allowed to choose a maximum of 3 projects under Department D. They may choose from any classes under Conservation and Wildlife, Shooting Sports, Forestry, or Range Management but may only choose 3 classes total under this department. Shooting Sports Competition will be handled separately.
- ⇒ When filling out the entry forms please indicate the clover kid project with the appropriate division and a CK before the class number. Also please include the class name (bold) for reference.
- ⇒ Clover Kids will receive \$1.00 premium per class that they enter/complete, unless specified otherwise.

DEPARTMENT D - CONSERVATION AND WILDLIFE

GENERAL INFORMATION:

Dare to do better than you've ever done before!

- A. **SHOW WHAT YOU DID AND LEARNED** - All exhibitors are encouraged to show evidence of their personal field experiences, study or observations that relate to their exhibit. This helps judges understand what the 4-H'er did and learned in the process that led to the exhibit.
- B. **PROPER CREDIT** - Show proper credit by listing the sources of plans or other supporting information used in exhibits.
- C. **WHOSE EXHIBIT?** - The exhibitor's name, address, and parent's or guardian's name must be on the back or bottom of all displays so that the owner can be identified even if the entry tag becomes separated from the exhibit.
- D. **WILDLIFE AND WILDLIFE LAWS** - "Animal" or "wildlife" in the following instructions includes wild fish, amphibians, reptiles, birds, or mammals. Follow wildlife laws: example: wildlife laws do not allow collection of bird nests, eggs, or any of their parts.
- E. **PROJECT MATERIALS** - Related project booklets include Bird Behavior (EC 59381), Fishing for Adventure Project Manuals, Wildlife Conservation (4-H 125), and Wildlife Habitat Evaluation Handbook, Participants Manual (NE 4H4300).
- F. **ALL BOARD EXHIBITS** - Avoid cardboard panels because they blow over during display. Mount all board exhibits on 1/4" or 3/8" thick plywood, masonite, or similar panel 24" high by 24" wide.
- G. **BOARD AND POSTER EXHIBITS** - These are displays that show educational information about a topic of interest. Board exhibits can hold objects such as fishing equipment or casts of animal tracks. Mount all board exhibits on 1/4" plywood, masonite, or similar panel no larger than 24" high by 24" wide. Poster exhibits should be on regular poster sheets, no larger than standard size (22 by 28 inches) but half size, 22 by 14 inches, is recommended. Poster exhibits normally will be stapled in the corners for fair display and to prevent their blowing in the wind.
- H. **SCORING** - Sample scoresheets are available at the Extension office and on the UNL 4-H web page (<http://4h.unl.edu>).

DIVISION 340 - WILDLIFE AND HOW THEY LIVE

AWARDS: Purple - \$3.00 Blue - \$2.00 Red - \$1.50 White - \$1.00

CLASS:

- 1 **Mammal Display**
- 2 **Bird Display**
- 3 **Fish Display**
- 4 **Reptile or Amphibian Display** - Classes 1-4 are board or poster exhibits. Display may show any aspect of wildlife, wildlife habitat, or related conservation, restoration, or management. Examples: life history or other facts about one type of wildlife: how to manage wildlife on a farm or in town; managing habitat for one kind of wildlife: life requirements for one kind of wildlife during one season or through the year; wildlife study methods, wildlife behavior (example: when nesting, finding food, moving, etc.); habitats (examples: grasslands, wetlands, river or stream corridors) and what wildlife is found there; habitat needs for a specific kind of wildlife. For more ideas, refer to project books.
- 5 **Wildlife Connections** - Board or poster exhibit. The purpose of this display is to show interconnections and related aspects among animals, plants, and other habitat components. All displays should show two or more interactions (connections) that occur between/among animals or between animals and their habitat. Displays might show how animals interact with other animals, with people, or with their habitat.

Examples:

1. Food chain display. Use pictures, drawings or other items to illustrate the source of food energy and where it goes--who eats whom or what. Use arrows to show the direction of the energy (food) flow.
 2. Show the role of predators, scavengers, insect eaters or others in nature.
 3. Show how wildlife numbers (populations) change through the year or with their habitat.
 4. Show predation, competition, or other behavioral interactions of wildlife.
 5. Choose one kind of wildlife and make observations through a season or year. Keep notes of interactions, then display what you saw.
 6. For more ideas, refer to project booklets..
- 6 **Wildlife Tracks** - Board or diorama-type box exhibit. Make a display of animal tracks using plaster-of-paris casts. There are two options. For both options, include a brief description of your experiences in making the tracks so the judges better understand what you did and learned. Positive cast (impressions as they would be in nature) are preferred.
- Two options:
1. Option one should show plaster-of-paris tracks of five or more kinds of wildlife along with a picture or illustration of each kind of animal. (or)
 2. Option two should show two or more plaster-of-paris tracks of one specific kind of wildlife and should include a picture or illustration of the animal, what the animal may eat, and what may eat the animal. Positive casts (impressions as they would be in nature) are preferred.
- 7 **Wildlife Knowledge Check** - Use electrical circuits, pictures, or other methods of teaching wildlife identification or other wildlife related knowledge. Plan size and SHAPE TO FIT TRANSPORTATION AND DISPLAY; MAXIMUM SIZE 24 X 24 INCHES. Example: prepare a list of animals and questions about where each would most likely live. Rabbits - brushy areas along field borders; ducks - marshes, etc.
- 8 **Wildlife Diorama** - Box must be no larger than 24" x 24". The exhibit might show a grassland, prairie, agricultural, woodland, riparian (stream or river corridor), wetland, and/or other area with wildlife habitat. Example: show a large unbroken grassland or prairie for area-sensitive species such as meadowlarks, greater prairie-chicken, lark bunting, grasshopper sparrows, Ferruginous hawk, burrowing owl, horned lark, upland sandpiper, or pronghorn; AND/OR show an area interspersed with several habitats such as windbreaks, farm fields, woods, waste areas, ditches, and pastures for edge-adapted species such as white-tailed deer, Northern bobwhite, ring-necked pheasants; mourning doves, cottontail rabbits, fox squirrels, Northern cardinals or blue jays. Label the habitats displayed show at least five kinds of wildlife in their proper habitats.
- 9 **Wildlife Essay** - Learn how to share educational information by writing. Choose a conservation or wildlife that interests you and write an essay about it. For example, write about a particular species of wildlife that you have observed or about the values of wildlife (commercial value, game value, genetic value, aesthetic value, ecological value, scientific value). You might write about wildlife on a farm, in town, in a backyard, at a backyard feeder or at other places. You might write about hunting, fishing or ethics and proper behavior for hunting or fishing. For other ideas, refer to project booklets.
- The essay should be between 100 and 1000 words long and should be typed, double spaced, or written so that it can be easily read. Standard size paper (8 ½ x 11) format is preferred. You might use books, magazines or personal interviews as resources, but you must give credit to all sources by listing them.
- 10 **Wildlife Values Scrapbook** - Make a scrapbook about the various values of wildlife (commercial value, genetic value, aesthetic value, ecological value, scientific value) following guidelines in the Wildlife Conservation project booklet (4-H 125).
- 11 **Wildlife Arts** - The purpose of this class is to allow artistic exhibits that contain educational information about conservation and wildlife. Examples might include paintings, photographs, wood carvings, painted duck decoys, or songs or poems written by the exhibitor. Entries must be appropriate for fair display and no larger than 24" x 24". For example, paintings or photographs should be displayed in notebook format or mounted on a sturdy display panel. All entries must include a title and brief explanation of the purpose or message (what is the exhibit meant to show).

AWARDS: Purple - \$4.00 Blue - \$3.00 Red - \$2.00 White - \$1.00

CLASS:

C12 Casting Contest

DIVISION 342 - WILDLIFE HABITAT

AWARDS: Purple - \$3.00 Blue - \$2.00 Red - \$1.50 White - \$1.00

CLASS:

- 1 **Houses** - Make a house for wildlife. Examples: bird house (wren, bluebird, purple martin, wood duck, kestrel, barn owl, etc.) or bat house; no insect houses. Make the house functional so that dimensions, hole size, etc. are appropriate to fit the intended species' needs. Include the following information: 1) the kinds of animal(s) for which the house is intended, 2) where and how the house should be located for best use, and 3) any seasonal maintenance needed. Tips: Check NebGuide on bird houses and shelves.
- 2 **Feeders/Waterers** - Make a bird bath or feeder. Examples: seed, suit or nectar feeders. Indicate the kinds of animal(s) for which the feeder or waterer is intended. Make the feeder or waterer functional so that it fits wildlife needs. Include the following information: 1) where and how the feeder or waterer should be located for best use and 2) how it should be maintained. Tips: Check NebGuide on feeding birds.
- 3 **Wildlife Habitat Design** - Board or poster Exhibit. Choose a backyard, acreage, or farm, and design a habitat plan to meet the food, water, shelter, and space needs of at least three kinds of animals you would like to attract. Draw an outline of the area and show what plants or other habitat will be provided. Indicate how the various parts of your plan provide the desired habitat needs. You might include an aerial photo of the area if you have one. For ideas, check the Wildlife Habitat Evaluation Handbook, Participant's Manual (NE 4H4300).

DIVISION 343 - HARVESTING EQUIPMENT

AWARDS: Purple - \$3.00 Blue - \$2.00 Red - \$1.50 White - \$1.00

CLASS:

- 1 **Fish Harvesting Equipment** - Board Exhibit. Display of equipment used in fish harvesting. Examples: fishing knots, hooks (with corks over ends for safety), lures. Label all items displayed. Include in your exhibit the following information:
 1. the purpose of each item
 2. when or where each item is used in relation to other equipment
 3. Any personal experiences you've had with the item(s).
- 2 **Build a Fishing Rod** - Build your own fishing rod for exhibit and for fishing use. Rod building blanks and kits with instructions are available for this purpose. For fair exhibit, follow guidelines in the project booklet, Fishing For Adventure Manuals.
- 3 **Casting Target** - Make a casting target for exhibit and use, follow guidelines in the project booklet, Fishing For Adventure Manuals.
- 4 **Wildlife Harvesting Equipment** - Board Exhibit. Display of equipment used in harvesting wildlife. Examples: expended ammunition casings (no live ammunition permitted), steel traps, hide stretchers, fleshers, etc. For displays of shotguns, rifles, or bows, use drawings or pictures. Label all items displayed. Include in your exhibit the following information:
 1. the purpose of each item
 2. when or where it is used in relation to other equipment
 3. any personal experiences you've had with the item(s).

DIVISION 346 - TAXIDERMY

AWARDS: Purple - \$6.00 Blue - \$4.00 Red - \$2.00 White - \$1.00

CLASS:

- 1 **Tanned Hides or Taxidermy** - Any legal fish, bird, or other wild animal properly processed by the member. No requirement as to size or mounting. Include the following information:
 1. the animal's name
 2. information about the exhibitor's personal field experiences, study, or observations that relate to the exhibit.

DIVISION 361 - OTHER NATURAL RESOURCES

AWARDS: Purple - \$3.00 Blue - \$2.00 Red - \$1.50 White - \$1.00

CLASS:

- 1 **Design Your Own Exhibit in Natural Resources, Conservation, or Ecology.** This class is for educational exhibits about natural resources, conservation, wildlife, or ecology that do not fit into other categories. Entries must be appropriate for fair display and no larger than 24" x 24". All entries must include a title and should be clear (a brief explanation or other method) about the intended purpose or message - what the exhibit is meant

to show. Think about accuracy, creativity, educational value for viewers and evidence of exhibitor's personal experiences and learning.

DEPARTMENT D - SHOOTING SPORTS

GENERAL INFORMATION:

NO FIREARMS may be exhibited. All sharp items (i.e. broadheads, knives, etc.) must be enclosed in a plexiglass display case. Display cases must be 12" wide x 18" long x 4" deep and displayed so judges can open them to examine items. Items must be secured in the case.

All Shooting Sports projects must have a 5" x 8" notecard securely attached describing:

1. the project and how it applies to Shooting Sports
2. experience gained in making the project
3. how the project will be used. Information should be neatly hand-written or typed on one side only of the card. All exhibits should be self-explanatory and educational to viewers. Written explanations should be short and neat.

Name and address of exhibitor must be on the back of each exhibit. This should be permanently written on the project to identify the owner even if entry cards become lost.

Exhibits that are dangerous or improperly prepared will be refused entry.

DIVISION 950 - SHOOTING SPORTS

AWARDS: Purple - \$2.00 Blue - \$1.50 Red - \$1.25 White - \$1.00

CLASS:

Educational Displays - A poster or display concerning a specific Shooting Sports discipline. Must be mounted on 14" or 3/8" thick plywood, masonite or similar panel, 24" x 24" (24" high by 22" wide will be accepted). Display may be 3-dimensional, not to exceed 2" from face of poster.

- C1 **Educational Display** - Display may include safety, building or using equipment, or any aspect of archery, rifle, BB gun, air rifle, shotgun, pistol or muzzle loading.
- C2 **Archery Accessory** - Any accessory such as quivers, targets, possibles boxes, survival kits, etc.
- C3 **Archery Equipment** - includes all archery equipment which has been made by the exhibitor. No bows are allowed due to safety and theft factors. Examples of acceptable items would be arrows, hand-chipped flint arrow head, etc. Bows built by exhibitor may be shown in a photo story in this class.
- C4 **Rifle Accessory** - Any accessory such as shooting mats, slings, targets, etc. that have been made by the exhibitor. All items must be safe to display.
- C5 **Rifle Equipment** - includes all equipment made by the exhibitor not including rifles. Examples: stocks, gun racks, target stands, etc. (may not duplicate accessories). Custom firearms may be shown in a photo story in this class.
- C6 **Shotgun Accessory** - Any accessory such as trap vests, trap bags, etc. No firearms may be displayed. All items must be safe to display.
- C7 **Shotgun Equipment** - Any equipment made by the exhibitor such as custom stock, etc. No firearms may be displayed.
- C8 **Muzzleloading Accessory** - Any accessory such as possibles bag, clothing, pouch, powder horn, etc. All items must be safe to display.
- C9 **Muzzle loading Equipment** - includes all equipment made by the exhibitor. No firearms may be displayed. Custom-made muzzle loaders may be shown in a photo story in this class.
- C10 **Pistol Accessory** - any accessory such as holster, belt, shell holder etc., that has been made by the exhibitor. All items must be safe to display.
- C11 **Pistol Equipment** - includes all equipment made by the exhibitor. Examples: pistol-grip, custom sights, etc. No firearms may be displayed. Pistols which are custom made or refinished by exhibitor may be shown in a photo story in this class.
- C12 **Wildlife Educational Display** - Poster or display concerning Wildlife and/or Hunting Lore as part of the Shooting Sports project. Must be mounted on 1/4" or 3/8" thick plywood, masonite, or similar panel, 24" x 24" (24" high x 22" wide will be accepted). Display may be three-dimensional, NOT to exceed 2" from face of poster. Display may include safety, habitat, species characteristics, or any aspect of wildlife.
- C13 **Wildlife Accessory** - Accessories could be: wildlife habitat maps, nesting boxes, waterers, etc. All items must be made by exhibitor. All items must be safe to display.

DEPARTMENT D - SHOOTING SPORTS COMPETITION

⇒ Clover Kids are NOT permitted to do shooting sports competition.

GENERAL INFORMATION:

Marksmanship contestants must meet 4-H dress codes, but may wear caps while shooting. Unsafe actions on the part of any shooter will drop the contestant a ribbon placing or result in disqualification. This determination will be made by contest officials. Awards earned during the marksmanship contests will be turned over to the respective 4-H Shooting Sports Club.

In order to compete in any 4-H Shooting Sports competition, members must meet the following minimum requirements:

1. A member must have reached his or her 8th birthday by Jan. 1 of the competition year, and not their 19th birthday.
2. All contestants must be currently enrolled in the Nebraska Shooting Sports project they are entering.
3. Contestants who are old enough (12 and older) must have completed the Nebraska Hunter Safety program.

There are two age groups for competition. They are: Junior (ages 9-10-11), Senior (ages 12 and older). Junior age members will NOT be eligible to compete in shotgun, small bore rifle, high powered rifle or pistol events.

Range officials shall check all firearms, ammunition and archery equipment prior to its use in competition. Unsafe equipment will not be allowed on the range.

All pistols, rifles, shotguns and bows and arrows will be cased and unloaded until the competitor is instructed to uncase at the firing line.

Standardized range commands will be used for all events. Any deviation from these rules by the competitor will be grounds for disqualification.

Competitors are allowed on-line coaching and it is encouraged! This assistance should be only as related to safe loading, unloading and adherence to range commands.

Competitors may appeal their score in any of the events. The first appeal is to be registered with the judge or range official in charge of the event. The second appeal will be registered with the score arbitrator of the match and only when scoring discrepancies are discovered after targets leave the range or at the specific request of the range official or judge.

Each contestant should have appropriate eye protection for all shooting events except archery. Contestants must provide their own eye protection.

Each contestant must have appropriate hearing protection for shotgun, pistol and high power rifle events. Contestants should provide their own hearing protection.

DISQUALIFICATIONS: Any contestant acting in an unsafe manner or unsportsmanlike action such as intentionally bothering another shooter or the shooter's equipment shall be reason for disqualification.

Safety is a primary consideration for all events. Any violation of safe shooting is grounds for disqualification.

ARCHERY

Outdoor competition will consist of 60 arrows shot in three games, each game being 4 ends of 5 targets each. Scoring will be on a N.F.A.A. Single or Five Spot 65 cm. target face. Scoring shall be 5,4,3,2,1 from X outward. Lines must be cut through to count the next higher score. No one is allowed to touch any arrows before they have been scored. Witnessed bounce-outs or arrows passing through the target will be reshot. Perfect score is 300 (60x). X's will serve as tie breakers. All other N.F.A.A. Tournament rules apply to questions on scoring.

Arrows will be shot at 65 cm. target faces at the following distances:

- Junior (age 9-11) 20 arrows at 20 yards
 - 20 arrows at 30 yards
 - 20 arrows at 40 yards

Senior (age 12-18) 20 arrows at 30 yards
 20 arrows at 40 yards
 20 arrows at 50 yards

DIVISION 951 - SHOOTING SPORTS

CLASS:

C2 Junior Archery

C3 Senior Archery

BB GUN

Any 4-H member enrolled in the BB project may participate.

Competition will consist of 40 rounds, 10 rounds per position. 4 positions (prone, sitting, kneeling and standing) will be the course of fire. Target distance - 5 meters.

NRA 5 Meter BB Gun rules will be followed.

Smooth-bore BB Guns only. Shooters must provide their own equipment. BBs and targets will be provided.

AR-4/10-ten bull targets will be used. On line coaching is allowed and encouraged. Ten minutes per target will be allowed.

DIVISION 951 - SHOOTING SPORTS

CLASS:

C5 Junior BB Gun

C6 Senior BB Gun

AIR RIFLE

Any 4-H member enrolled in the Pellet Gun project may participate.

Competition will consist of 40 rounds, 10 rounds per position. Four positions (prone, sitting, kneeling and standing) will be the course of fire. Target distance - 10 meters. NRA 10 meter Air Rifle rules will be followed.

Shooters must provide their own equipment. Pellets and targets will be provided. Ar-5/10-ten bull targets will be used.

On line coaching is allowed and encouraged! 10 minutes per target will be allowed.

DIVISION 951 - SHOOTING SPORTS

CLASS:

C8 Junior Air Rifle

C9 Senior Air Rifle

SMALLBORE RIFLE

Only 4-H members 12 years of age or older and enrolled in the Smallbore Rifle project may compete. Competition will consist of 40 rounds, 10 shots in each of the four positions will be fired: 1) Prone, 2) Standing, 3) Kneeling, 4) Sitting. Each member will fire all four positions in succession. NRA Smallbore rifle Rules will be used. NRA 50 ft. targets will be used.

Shooters must provide their own rifle. Any .22 caliber rimfire catalogued as ".22 short", ".22 long" or ".22 long rifle" which loads one round at a time is acceptable. All triggers must pull not less than 3 pounds. Optional items - spotting scopes, ground pads, shooting kits, gloves, padding (shoulder, sling and elbow), rifle slings and kneeling pads used in accordance with NRA regulations are authorized. use of any other device or equipment is prohibited. Ammunition and targets will be provided. Ten minutes per target will be allowed.

DIVISION 951 - SHOOTING SPORTS

CLASS:

C10 Senior Smallbore Rifle

TRAP AND SKEET

This competition will be restricted to Senior contestants (ages 12-18) who are enrolled in the 4-H Shotgun project.

Shooters must furnish their own equipment and ammunition. Either factory loads or reloads may be used. The range officer does have the authority to weigh powder and shot on reloaded shells.

Skeet Rules

National Skeet Shooting Association rules for shooting and scoring will be used. Course of fire will be as follows: 50 birds. Any gauge gun may be used that is capable of shooting doubles.

Ties will be broken by a shoot-off from the competitors involved.

Trap Rules

American Trap Association rules for shooting will be used for the 16 yard singles.

Course of fire will be as follows: Senior - 50 birds.

Any gauge gun may be used, however; 12 gauge is probably more advantageous.

Ammunition will consist of no shot larger than 7 ½.

Ties will be broken by a shoot-off from the competitors involved.

DIVISION 951 - SHOOTING SPORTS

CLASS

C11 Senior Skeet

C12 Senior Trap

DEPARTMENT D - FORESTRY

GENERAL INFORMATION:

The official reference for all forestry projects is Tree Identification Manual (4-H 332). Other helpful forestry references include Trees of Nebraska (EC 92-1774), Leafing Out (4-H 431), 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 stiff enough to stand when supported from behind and below. Length and width must be no more 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 both Norway Maples.

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

AWARDS: Purple - \$3.00 Blue - \$2.00 Red - \$1.50 White - \$1.00

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.

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.

- 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)

- 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)

- 5 **Leaf Print Display**

- 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)
- 7 **Champion Tree Display**
- 8 **Cross Section of a Tree** - Display a cross-section of a tree that is about 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.

- 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.
- 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.

DEPARTMENT D - RANGE MANAGEMENT

GENERAL INFORMATION:

- A. Individuals in Reading the Range Unit 1 project may exhibit in classes 1-5 and 8.
- B. Individuals in the Using Nebraska Range (Unit II) project may exhibit in classes 1-8. Refer to EC 85-170 and EC 89-118 for plant identification.
- C. Each exhibit must be properly identified with Unit and Class. Exhibits will be judged based on completeness of plant mount, accuracy of identification, label, neatness and conformation to project requirements. All plant displays and display covers must be the result of the current year's work.
- D. Lists of appropriate plants in each category (grasses, forbs, shrubs, introduced seeded pasture and hay plants and grass-like plants) can be found in Range Judging Handbook for Nebraska (EC 98-150-F), Common Grasses of Nebraska (EC 05-170), and Nebraska Range/Pasture Forbs and Shrubs (EC 118).

- E. Plants must be mounted on sheets that are 11" wide x 14" high. Plants should be glued rather than taped and the mounts should be protected with a clear cover. Proper plant mounts should include root as well as stem and leaf tissue. Each complete mount must have a 3" x 5" cardstock label glued flush in the lower right corner of the mounting sheet. The label (see example on right) should include the following information: 1. Scientific name (in italic or underlined), with authority. 2. Common name. 3. County of collection. 4. Collection date. 5. Collector's name. 6. Collection number. 7. Other information, depending on class selected, i.e., grazing response, longevity, season of growth, origin, life form. This information should be typed or printed neatly.

<p>PLANTS OF NEBRASKA</p> <p>Scientific name: <i>Schizachyrium scoparium</i> (Michx.) Nash</p> <p>Common name: Little bluestem</p> <p>County of collection: Wheeler Co.</p> <p>Collection date: 6 September 2004</p> <p>Collector's name: Joe Smith</p> <p>Collection number: 3</p> <p>Grazing response: decreaser</p>
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DIVISION 330 - RANGE MANAGEMENT

AWARDS: Purple - \$3.00 Blue - \$2.00 Red - \$1.50 White - \$1.00

CLASS:

- 1 **Grazing Response** - A collection of 4 decreasers, 4 increasers, and 4 invaders.
- 2 **Longevity** - A collection of 6 perennial plants and 6 annual plants selected from grasses or forbs.
- 3 **Season of Growth** - A collection including 6 cool season grasses and 6 warm season grasses.
- 4 **Origin** - A collection of 6 native range grasses and 6 introduced grasses. Introduced grasses are not from North America and often used to seed pastures.
- 5 **Life Form** - A collection including 3 grasses, 3 forbs, 3 grass-like and 3 shrubs.
- 6 **Range Plant Board** - This exhibit should display a collection of 25 range forage species important to a particular county. The display board should be hinged in the middle with the total open length of 60" and height of 36". This display should be adequately labeled.
- 7 **Special Study Exhibit** - This exhibit should display the results of a clipping study, a degree of use study, or a range site study. The display board should be 30" x 36" or if hinged in the middle, may be 60" x 36". The display should be adequately labeled.
- 8 **Junior Rancher Exhibit** - This exhibit should include a ranch map with a record book or an appropriate educational display on some phase of rangeland or livestock management. The overall size of the exhibit should not be larger than 30" wide and 36" high.