

ENVIRONMENTAL EDUCATION EARTH SCIENCE DEPARTMENT D

All exhibits must be pre-entered at the Seward County Extension Office by July 10th.

**denotes entries not eligible for State Fair*

Department D – CONSERVATION AND WILDLIFE

Show What You Did & Learned: All exhibitors must show evidence of their personal field experiences, study, or observations that relate to their exhibit. This helps judges understand what the 4H'er did and learned in the process that led to the exhibit.

Proper Credit: Show proper credit by listing the sources of plans or other supporting information used in exhibits.

Example to attach to your exhibit

Name: Chris Clover

County: Clover County

Age: 10

Field Experience, Study, or Observations:

I attended a 4-H workshop where we put out a food plot, and then made turkey calls. We played a game about attracting turkeys. Sometimes we acted like a female to draw in a tom turkey. Sometimes we acted like a lost baby turkey to call in a whole flock. I was able to use my turkey call and play the game successfully. While I never turkey hunted in person, I went on-line to research more turkey calls. I hope to turkey hunt someday, and I want to use a box call to hunt fall turkeys.

Credits/Source:

Information was obtained from Nebraska Game & Parks website

Whose Exhibit? The exhibitor's name, county, and age must be on the back or bottom of all displays.

Wildlife and Wildlife Laws: "Animal" or "wildlife" in the following classes includes wild fish, amphibians, reptiles, birds, or mammals. Please make sure you are following all wildlife laws.

Project Materials: Related project booklets include Exploring Your Environment Series, 4-H Shooting Sports, Amphibians, Bird Behavior (EC 59381), Fishing for Adventure Project Manuals, Wildlife Conservation (4-H 125), Geology, and Outdoor Adventure. Other resources include: Outdoor Skills: Learning Science in the Outdoors series (Science Signature Outcome Program) outdoornebraska.gov/afterschool/ and www.whep.org.

Board and Poster Exhibits: 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" x 28") but half size, 22" x 14", is recommended.

Scoresheets, forms, contest study materials, and additional resources can be found at <https://go.unl.edu/ne4hconservation-wildlife-shooting>.

Division 901 – 4-H Flops are Educational

Pay Category #7

*Class 1 **Conservation or wildlife flop in any class.** Tell why it was a flop and what you learned as a result of it.

Division 340 – Wildlife and How They Live (Classes 1-4)

Pay Category #5

Wildlife and How they Live (Classes 1- 4) are board or poster exhibits. Display may show any aspect of wildlife, wildlife habitat, or related conservation. For more ideas, refer to project booklets. Remember to look at General Rules for this area. 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 behavior and habitats.

Resources: https://4hcurriculum.unl.edu/index.php/main/program_project/204

Class 1 **Mammal Display**

Class 2 **Bird Display**

Class 3 **Fish Display**

Class 4 **Reptile or Amphibian Display**

Class 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:

- 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.
- Show the role of predators, scavengers, insect eaters, or others in nature.
- Show how wildlife numbers (populations) change through the year.
- Show predation, competition, or other behavioral interactions of wildlife.
- Choose one kind of wildlife and make observations through a season or year, keep notes of interactions, then make a display of what you saw.

- Class 6 **Wildlife Tracks**– Board or diorama-type box exhibit. Make a display of animal tracks using plaster-of-paris casts. There are 3 options. For all options, include a brief description of your experiences in making the tracks so the judges better understand what you did and learned. Positive casts (impressions as they would be in nature) are preferred.
- 1) Option 1 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 2 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. (OR)
 - 3) Option 3 should show two tracks and include the animal’s habitat needs including preferred food, shelter, water, and space in addition to picture or illustration of the animal.
- Class 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".
- Class 8 **Wildlife Diorama**– Exhibit must be no larger than 24" by 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 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, mourning doves, cottontail rabbits, fox, squirrels, northern cardinals, or blue jays. Label the habitats displayed and show at least 5 kinds of wildlife in their proper habitats.
- Class 9 **Wildlife Essay**– Learn how to share educational information by writing. Choose a conservation or wildlife topic 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. 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 ethics, proper behavior in the outdoors, hunting, or fishing. The essay is between 100 and 1,000 words long and typed, double spaced on 8½" x 11" paper. You might use books, magazines, or personal interviews as resources, but you must give credit to all sources by listing them.
- Class 10 **Wildlife Values Scrapbook**– Make a scrapbook about the various values of wildlife. This would include aesthetic, scientific, commercial, game, genetic, and/or ecological. One resource would be the Wildlife Conservation project booklet (4-H 125).
- Class 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 the exhibit is meant to show).

Division 342 – Wildlife Habitat

Pay Category #5

- Class 1 **Houses**– Make a house for wildlife. Example: bird house (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, 3) any seasonal maintenance needed, and 4) any evidence of your personal observations or experiences. Tips: check NebGuide on bird houses and shelves.
- Class 2 **Feeders/Waterers**– Make a bird bath or feeder. Examples: seed, suet, or nectar feeders. Squirrel feeder okay; no insect feeders. Include the following information: 1) the kinds of animal(s) for which the water/feeder is intended, 2) where and how the water/feeder should be located for best use, 3) any seasonal maintenance needed, and 4) any evidence of your personal observations or experiences. Tips: Check NebGuide on feeding birds.
- Class 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.

Division 343 – Harvesting Equipment

Pay Category #5

- 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) purpose of each item, 2) when or where each item is used, and 3) any personal experiences you've had with the item(s).
- Class 2 **Build A Fishing Rod**–Rod building kits with instructions are available for this purpose. A fishing rod educational exhibit may not exceed 96" in length. Exhibit must be mounted on a board. Include with the exhibit: 1) Explanation of cost of materials/components, where materials/components were purchased, and

number of hours required for construction.

2) Label all parts. Necessary components which must be included are grip, line guides (based on manufacturer's specifications), guide wraps, and hook keeper. Reel seat needs to be aligned with guides, and guides aligned accurately down rod. Guide wraps of size A to D, nylon or silk thread. The exhibit will be judged on: workmanship, labeling of parts, information, and neatness.

Class 3 **Casting Target**– Make a casting target for exhibit and use. Target must be under 48" x 48". The bullseyes must be 2 feet, outer band must be 1 foot in diameter and can have up to 3 rings. The exhibit must be easy to store, durable, and weather resistant. Include the purpose and rules of using your casting target.

Class 4 **Wildlife Harvesting Equipment Board Exhibit**– Display of equipment used in harvesting wildlife. Ex: 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: 1) the purpose of each item, 2) when or where it is used, and 3) any personal experiences you've had with the item(s).

Class 5 **Inventing Wildlife/Fish Harvesting Equipment, Aid or Accessory**– Use engineering principles to invent or adapt equipment that helps you harvest fish or wildlife. This could include wildlife calls, adapted fishing pole for shallow water, a blind, decoys, etc. Share your drawing (or adapted plans) of how the equipment works, how you tested it and the results of testing your prototype, and any adjustments you made.

Outdoor Adventures

Display posters must be made of material, e.g. foam board or poster board and measure no larger than 22" x 28". Poster material should be sturdy enough to hold display items.

Display exhibits other than posters to be no larger than 18" x 24".

Journal/Binder exhibits measure no larger than 16" x 16".

Consider neatness and creativity.

Division 913 – Outdoor Adventures – Level 1

Pay Category #7

4-H members enrolled in the Outdoor Adventure Series can exhibit up to 8 exhibits in any of these classes. The 4-H project/manual will help you as a reference to find more information about certain fair exhibits. All posters need to be 14" x 22" or smaller.

Hiking Trails

*Class 1 **GORP**– Design your own mix of GORP. Include a recipe card with ingredients. Submit a sandwich size bag or comparable size container of GORP with your recipe card.

- *Class 2 **Backpack Selection**– Select and pack a backpack for a day hike. Include a picture of you wearing it properly adjusted, and a paper explaining what is in the backpack and the purpose of each item.
- *Class 3 **Hiking Fashion & Walkin’**– Make a poster with pictures showing your choices of clothing for the layering principle: core, second, third, and outer. Also include your footprint and what type of foot you have. Include the appropriate hiking shoes with each outfit.
- *Class 4 **First Aid Kit**– Make a first aid kit. Include a list of “First Aid Supplies” and what each item is used for.
- *Class 5 **Leave No Trace or Protect Local Resource Poster**– Design a standard size poster or a flier on the Leave No Trace concepts or protecting a local resource. For ideas visit Int.org.
- *Class 6 **Hiking/Camping Scrapbook or Journal**– Design a scrapbook recording your trips with pictures and narrations. Include other memories you have from the trip and what you learned or discovered on each trip, sketches of what you see.
- *Class 7 **Weather Safety**– Choose from weather safety directions and where to take shelter, or what different cloud formations signal. Make a poster with the previous information, and tips of how to stay safe for each type of weather.
- *Class 8 **Footprint Identification**– Make a guide to take with you hiking that helps you identify different types of footprints you can come across on a trail. Keep it small, lightweight, and weather resistant for your backpack.
- *Class 9 **Bear Bags**– Make a system to keep food away from bears/rodents in the wilderness.

Camping Adventures

- *Class 10 **Overnight Camping Trip Plan**– Plan an overnight camping trip taking into consideration all the questions on page 7 of the manual for Part I of this exhibit. For part II, share a picture story of how your plan was carried out. The format can be a report, binder, poster, or powerpoint.
- *Class 11 **Get in Gear Demo**– Design a powerpoint or movie demonstrating how to use one or two basic camping tools. Include the written copy of demonstration outline on page 12 of manual.
- *Class 12 **Camping Knots**– Make six different knots out of rope. Attach to a board (foam board or plywood) 22” x 18” or smaller. Label the name of the knot and its use in camping, backpacking, or hiking.
- *Class 13 **Leave No Trace Community Service**– Organize a cleanup or beautification of a park, camping area, or hiking trail. Share your steps in setting it up, organizing volunteers, and before and after pictures. The format can be a binder, poster, or powerpoint.
- *Class 14 **Shelter**– Create a display or poster about different types of shelters, or on the care of camping shelters. See page 19 in manual.

- *Class 15 **Menu Planning**– Prepare a menu for a three day camping trip. Use the resources at cnpp.usda.gov/mypyramid to plan a balanced menu. Prepare one of the foods on your menu, and turn in with your menu plan on 8 ½' x 11" paper.
- *Class 16 **Water Research**– Conduct research on the water in a camping area. Prepare a report that includes your findings along with recommendations for keeping water clean. See pages 26-27 in manual.
- *Class 17 **Letter to Decision Maker**– Choose an environmental issue you feel passionate about, write a letter to your representative or senator, urging them to protect the environment and keep lands wild. Print your letter (or email) on a sheet of paper, and any response sent back to you.
- *Class 18 **Recycle System**– Create a system to recycle when in the wilderness such as aluminum, plastics, paper, food scraps, etc.

Backpacking Expeditions

- *Class 19 **Create a video, photo story, or poster** on how you selected your backpack and made adjustments.
- *Class 20 **Non-Tent Backpacking Shelter**– Create a shelter of your own design to use when backpacking in wilderness areas. Include a drawing of your plans, and a picture of your shelter set up.
- *Class 21 **Leave No Trace Chart**– See pages 22-23 in manual. Make a chart of the Leave No Trace principles for different biomes. Present it on a standard size poster.
- *Class 22 **Backpacking Pyramid**– Create your own game that can be played when out on the trail. Include where your idea came from, directions on how to play, and the game itself or resources needed to play the game (such as leaves if a tree identification game).
- *Class 23 **Fitness Program**– Create a 3 month fitness plan for a backpacking/hiking trip. Make a calendar of what you will do each day. Include a title page with your name, your goal of physical fitness, and describe the hike you are training for.
- *Class 24 **Backpacking Map**– Using a topographical map, design a hike. Include landmarks, roads, shelter, and water resources. Draw out your route with starting point and orienting arrows. (pages 28-29 in manual).

Division 344 – Outdoor Adventures – Level 2

- Class 1 **Poster**– Create a poster display no larger than 22" x 28". Topics may include, but not limited to one or more of the following; how to pitch a tent, knot tying, cooking over a campfire, how to start a campfire, wildlife and plants identified while camping, how to set up emergency shelter, dealing with weather, collection of photos from camping trips, "Leave No Trace" and how that was followed while camping, plan a camping trip, camping essentials, environmental

issues/protecting natural resources, park or trail clean up, sanitation/hygiene while outdoors or use of GPS.

Class 2 Journal/Binder– Written report of virtual or actual camping/hiking trips with observations OR field journal (notes of actual experiences, sights, sounds, smells, etc.), OR camping or hiking trip diary. Explain growth in project, leading the hikes, planning the camping trip, now being able to identify the wildlife and nature around you and how identified (sight/sound/shape/smell/color). Feathers/leaf/flower pressings must be securely attached, if included. Photos or drawing of observations encouraged. Exhibits measure no larger than 16" x 16".

Class 3 Camping/Hiking Safety– Must include explanation of use of item and why selected/purpose, how it fits hiking/camping needs. May include, but are not limited to, one of the following: travel sized poisonous plants guide, camping first aid kit, weather/water safety or hand hygiene kit. Exhibits measure no larger than 18" x 24".

Class 4 Digital Media–Use digital media to show video/slideshow/presentation of setting up a tent (include why site is chosen) or protecting natural resources or environmental issues or computer video camping/hiking game. Submit a USB drive or DVD inside a report cover or notebook. If using a slideshow, include printed slides inside report cover or notebook.

Class 5 Other Camping Items– Must include what inspired the creation of the item, and its purpose. May include, but are not limited to one of the following; nature art, nature haiku poem, spider web sketches, or knot display. Exhibits measure no larger than 18" x 24".

Division 345 – Outdoor Adventures – Level 3

Class 6 Poster– Create a poster display, no larger than 22" x 28". Topics may include but not limited to one of the following: topographic map, backpacking trip plan, camp layout, plan an expedition (can be dreamed or lived), collection of photos from your expedition, trails hiked, cost comparison of rental vs purchase, or using GPS/compass.

Class 7 Journal/Binder– Written report of actual, virtual, or imagined expeditions/camping/hiking, OR field journal (notes of actual experiences, sights, sounds, smells, etc.). Explain growth in project, challenges in leading a group, teaching others about wildlife and nature identification and "Leave No Trace." Exhibits measure no larger than 16" x 16".

Class 8 Expedition Safety– Must include an explanation of use of items, why selected/purpose of item, how it meets hiking/camping/expedition needs. May include, but are not limited to: travel sized edible plants, creepy crawly guide, tent repair kit, travel first aid kit, or weather/water safety. Exhibits measure no larger than 18" x 24".

Class 9 Digital Media– Use digital media to show video/slideshow/presentation of one of the following, but not limited to: building a non-tent shelter (include why needed), packing your backpack/equipment and getting it onto you, teaching others about environmental issues, or a computer video backpacking expedition game. Submit a USB drive or DVD inside a report cover or notebook. If using a slideshow, include printed slides inside report cover or notebook.

Class 10 Other Expedition Items– Must include what inspired the creation of the item, and the purpose of the item. May include, but are not limited to: nature art, nature cinquain poem, backpacking food recipes, hiking/expedition conditioning plan, charcoal etching, dehydrated meal or snack (at least 1 cup displayed in re-sealable plastic bag with ingredients, instructions, and nutritional facts included). Exhibits measure no larger than 18" x 24".

Division 346 – Taxidermy

Pay Category #5

Resources: https://4hcurriculum.unl.edu/index.php/main/program_project/206

Class 1 Tanned Hides– 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, and 2) information about exhibitor's personal field experiences, study, or observations that relate to the exhibit.

Class 2 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: the animal's name; information about the exhibitor's personal field experiences, study, or observations that relate to the exhibit.

Division 347 – Shooting Sports

4-H Shooting Sports requires youth to be under the direct leadership of a certified 4-H Shooting Sports Leader in either shotgun, rifle (bb gun), archery, pistol, black powder/muzzleloader, and/or hunting skills. No firearms can be entered as an exhibit, nor live ammunition, however information can be shared through pictures.

Class 1 Shooting Aid or Accessory– Any item which helps the shooter/hunter better perform their sport. Examples: rifle sling, kneeling roll, arm guard, shotgun vest, target boxes, shooting stick, etc. Include your design, or plans you adapted, what the item is and used for.

Class 2 Storage Case– An item with the purpose to safely hold a firearm, bow, ammunition, and/or arrows. Examples: soft sided shotgun case, quivers, firearm safe. Include your design or plans you adapted. Explain how the storage case is used.

- Class 3 **Practice Game or Activity**– Invent or adapt an activity to practice or teach a project skill. Include pictures of youth playing the game, testimonials of members who played the game, what skill is being worked on, and directions for the game. Explain how you came up with the game or adapted it to fit the needs of your group members.
- Class 4 **Science, Engineering, Technology Advancement of Shooting Sports, Conservation, or Wildlife**
Essay or Display– Choose a specific area of shooting sports and share how it has advanced. Include a timeline and photos or illustrations. Keep your topic narrow and manageable. Essays are limited to 1,000 words and should be on 8 ½" x 11" paper.
- Class 5 **Healthy Lifestyles Plan**– Include a shooter's (hiker's camper's, angler's) diet and exercise plan, and how the 4-H member will benefit or improve from following the plan. Ideally, the 4-H member would follow the plan and include some journal entries about adaptations or improvements made while following the plan.
- Class 6 **Citizenship/Leadership Project**– Share a display on a citizenship project or leadership project the 4-H member took on individually or with a group to improve some aspect related to 4-H Shooting Sports. Examples could be range development, conservation planting to attract wildlife, a camp, or a 4-H recruitment event. Include who benefitted from the project, what the 4-H member's role was, and any results.
- Class 7 **Career Development/College Essay, Interview or Display**– Research opportunities for careers related to this area or opportunities for college majors or college activities to help discover using project skills beyond a person's 4-H career. Essays are limited to 1,000 words and should be on 8 ½" x 11" paper. Interviews need to include a picture of the interviewee in their work setting, questions asked, and a transcript of answers.
- Class 8 **Community Vitality Display**– Explore the difference shooting sports, conservation, fishing, and hunting make in keeping Nebraska vibrant especially in rural areas. Present facts and research in an interesting way for the public to learn from.
- Class 9 **Ag Literacy: Value Added Agriculture Interview or Research Project**– Explore how traditional ag producers are adding value to their production agriculture operations through conservation efforts, hunting, raising pheasants, shooting sports related tourism, etc. Present finding in an interesting way for the public to learn from.

Division 361 – Other Natural Resources

Pay Category #5

Class 1 **Design Your Own Exhibit in Natural Resources, Conservation, Geology, 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 (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 – FORESTRY

General Information

The official reference for all forestry projects is the Tree Identification Manual (4-H 332) <https://marketplace.unl.edu/ne4h/4h332.html> which was recently revised and is available for purchase from UNL Marketplace. Other helpful forestry references include Trees of Nebraska (EC 92-1774-X), Leafing Out (4-H431) and Plant a Tree (EC17-11-80). <https://marketplace.unl.edu/ne4h/leafing-out.html>

Display “boards” must be made from wood or wood composite, e.g. plywood, fiberboard, or masonite, ¼” to ½” 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 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 five of the ten 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 ten 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 ten samples are included in the display, only the first ten 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 in 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 the 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.

Resources:

Tree Identification—Learn to use a dichotomous key to classify trees; Identify common Nebraska trees

https://4hcurriculum.unl.edu/index.php/main/program_project/65

Division 901 – 4-H Flops are Educational

Pay Category #7

*Class 2 **Environmental & Earth Science** (Department D) flop in any class. Tell why it was a flop and what you learned as a result of it.

Division 320 - Forestry

Pay Category #7

- Class 1 **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, wildfire, forest products, forest wildlife, or forest pests. The only requirement is that the display must be no larger than 24” x 24” x 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.
- Class 2 **Leaf Display**– The leaf display must include samples of “complete leaves” from at least ten 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 to enhance educational value.

- Class 3** **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 the dormant season (November–April) when the buds are mature. Twig samples must be at least 6" long and exhibit buds. Leaves must be removed and side branches must be trimmed to less than 1" in length. All collection must be done by the exhibitor. *Mounting:* Twigs must be mounted on a display board. Any method, e.g. wire, glue, tape, staples, plastic bags, etc., may be used to mount twigs, but be sure all features can be clearly identified. The non-terminal end must be cut at a slant so the pith can be seen. *Labeling:* The label for each sample must include: 1.) common name 2.) scientific name 3.) leaf arrangement (for broadleaf trees) 4.) collector's name 5.) collection date 6.) collection location (be specific, state and county at a minimum). *Supplemental information:* e.g. general uses, tree characteristics, etc., may be included to enhance educational value.
- Class 4** **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 honeylocust 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. *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 seeds in the fruit, etc., may be included to enhance its educational value.
- Class 5** **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" x 4" x 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 and county at a minimum). *Supplemental information:* e.g. common products, wood density, etc., may be included to enhance educational value.

Class 6

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 fair judging day. The disc must measure 6" to 12" in diameter and 1" to 3" 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: 1.) Pith 2.) Heartwood 3.) Sapwood 4.) One growth ring (beginning and end) 5) Cambium and 6.) Bark. A separate label attached to the back of the disc must include: 7.) Common name 8.) Scientific name 9.) Tree classification (softwood or hardwood) 10.) Age (of the cross section) 11.) Collector's name 12.) Collection date 13.) Collection location (be specific, state and county at a minimum).

Class 7

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: 1.) Trunk 2.) Crown 3.) Roots 4.) Leaves 5.) Flowers 6.) Fruit 7.) Buds 8.) 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.

Class 8

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 one year old (on judging day). The display container must contain at least 8" 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 2.) scientific name 3.) seed treatments (if any) 4.) planting date 5.) emergence date 6.) collector'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 the educational value. Supplemental information will be an important factor in judging.

Class 9

Forest Product Display– Prepare a visual display and/or collection tracing the origin of one non-lumber product that comes from trees and/or forests. The display must be no larger than 24" x 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.

- The goal of this exhibit is for students to learn that many products come from trees and forests, and to explore one of these products through in-depth study.
- Information about the tree or forest product: e.g. information about harvesting, processing, industry information, and environmental or other benefits 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.
- Personal interviews with industry professionals are encouraged as a source of information.

Class 10

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" x 24" x 24". 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" x 24".

- 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 or the display that includes the exhibitor's name and age.

Class 11

Wildfire Prevention Poster– Prepare a poster, no larger than 24" x 24" 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.

Class 12

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.

Class 13

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" x 24" x 24". Photographs, drawings, samples, charges, posters, etc. can be used. Posters submitted may be no larger than 24" x 24". 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 D – AGRONOMY (CROP PRODUCTION)

Individuals in the Crop Production, Field Crops project may exhibit grain or plants or prepare an educational display representing their project. 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.

Department D – CROP PRODUCTION

(Classes 1-5) **IMPORTANT:** A completed Crop Production Worksheet (available at <https://cropwatch.unl.edu/Youth/Documents/Crop%20Production%20Project%20Worksheet%20Final.pdf>) must accompany grain and plant exhibits or they will be deducted one ribbon placing. The worksheet must include the exhibitor's name and address, county, plant hybrid or variety, plant population, whether crop production was irrigated or dryland, and general information including farm cropping history, soil type and weather effects. The worksheet also must include an economic analysis of the project, listing individual expenses and income, on a per acre basis. Other topics to discuss are the selection of variety or hybrid, impacts of tillage and conservation practices, inputs (fuel, fertilizer, irrigation, labor, pesticides, etc.), any observations made during the growing season, and what you learned from your crops project. The worksheet counts as 50% of the total when judged. Worksheet must be the original work of the individual exhibitor or it will be deducted one ribbon placing. Attach the worksheet to the entry in a clear plastic cover such that it can be read without removing it from the cover.

In addition to the worksheet, grain and plant exhibits will be judged on condition, appearance (i.e. disease and insect damage, grain fill), uniformity (size, shape, color, maturity) and quality of exhibit. Grain exhibits must be one gallon per sample. Grain exhibits harvested in the fall (e.g. corn or soybeans) may be from the previous year's project.

Plant exhibits, with the exception of ears of corn, must be the result of the current year's project. • Corn—10 ears or 3 stalks (cut at ground level with no roots or soil and bound together) • Grain Sorghum—4 stalks (cut at ground level and bound together) • Soybeans—6 stalks (cut at ground level and bound together) • Small Grains (oats, barley, wheat, triticale)—sheaf of heads 2" in diameter at top, tied with stems about 24" long • Other crops (alfalfa, millet, etc.)—sheaf of stems 3" in diameter at top, tied with stems cut at ground level or half size small square bale.

Division 901 – 4-H Flops are Educational

Pay Category #7

*Class 3 **Agronomy flop in any class.** Tell why it was a flop and what you learned as a result of it.

Department D

Division 750 – Field Crops - Grain or Plant Exhibits

Pay Category #7

- Class 1 **Corn** (includes yellow, white, pop, waxy or any other type)
- Class 2 **Soybeans**
- Class 3 **Oats**
- Class 4 **Wheat**
- Class 5 **Any Other Crop** (includes grain sorghum, alfalfa, millet, barley, rye, triticale, amaranth, dry beans, sugar beet, mung bean, canola, forage sorghum, safflower, etc.)

Department D – Field Crops

Division 750 –Displays

(Classes 6-10) 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” wide by 28” tall 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. Explain pictures and graphs clearly and concisely. Consider creativity and neatness.

Each display must have a one page essay (minimum) explaining why the exhibitor chose the area of display and what they learned from their project. Include any references used. The essay should be in a clear plastic cover with the exhibitor’s name outside. If a display does not have an essay, it will automatically be deducted one ribbon placing.

- Class 6 **Crop Production Display**– The purpose of this class is to allow original and creative exhibits that contain educational information about crop production aspects, such as crop scouting, alternative crops, pest management, etc.
- Class 7 **Crop Technology Display**– Display information about aspects of technology used in crop production, such as genetic engineering, crop breeding, GPS, yield mapping, computers, etc.
- Class 8 **Crop End Use Display**– Display information about the final product or end uses for a crop, including examples of products. (i.e. corn can be processed into livestock feed, ethanol, plastics, etc. or soybeans can be processed into bio-diesel, pet bedding, crayons, oil, etc.)
- Class 9 **Water or Soil Display**– Display information about ways to protect or conserve water and soil resources.
- Class 10 **Career Interview Display**– The purpose of this class is to allow youth to investigate a career in agronomy. Youth should interview one person that works with crops about such topics as: what parts of their job do they enjoy or dislike, why did they choose that career, what was their education, etc. Include a picture of the person interviewed.
- Class 11 **Special Agronomy Project—Educational Exhibit**— Educational exhibit based on what was learned from the project. **The crop of the year for 2023 is Tepary**

Beans. Present information on a poster 14" x 22" either vertical or horizontal arrangement or in a clear plastic report cover. The 4-H member's name, age, and county must be on the back of the poster or report cover. Refer to Scoresheet SF259. Each display must have a one-page essay (minimum) explaining why the exhibitor chose the area of display and what they learned from their project. Include any references used.

Class 12

Special Agronomy Project—Video Presentation— 4-H exhibitor designs a multimedia presentation related to the crop. **The crop of the year for 2023 is Tepary Beans.** This could include narration of the growing process, presenting facts about the crop or any other innovative multimedia practices. The presentation should be at least 2 minutes in length and no more than 5 minutes in length, appropriate graphics, sound, and either a video clip, animation, or voice over and/or original video clip. Any of the following file formats will be accepted: mp4, .mov, .ppt, or .avi.

Class 13

Special Agronomy Project (Freshly Harvested Crop)— Plant exhibits must be the result of the current year's project. Depending on the type of crop selected for the current year: **The crop of the year for 2023 is Tepary Beans.**

- Corn - 10 ears or 3 stalks (cut at ground level with no roots or soil and bound together)
- Grain Sorghum - 4 stalks (cut at ground level and bound together)
- Soybeans - 6 stalks (cut at ground level and bound together)
- Small grains (oats, barley, wheat, triticale) - sheaf of heads 2 inches in diameter at top tie with stems about 24" long.
- Other crops (alfalfa, millet, etc.) - sheaf of stems 3 inches in diameter at top tied with stems cut at ground level.

Supporting documentation (½ to 1-page in length) should include the following:

- Economic Analysis and/or research that supports feasibility of this crop in Nebraska or how the crop has evolved over time.
- Other topics to discuss are past/current commercial production of this crop. This includes: the selection of variety or hybrid, impacts of tillage and conservation practices, inputs (fuel, fertilizer, irrigation, labor, pesticides, etc.), any observations made during the growing season about this crop and what you learned from your crops project. This ½ to 1-page summary counts as 50% of the total when judged.
- In addition to the summary, grain and plant exhibits will be judged on condition, appearance (i.e. disease and insect damage, grain fill), uniformity (size, shape, color, maturity), and quality of exhibit.

Rules

1. Grain or Plant Exhibits - Classes 1-5: :

- A completed Crop Production Worksheet (available at <https://cropwatch.unl.edu/Youth/Documents/Crop%20Production%20Project%20Worksheet%20Final.pdf>) must accompany grain and plant exhibits or it will automatically

be deducted one ribbon placing. The worksheet must include the exhibitors name and address, county, plant hybrid or variety, plant population, whether crop production was irrigated or dryland, and general information including farm cropping history, soil type and weather effects.

- The worksheet also must include an economic analysis of the project, listing individual expenses and income, on a per acre basis. Other topics to discuss are the selection of variety or hybrid, impacts of tillage and conservation practices, inputs (fuel, fertilizer, irrigation, labor, pesticides, etc.), any observations made during the growing season and what you learned from your crops project. The worksheet counts as 50% of the total when judged.
- Worksheet must be the original work of the individual exhibitor or it will be deducted one ribbon placing.
- Attach the worksheet to the entry in a clear plastic cover such that it can be read without removing it from the cover. In addition to the worksheet, grain and plant exhibits will be judged on condition, appearance (i.e. disease and insect damage, grain fill), uniformity (size, shape, color, maturity), and quality of exhibit. Refer to Scoresheet SF264. Grain exhibits must be one gallon per sample. Grain exhibits harvested in the fall (e.g., corn or soybeans) may be from the previous year's project. Display containers will be furnished.
- Plant exhibits, with the exception of ears of corn, must be the result of the current year's project. - Corn - 10 ears or 3 stalks (cut at ground level with no roots or soil and bound together)
- Grain Sorghum - 4 stalks (cut at ground level and bound together)
- Soybeans - 6 stalks (cut at ground level and bound together)
- Small grains (oats, barley, wheat, triticale) - sheaf of heads 2 inches in diameter at top tie with stems about 24" long.
- Other crops (alfalfa, millet, etc.) - sheaf of stems 3 inches in diameter at top tied with stems cut at ground level or half size small square bale.

2. Displays - Classes 6-10:

- 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" wide by 28" tall 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. Explain pictures and graphs clearly and concisely.
- Consider creativity and neatness. Refer to Scoresheet SF259 Each display must have a one-page essay (minimum) explaining why the exhibitor chose the area of display and what they learned from their project. Include any references used.
- The essay should be in a clear plastic cover with the exhibitor's name outside.
- If a display does not have an essay, it will automatically be deducted one ribbon placing.

3. NEW: Special Agronomy Project –

- Youth experience a crop that is grown, was grown, or has the potential to be grown in Nebraska by growing it, researching traits of that crop, and determining viability of that crop in the part of the state they live.

- Each year, seeds will be mailed to extension offices or ag ed classrooms across the state, as ordered by that location. Offices will distribute to youth on a first-come—first-served basis. A different seed will be selected every year.
- Youth will grow seeds in their garden or pots. Written resources materials will be available for youth, in addition to virtual, live, or recorded videos/field trips.
- Youth will be eligible to enter an exhibit at both the county and/or state fair in the agronomy project area.

Department D – WEED SCIENCE

Any individual in the Conservation, Environment 1, 2 or 3, Range, Reading the Range 1 or Using Nebraska Range 2, or Crop Production, Field Crops projects may exhibit a weed book or weed display. At least 15 of the specimens must represent this year's work. For assistance identifying plants, participants can use Nebraska Department of Agriculture's Weeds of Nebraska and the Great Plains (1994) or Weeds of the Great Plains (2003).

Scoresheets, forms, contest study materials, and additional resources can be found at <https://go.unl.edu/ne4hagronomy>.

Department G

Division 751 – Books

Pay Category #7

- Plants must be mounted on sheets that are no larger than 14" wide by 14" high. Proper plant mount should include root as well as stem and leaf tissue. Plants should be glued rather than taped and the mounts should be protected with a clear cover.
- Exhibits will be judged based on completeness of plant mount, accuracy of identification, label, neatness, and conformity to exhibit 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 the order that plants were collected in your personal collection, 7) Other information depending on class selected, i.e., noxious, life form. This information should be typed or printed neatly.

Class 1 **Weed Identification Book**– A collection of a minimum of 15 plant mounts including at least two of the following prohibited noxious weeds (Canada thistle, musk thistle, plumeless thistle, salt cedar, leafy spurge, purple loosestrife, diffuse knapweed, spotted knapweed, Japanese knotweed, bohemian knotweed, giant knotweed, sericea lespedeza, or phragmites), and at least three weeds that are a problem primarily in lawns.

Class 2 **Life Span Book**– A collection of seven perennial, one biennial, and seven annual weeds.

Department G

Division 751 – Displays

Pay Category #7

- 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. Explain pictures and graphs clearly and concisely.
- Each display must have a one-page essay explaining why the exhibitor chose the area of display and what they learned from their project. Include any references used. The essay should be in a clear plastic cover with the exhibitor's name outside.

Class 3 **Weed Display**– The purpose of this class is to allow original and creative exhibits that contain educational information about weeds, such as interesting information about a weed species, the effects of weed control, herbicide resistant weeds, what makes a weed a weed, or uses for weeds.

Department D – RANGE MANAGEMENT

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, Common Grasses of Nebraska and Common Forbs and Shrubs of Nebraska. 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.

Department D

Division 330 – Books

Pay Category #7

For books, plants must be mounted on sheets that are no larger than 14" wide x 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 italics or underlined), with authority 2) Common name 3) County of collection 4) Collection date 5) Collector's name 6) Personal collection number, indicating order the 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.

Scoresheets, forms, contest study materials, and additional resources can be found at <http://go.unl.edu/ne4hrange>.

Reading the Range Learn the names of range plants; Identify and collect range plants; Explore the basics of range management
https://4hcurriculum.unl.edu/index.php/main/program_project/116.

Using Nebraska Range Study Nebraska's grassland heritage; Understand plant vigor and the effects of grazing; Identify range sites; Calculate range conditions; Understand stocking rates
https://4hcurriculum.unl.edu/index.php/main/program_project/117.

Weed Science Learn the names of range plants; Identify and collect range plants; Explore the basics of range management
https://4hcurriculum.unl.edu/index.php/main/program_project/118.

- Class 1 **Value and Importance for Livestock Forage and Wildlife Habitat and Food Book**– A collection of 12 different plant mounts, with four classified as high value, four as medium value, and four 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 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.
- Class 2 **Life Span Book**– A collection of six perennial plant mounts and six annual plant mounts selected from grasses or forbs.
- Class 3 **Growth Season Book**– A collection of six cool-season grass mounts and six warm-season grass mounts.
- Class 4 **Origin Book**– A collection of plant mounts of six native range grasses and six introduced grasses. Introduced grasses are not from North America and are often used to seed pastures.
- Class 5 **Major Types of Range Plants Book**– A collection of plant mounts of three grasses, three forbs, three grass-like, and three shrubs.
- Class 6 **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.

Department D

Division 330 - 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" X 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.

Class 7 **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 back of the poster.

Department D

Pay Category #7

Division 330 - Boards

Boards should be no larger than 30" wide by 36" tall. Boards should be adequately labeled.

Class 8 **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. This should be placed in a sheet cover attached to the board.

Class 9 **Junior Rancher Board**— This exhibit should include a ranch map with a 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.

*Class 10 **Range Plant Board**— Will include 25 range forage species important to a particular county and should include: 1.) Scientific name (in italics 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 as needed.