

GENERAL

Superintendent: Ellie Binder

Entries limited to one per class number. 4-H'ers must be enrolled in the project to exhibit in that project. Interview judging is available. Please read 4-H Exhibits section.

DEPARTMENT - CITIZENSHIP & HERITAGE

An exhibit of items, pictures, maps, charts, slide tapes, drawings, illustrations, writings, or displays that depict the heritage of the member's family or community or 4-H history. All exhibits should be labeled with name, county, age, and number of years' experience in the project.

Displays should not be larger than 22" x 28" wide. Pictures and other hanging items must have a wire hanger for display purposes. Collections should be securely displayed in an attractive container no larger than 22" x 28".

Premiums for all Heritage/Genealogy classes

PREMIUM CODE 14

LEVEL I - Division 101 - Beginning (1-4 years in project)

1. Heritage Poster or flat exhibit. Entries may be pictures, posters, items that depict family heritage. Exhibits must be supported by a written explanation.

2. Family Genealogy/History Notebook - Include pedigree charts/family group sheets, with documentation for two-three generations of one family line, expanding each year.

3. Local History Scrapbook or notebook that depicts history of local community or Nebraska that helps youth appreciate their heritage.

4. Framed Family Groupings (or individuals) of pictures showing family history. Pictures must be supported by a written explanation.

5. Other Exhibits depicting the heritage of the member's family or community. Exhibit must be supported by a written explanation. May include biographical album of themselves or another family member, family cookbooks, etc.

6. 4-H History Scrapbook relating 4-H history of local club or county, must be work of individual, no club reports.

7. 4-H History Poster relating to 4-H history of local club or county or individual.

8. Story or Illustration about a historical event.

9. Book Review about local, Nebraska or regional history.

10. Other Historical Exhibits- attach an explanation of historical importance.

11. Family Traditions Book- Exhibitor scrapbook depicting family traditions of the past.

12. Family Traditions Exhibit- Story or illustration of a family tradition or event. Exhibits must be supported by a written explanation.

13. 4-H Club/County Scrapbook-Scrapbook relating to 4-H history of local club or county compiled by club historian.

14. 4-H Member Scrapbook-Scrapbook relating to individual 4-H members' 4-H history.

15. Special Events Scrapbook-A scrapbook relating to a 4-H special event, such as Congress or CWF or a personal or family special event, such as a trip, family reunion, etc.

LEVEL II - Division 102 Advanced (over 4 years in project)

1-10. Classes 1 to 10 are the same as listed under Level I.

11. Exhibit depicting the importance of a community of

Nebraska historic landmark.

12. Community Report documenting something of historical significance from past to present.

13. Historic Collection displayed securely and attractively in a container no larger than 22" x 28".

14. Video of a family or a community event. Must be produced and edited by 4-H member. Enter as a USB.

15. 4-H Club/County Scrapbook-Scrapbook relating 4-H history of local club or county compiled by club historian.

16. 4-H Member Scrapbook-Scrapbook relating to individual 4-H members' 4-H history.

17. Special Events Scrapbook-A scrapbook relating to a 4-H special event, such as Congress or CWF or a personal or family special event, such as a trip, family reunion, etc.

AWARD AVAILABLE:

Top Family History Exhibit

CITIZENSHIP - Division 120

The purpose of these citizenship exhibits is to foster civic responsibility and action within the diverse areas of citizenship including community service, service learning, government and policy making.

Supporting Material: All entries must have a statement explaining the purpose of the exhibit. All exhibitors are encouraged to show evidence of their personal experiences, study or observations that relate to their exhibit. This helps the judges understand what the 4-H'er did and learned in the process that led to the exhibit. Displays are limited to 22" x 28" wide.

References: All exhibitors should reference material sources or supporting information used in exhibits.

Identification: All entries should be labeled with the exhibitor's name and county.

Entries: Each exhibitor is limited to one item per class.

PREMIUM CODE 14

Classes

1. Care Package Display -This exhibit is a display about the PROCESS of creating and giving a care package, not the actual care package. You may use a poster, Power Point (should be saved to a USB drive) or another multi-media program to tell about the PROCESS of developing and giving a care package to a service organization. You need to answer the following questions in your exhibit.

A) How did you select the organization?

B) What items did you include in your care package?

C) Why did you select those items?

D) How did it feel to present your care pack to the organization?

E) What did you learn from this experience?

F) Other information that you feel is important about the care package or organization.

Some examples of care packages are: Backpack for school supplies, litter pan for animal shelter items, suitcase for abuse shelter or homeless shelter, etc.

2. Citizenship Game which could include but isn't limited to symbol flash cards, question and answer board or stimulation with props. Clear instructions on how to play the game and what the game hopes to accomplish must be included.

3. Patriotic or Cultural Fine Arts can be of made any art media but should tie in the relevance of the artwork to citizenship.

4. Public Adventure Scrapbook should describe your Public Adventure or Service Learning Activity. Scrapbooks must measure no more than 16" x 16".

5. Public Adventure Poster should describe your Public Adventure or Service Learning Activity. Display posters must be stiff enough to stand when supported from behind and below. Length and width must be no more than 24" x 28".

6. Written or Recorded Stakeholder Interview should follow the outline found in the Public Adventures Curriculum. It may be written or recorded. Recordings should be saved as a .wav or .mp3 file a USB/thumb drive will be accepted.

7. Written Citizenship Essay is designed to promote good citizenship and patriotism. All essays should be 300 - 400 typewritten words.

8. For 9th-12th graders only: Oral Citizenship Essay addressing the theme "Freedom's Obligations", should be 3-5 minutes. No background music, singing or other enhancement allowed. All essays should be saved as a .wav or mp3 file; a USB/thumb drive will be accepted. Voice tone should be normal and conversational. A copy of the written essay should be attached.

9. Service Items can include but aren't limited to lap quilt, Quilt of Valor, and homemade toys. Only non-perishable items will be accepted. Attached to the exhibit should be an explanation of who the recipient was and how the service project was made and used.

10. 4-H Club Exhibit should depict what a 4-H club has done in the area of community service. This item could include, but is not limited to, a service item, poster, scrapbook, and cultural or creative arts item or care package, Quilt of Valor.

SEEING i2i - Division 130

PREMIUM CODE 15

All exhibitors are encouraged to show evidence of their personal field experiences, study or observations that relate to their exhibit. This helps the judges understand what the 4-H'er did and learned in the process that led to the exhibit.

1. Cultural Fine Arts made of any art media but should symbolize what makes them unique

2. How Are We Different? interview should follow the interview guide on page 3 and should reflect on the differences and similarities between you and the person you are interviewing.

3. Name Art should be creative art exhibit that symbolizes or explains where your name came from and what it means. Can use any media.

4. Family History depicting your family cultural history or the ethnic make-up of your community noting who were the first settlers, where did they come from, is there evidence of the background today (local celebrations, family celebrations, museum or educational displays, historical markers, etc.)

5. Cultural Food Exhibit depict a cultural food that is special to your family. Can be a story or an essay.

6. "This is Who I Am" poem

7. i2i Poster tells what you have learned through the project.

8. Biography of a Historical Figure about a person who has made a positive impact on our society or who has made a difference in the lives of others

9. Play Script written about a different culture

DEPARTMENT - COMMUNICATIONS

PREMIUM CODE 12

Division 152-Communications Module 1

COUNTY ONLY ENTRIES

1.+ Letter to relative-Write a letter to a relative asking for information about your ancestors. Use all parts of a friendly letter as outlined in the project manual.

2.+ Evaluate 2 Webpages-Using the questions on page 21 of the manual evaluate two webpages (your choice).

COMMUNICATIONS, MODULE 2 - Division 154

Use one or a combination of the experiential activities in the Communications, Module 2 curriculum to create an educational poster or essay sharing with others what you have learned. Topics may include, but are not limited to:

Identifying cultural differences in communication

Developing guidelines for internet etiquette

Evaluating another person's presentation

Identifying communication careers

Preparing a presentation using a form of technology

1. Poster. Create a poster, measuring either 22"x28" or 24"x36" that showcases what was learned in this project area.

2. Essay. Write an essay (3-5 pages) that showcases what was learned in this project area.

COMMUNICATIONS, MODULE 3

Use one or a combination of the experiential activities in the Communications, Module 3 curriculum to create an educational poster, essay, or digital media sharing with others what you have learned. Topics may include, but are not limited to:

Composing a personal resume

Completing research on a speech or presentation topic

Identifying ways to reduce risks online

Evaluating own cell phone usage and etiquette

Critiquing advertisements

Job shadowing a communication professional

3. Poster. Create a poster, measuring either 22"x28" or 24"x36" that showcases what was learned in this project area.

4. Essay. Write an essay (3-5 pages) that showcases what was learned in this project area.

5. Digital Media. Design a form of digital media (advertisement, flyer, short video or presentation, social media or web page, etc.) that showcases what was learned in this project area. Upload the digital media file to an online location (web site, Dropbox, Google Drive, YouTube, Flickr, etc.) and using the web address of the digital media file, create a QR code (using any free QR code creator, ex. qr-code-generator.com). Print the following on an 8.5"x11" sheet of cardstock: 1) the QR code, 2) 1-3 sentences about what viewers will see when they access the QR code on their mobile device.

DEPARTMENT HUMAN DEVELOPMENT - Division 200 Rules

1. Exhibitors in the Human Development project area will be asked to focus on designing toys/games/activities that meet the different needs of children.

2. Categories: are based on the Early Learning Guidelines in Nebraska which identify the important areas in which our children should grow and develop. Use the Nebraska

Department of Education website and the resources around the Early Learning Guidelines to help understand the six areas and the skills children need to develop to create your exhibit, in conjunction with your project manual. <https://www.education.ne.gov/oec/early-learning-guide-lines>

Please refer to the 4-H online resource: <http://go.unl.edu/babysittingsaline>.

All entries for Classes 1-6 should include information sheets that include the following questions and answers:

- 1) Where did I get the idea for this exhibit?
- 2) What decisions did I make to be sure exhibit is safe for child to use?
- 3) What age is this toy, game or activity appropriate for and why? (Infant, Birth-18 mos.; Toddlers, 18 mths-3 yrs.; Preschoolers, 3-5 yrs. or Middle Childhood, 6-9 yrs.) 4-H'ers must give at least 2 examples that help in understanding the appropriateness of this exhibit for the age of the child (see project manuals).
4. How is the toy, game or activity intended to be used by the child?

Information sheet for Class 8 should include:

- 1) State which ONE age group (infant, toddler, preschooler, middle childhood) the kit was prepared for.
- 2) What are children this age like? Give 2 examples to show how the kit would be appropriate for children this age.
- 3) What will the child learn or what skills will they gain by using the kit?
- 4) What item(s) were made by the 4-H'er. 4-H'er should make one or more items in the kit, but purchased items are also allowed. (It is highly suggested that an inventory list of items in the kit be included).

4-H'ers enrolled in the I HAVE WHAT IT TAKES TO BE A BABYSITTER project may enter:

Toy, game, or activity made for a selected and identified age group. Each area is a different class. Information sheet required or exhibit will be dropped a ribbon placing (Classes 1-6). PREMIUM CODE 13

- 1. Social Emotional Development**
- 2. Language and Literacy Development**
- 3. Science**
- 4. Health and Physical Development**
- 5. Math**
- 6. Creative Arts**

7. Activity with a Younger Child - Poster or scrapbook showing 4-H'er working with a child age 0 to 8 years. May show making something with the child, or child care or child interactions. May include photos, captions, story, or essay. Size of exhibit is your choice. Other people may take photos so 4-H'er can be in the photos. 4-H'er must make scrapbook or poster. No information sheet needed for class 7. (Scoresheet – SF 115)

8. Babysitting Kit – The kit should be for ONE age group (infant, toddler, preschooler, middle childhood). Purpose of the kit is for the 4-H'er to take with them when they babysit in

someone else's home. Do not make kit for combination of ages or for your own family to use. See. 4-H'er should make one or more items in the kit, but purchased items are also allowed. A list of items in the kit is suggested to be included. Display in box or bag suitable for what it contains. Approximate size not larger than 12"x15"x10". All items in kit must be safe for child to handle.

Information sheet (see above) for class is required (see the beginning of Human Development section for supporting information – Class 8 - Questions 1-4.

- 1) State which ONE age group (infant, toddler, preschooler, middle childhood) the kit was prepared for.
- 2) What are children this age like? Give 2 examples to show how the kit would be appropriate for children this age.
- 3) What will the child learn or what skills will they gain by using the kit?
- 4) What item(s) were made by the 4-H'er. 4-H'er should make one or more items in the kit, but purchased items are also allowed. (It is highly suggested that an inventory list of items in the kit be included).

4-H'ers taking any of the projects in Department C-200 may enter:

9. Family Involvement Entry. Scrapbook, poster, or story describing an activity the family did together. It might include making something such as a doll house or feed bunk. Items may be exhibited if desired. Other possibilities include a house or farm cleanup project, a family reunion, a celebration of a family milestone, a trip or vacation, moving, a community service project. Photographs are encouraged. Visuals should show family participation. Participation by all family members is important. Include a list of family members and what each person did to participate in the event. (Scoresheet – SF 115) Can these be revised or updated

4-H'ers taking GROWING ALL TOGETHER (2 or 3) may enter:

10. Growing With Others Scrapbook or poster. Examples - How to decide if it's time you can be home alone, and related activities. How responsibilities and privileges are related. Friendships. Working with others. Understanding rules and boundaries. A family tree. A family rules chart. A family meal plan, with pictures of a special family meal. A home safety checklist. Being street smart (safety). A school scrapbook showing yourself and your school activities, memories, and special interests. (Scoresheet – SF 115)

11. Growing In Communities. Scrapbook or poster. Examples: A career study. A photo story about your own growth and development, not only physically but emotionally, socially, spiritually, mentally. A television evaluation (see project manual). How you have overcome obstacles. Friendships. A community profile. A community service project. Working with parents. Teaching experiences. Understanding discipline. Playground safety check.

QUILT QUEST - Division 229

A quilted exhibit is made up of at least 3 layers. Quilts or quilted items must be quilted or tied through all layers. No fleece

blankets, please.

When judging Quilt Quest exhibits, the judges consider SF209 “Standards for Judging Quilts and Quilted Items.”

PREMIUM CODE 12

For all classes, 4-Hers can choose fabrics for the quilt by selecting fabric from fabric bolts. 4-Hers may also use “fabric collections” offered by manufacturers in a particular designer or fabric line. Examples of fabric collection include:

- **Jelly Rolls** are made of (up to) 40 different strips of 2 ½” wide fabric laying on top of one another and rolled up to look like a jelly roll. The fabric is created by one designer or fabric line and compliments each other. In many cases, less skilled 4-Hers find it difficult to cut narrow strips with a rotary cutter and ruler, so this fabric selection may make it easier as they learn.
- **Honey Buns** are made like the Jelly Rolls with 1 ½” strips of fabrics.
- **Layer Cakes** are 10” squares of fabric from a manufactured designer or fabric line with different pieces of fabric “layered” on top of one another to look like a piece of cake.
- **Charm Packs** are made of 5” squares of coordinating fabric and may be tied up with a string or scrap of fabric.
- **Candies** are 2.5” squares of fabric from a manufactured designer or fabric line.
- **Turnover** is a collection of coordinating fabrics that are cut into 6” triangles.
- **Fat Quarters** are ½ yard cuts of fabric which are cut in half to make a rectangle that is approximately 18” x 21”. (One half yard of fabric yields 2 fat quarters). The “fat quarter” can be more economical to purchase for a smaller quilt because the purchaser does not have to buy the entire yardage width.
- **Fabric Kit** is a collection of fabrics cut in large pieces to accommodate the requirements of a particular quilt pattern. The 4-Her must cut out all of the smaller squares, rectangles, etc. to make the quilt top according to the pattern directions.

After fabric selection, youth can use a variety tools for cutting the fabric and completing the quilt. Cutting into pattern pieces may include hand roller die cutting machines that cut particular shapes which can be applied to fabric. This is allowed in the construction of the quilt.

10. Exploring Quilts -illustrate some aspect of quilts or quilt making. Examples include, but are not limited to, language arts, quilts of different cultures, chemistry, design, preservation, history, and construction, math-conversion of quilt patterns, textiles/fabrics, computerization, and entrepreneurship. History may include history of an old quilt or history or research of a particular style of quilt such as Baltimore album quilts, Amish quilts, other. Exhibit may be a 14” x 22” poster, notebook, CD, PowerPoint, Prezi, DVD, YouTube, or other technique. All items in an exhibit must be attached together and labeled. No quilted items in this class.

RULES: In Classes 20, 21, and 22. Supporting information is required for these exhibits. Information must also include elements or principles of design used and steps taken to complete project. Tag templates can be found on the 4-H State Fair website, please note this is in the Home Environment

information sheet: <https://go.unl.edu/ne4hhomeenvironment>
Exhibits without supporting information will be dropped a ribbon placing.

20. Quilt Designs Other Than Fabric-2 or 3 dimensional item with quilt design made using medium other than fabric such as stained glass, paper, etc. Supporting information is required for this exhibit. Information must also include elements or principles of design used and steps taken to complete project. Tag templates can be found on the 4-H State Fair website. Exhibits without supporting information will be dropped a ribbon placing.

21. Barn Quilt- Less than 4’ x 4’. Supporting information required. See 4-H State Fair website for information.

22. Barn Quilt – 4’ x 4’ or larger. If selected for state fair, exhibitor must make arrangements to enter and pick up the exhibit at the state fair. Supporting information required. See 4-H State Fair website for information.

30. Computer Exploration-notebook or poster with a minimum of six computer generated quilt designs or color variations on a quilt design. Include information of type of program used, process used to generate designs, or how you used color to create different quilt designs. Size of poster or notebook suitable for the exhibit.

40. Wearable Art-quilted clothing or garment. Must have a recognizable amount of quilting. May include fabric manipulation. Quilting must be done by 4-H’er. On a half sheet of 8 ½ x 11 inch paper, tell how you selected the design and fabrics including whether or not you used a kit, jelly roll, charm squares, etc.

41. Inter-generational Quilt – a quilt made by a 4-H youth and family members or friends of different generations. On a half-sheet of 8 1/2 x 11 inch paper, include A) How was the quilt planned and who did what in the construction of the quilt? B) How did you select the design and fabrics including whether or not you used a kit, jelly roll, charm squares, etc.? C) What did you learn that you can use on your next project?

42. Service Project Quilt – a quilt that has been constructed by 4-H youth to be donated. On a half-sheet of 8 1/2 x 11 inch paper, include A) explanation of why the quilt was constructed and who will receive the donated quilt, B) How did you select the design and fabrics used including whether or not you used a kit, jelly roll, charm squares, etc.?

C) What did you do and what was done by others? D) What did you learn that you can use on your next project?

Guidelines for classes 50-83: Please note the description of classes. They denote degree of difficulty in construction and not the number of years in the project. All quilts must be clean and finished for intended purpose. A quilt consists of three layers: backing, batting and top. All quilts must be quilted (hand or machine) or tied. All quilt piecing and finishing must be the sole work of the current 4-H member. Quilting, whether machine or hand quilted, may be done by another individual except for the premier quilt class where quilting must be done by the 4-H’er. No pre-quilted fabric may be used. Wall quilts must have a hanging sleeve on the back of the quilt, or some method for hanging. All quilted exhibits must have a permanent label on the back in the bottom right corner with name of quilter and date of completion.

RULES: Items in classes 50-83 should have a half sheet of 8 ½ x 11 inch paper attached (use safety pin no straight pin) to lower

left corner of the back of the quilt with name of quilt maker, date, and answers to the following questions. A) How did you select the design and fabrics including whether or not you used a kit, jelly roll, charm squares, etc.? B) Tell what you did and what was done by others. C) Tell what you learned that you can use on your next project. Quilts must have a permanent label on the back in the bottom right corner with quilter's name and date of completion.

A. Small – length + width = less than 60". This class includes miniature quilts, wall hangings, table runners, placemats (4), and pillow and must be quilted.

B. Medium – length + width = from 61" to 120".

C. Large – length + width over 120".

PREMIUM CODE 2

Quilted exhibits - Pieced quilts are made up of squares or rectangles. Attach card.

50. Small

51. Medium

52. Large

Quilted exhibits -In addition to squares or rectangles, quilts may have triangles, and/or may be embroidered. Attach card.

60. Small

61. Medium

62. Large

Quilted exhibits -In addition to any of the methods in classes 50 - 62, quilts may have curved piecing, appliqué, Celtic style, stained glass style, paper piecing, art quilt style (an art quilt is an original exploration of a concept or idea rather than the handing down of a "pattern". It experiments with textile manipulation, color, texture and/or a diversity of mixed media. An Art Quilt often pushes quilt world boundaries), or other non-traditional styles. Attach half sheet explanation.

70. Small

71. Medium

72. Large

Premier Quilt-entire quilt is the sole work of the 4-H'er, including quilting (hand or machine). No tied quilts. Attach card.

80. Hand Quilted

81. Sewing Machine Quilted

82. Long Arm Quilted - non-computerized/hand guided

83. Long Arm Quilted - computerized

AWARD AVAILABLE:

Top Quilt Quest Exhibit

MAKING CENTS OF IT - Division 246

COUNTY ONLY ENTRIES

PREMIUM CODE 15

1.+ Money Objects Read the story listed on page 8 and draw and label on an 8 1/2" x 11" sheet at least 5 different objects used as money before coins and paper currency were made.

2.+ Wants & Needs Make a wants/needs poster (11" X 17") using the information on page 16 of the manual.

MY FINANCIAL FUTURE - Division 247

PREMIUM CODE 15

General Information: Entries should be typed and then attached to a piece of colored card stock or colored poster board (limit the

size of the poster board or card stock to 14" x 22" or smaller). You may use the front and back of the poster board.

Beginner/Intermediate

1. Write 3 SMART financial goals for yourself (one should be short term, one intermediate, and one long term.) Explain how you intend to reach each goal you set.

2. Income Inventory— Using page 13 as a guideline, list sources and amounts of income you earn/receive over a six month period. Answer the following questions: What were your income sources? Were there any steady income sources? What did you do with the income you received? Include your income inventory in the exhibit.

3. Tracking Expenses—Use an app or chart like the one on page 17 to track your spending over 2 months. Answer the following questions: What did you spend most of your money on? What did you learn about your spending habits? Will you make any changes in your spending based upon what you learned? Why or why not? Include your chart in your exhibit.

4. Money Personality Profile—Complete the money personality profile found on pages 21-22. Answer the following questions: What is your money personality? How does your money personality affect the way you spend/save money? Have a friend or family member complete the money personality profile. Compare and contrast (how are you alike how are you different) your money personality profile with theirs.

5. Complete Activity 8 "What Does It Really Cost?" on pages 39-40.

6 My Work; My Future – Interview three adults in your life about their careers or jobs using the questions on page 51 and record these answers. In addition, answer the following questions on your display. What did you find most interesting about these jobs? Were there any positions you might want to pursue as your career? Why/Why not? What careers interest you at this point in your life? What are three steps you need to do now to prepare for this career?

Intermediate/Advanced

7. Interview someone who is paid a salary; someone who is paid a commission; and someone who is paid an hourly wage. Have them answer the following questions plus any additional questions you may have.

*What are some benefits of receiving your pay the way you do (salary, commission, or hourly wage)?

*What are some negative outcomes for getting paid the way you do?

*Does your pay keep pace with inflation? Why do you think this?

Summarize: Based upon your interviews which payment method would suit you the best? Discuss your answer.

8. The Cost of Not Banking---Type your answers to the questions about Elliot on page 50.

9. Evaluating Investment Alternatives— complete the case study of Jorge on page 64. Answer all three questions found at the bottom of the page.

10. Understanding Credit Scores—Watch the video and read the resource listed on page 71. Answer the following questions.

*Name 3 prudent actions that can reduce a credit card balance.

*What are the main factors that drive the cost of credit?

*List one personal financial goal that you could use credit or collateral to purchase. Discuss possible consequences that might happen with improper use of credit for your purchase.

11. You Be the Teacher – Create an activity, story board, game or display that would teach another youth about “Key Terms” listed on page 62. Activity/display must include at least five (5) of the terms.

DEPARTMENT - Environmental Education/Earth Sciences

ECOSYSTEM SERVICES - Division 310 COUNTY ONLY ENTRIES

PREMIUM CODE 15

1. + Write a Story about an Ecosystem - where there are no honeybees. See page 13.

2. + Energy In/Energy Out! Display -make a display following pages 32-33.

3. + Create an Ethanol -education poster 14” x 22”. See pages 36-37.

EARTH'S CAPACITY - Division 315 COUNTY ONLY ENTRIES

PREMIUM CODE 15

5. + Book Report -Read one of the two books listed on page 6. Answer the questions on page 7 on one sheet of paper.

6. + Butterfly Observations -Observe butterflies in your area. Answer the questions on the bottom of page 23 on a sheet of paper for your exhibit.

7. + Take in the Trash -Do the Take in the Trash activity on pages 38-39. Answer the questions at the bottom of page 39 on a sheet of paper for your exhibit.

FORESTRY - Division 320

Use Tree Identification Manual 4-H 332 as reference.

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

Display “posters” must be stiff enough to stand upright without buckling. 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 Classes 2, 3, 4, and 5 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 varieties of the same species (Norway Maple) and thus have the same genus and species name, i.e. *Acer platanoides*. Remember that other general labeling standards apply, i.e. scientific names are always italicized or underlined. When required, always indicate complete scientific names and common names, even when ‘variety names’ are included. For example, the scientific name of Emerald Queen Maple is *Acer platanoides* and the common name is Norway maple. ‘Emerald Queen’ may be included as the variety name, but variety names are not required. 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.

PREMIUM CODE 13

1. Design Your Own Exhibit - Prepare an educational exhibit about some aspect of trees, forests or forestry. Examples include paper recycling, forest fire, forest products, forest wildlife, or forest pests. 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 The leaf display must include samples of “complete leaves” from at least 10 different tree species. The display must include at least two samples of simple leaves, compound leaves, and conifer leaves. Leaves should be pressed, dried, and mounted.

Collection: Whenever possible, collect leaves from mature trees. The leaf samples should also be mature, representative of the average leaves on the tree, and in good condition. Keep in mind that shaded leaves often are much larger than normal.

Carefully remove leaves from the twig with the entire petiole or rachis (if compound) intact. If twig material is included in the display sample, 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 beginning in early summer. All collection must be done by exhibitor.

During 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.

Mounting: Leaves may be displayed in a notebook or on a display board. Any method may be used to mount leaves, but be sure all their features can be clearly identified.

Labeling: Refer to 4-H 332 for labeling specifications. 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, including county and other relevant information)

Supplemental information, e.g. general uses, common products, fall color, etc., may also be included with the display to enhance its educational value.

3. Twig Display Display must include twig samples from at least 10 different tree species. The display must include at least two samples each of both 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 inches long including the terminal end, contain buds, be in good condition, and not include any leaves or petioles. Any side branches should be trimmed to less than 1 inch. 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, may be used to mount twigs, but be sure all their features can be clearly identified. Be sure to cut the non-terminal end 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, including county and other relevant information)

Supplemental information, e.g. general uses, tree characteristics, etc. may be included with the display to enhance its educational value.

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 are ripe, which varies widely depending upon tree species. For example, Silver maple seeds ripen in May while red oak acorns do not mature until September. Collect seeds that are free of insect or disease symptoms. Remember to display the seeds, and not the fruit. For example, remove and display the seed from a honey locust pod, not just the pod itself. It is acceptable to display the fruit with the seed, but clearly label each. All collection must be done by exhibitor.

Mounting: Seeds may be displayed in a variety of ways, but they must be securely mounted and easily viewed. For example, seeds might be mounted on a display board or displayed in jars in a rack. Be as creative as you like.

Labeling: The label for each sample must include:

- 1) common name
- 2) scientific name
- 3) type of fruit, if known (e.g. samara, pod or legume)
- 4) collector's name
- 5) collection date
- 6) collection location (be specific, including county and other relevant information)

Supplemental information, e.g. maturity date, average number of seed in the fruit, etc., may also be included with the display to enhance its educational value.

5. Wood Display The wood display must include wood samples from at least 10 different tree species. All collection must be done by the exhibitor.

Preparation: Samples may be of any shape, e.g. sections of a board, wood cylinders turned on a lathe, horizontal or vertical cross sections of a small log with bark attached, etc. Each sample can be no larger than 4 inches by 4 inches by 4 inches. Cut surfaces should be sanded to show the grain. Treating samples with a clear finish (no stain) is optional.

Mounting: Samples may be displayed in a variety of ways but they must be securely mounted and easily viewed. For example, wood samples may be mounted on a display board or displayed in a box or rack. 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, including county and other relevant information)

Supplemental information, e.g. common products, density, etc., may be included with the display to enhance its educational value.

6. Cross Section Display a disc cut from a tree species listed in 4H 332. The disc must measure 6 to 12 inches in diameter and 1 to 3 inches thick. The bark should be firmly attached, which may be difficult if the tree was dead when the disc was cut. Sand at least one side of the disc so the grain can be seen. The disc may be treated with a clear finish, but treat both sides to minimize warping. Some cracking or checking can be expected and is allowed. All sections should be collected by exhibitor and be collected within one year of the fair.

Labeling: The following parts must be clearly and precisely identified on the disc with pins, paper tags, etc.

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

A separate label attached to the back of the disc must include:

- 1) common name
- 2) scientific name
- 3) tree classification (softwood or hardwood)
- 4) age (of the cross section)
- 5) collector's name
- 6) collection date
- 7) collection location (be specific, including county and other relevant information)

7. Parts of a Tree Prepare a poster, no larger than 24 inches x 24 inches that identifies the main external parts of any tree: trunk, crown, leaves, roots, fruit, flowers, buds, bark. Identifying other internal parts, e.g. cambium, annual rings, etc. is optional. Attach a separate label on the back of the poster that includes the exhibitor's name and age.

8. Living Tree Exhibit a tree seedling grown by the exhibitor from seed. The seed must be from a species listed in 4H 332. The seedling must be 60 days to 1 year old (on State Fair judging day). The container must contain at least 8 inches of soil (potting mix or suitable natural soil), have drainage holes, 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) exhibitor's name

Supplemental information about the tree: e.g. where the seed was collected, growth measurements, uses for that species, etc., may be included in an attached notebook, poster, etc. Supporting information will be an important factor in judging.

9. Forest Product Display - Prepare a visual display and/r collection tracing the origin of one non-lumber product that

comes from trees and/or forests. The display must be no larger than 24 inches by 22 inches by 28 inches. Photographs, drawings, samples, charts, posters, etc. can be used. Posters submitted may be no larger than 22" x 28" and may be either vertical or horizontal. The contestant must identify what species of tree the product is derived from and where the product is harvested, grown, or otherwise collected. The product listed must be partially or fully derived from trees; if partial the approximate percentage should be articulated in the display. 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.

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 inches by 24 inches by 24 inches. Original photographs, drawings, samples, charts, posters, etc. can be used. Actual specimens are strongly encouraged but must be properly preserved, i.e. insects pinned or placed in vials of alcohol, leaves pressed and dried. Posters submitted may be no larger than 24 inches x 24 inches.

- Explain through the display what species of trees the health issue affects, diagnostic features of the issue (symptoms in trees, identifying features of the pest, etc.), and management options.
- Include common and scientific names of trees and pests.
- Supplemental information about the tree or forest health issue: e.g. origin, proliferation in Nebraska/United States, and physiological effects on the tree may be included to enhance educational value. Supplemental information will be an important factor in judging but should not exceed three printed pages of text. Cite sources of information.
- Attach a separate label on the back of the display that includes the exhibitor's name and age.

11. Wildfire Prevention Poster - Prepare a poster, no larger than 24 inches x 24 inches that promotes wildfire prevention strategies. Strategies articulated in the poster can include personal and/or land management actions. Attach a separate label on the back of the poster that includes the exhibitor's name and age.

- Supplemental information about wildfire prevention should be attached to the poster: e.g. frequency of wildfires in Nebraska/United States, financial costs of wildfires, environmental factors that contribute to wildfires, etc. to enhance educational value. Supplemental information will be an important factor

in judging but should not exceed three printed pages of text. Cite sources of information

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.

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 inches by 24 inches by 24 inches. Photographs, drawings, samples, charts, posters, etc. can be used. Posters submitted may be no larger than 24 inches x 24 inches. The tree must have been planted 60 days to 1 year before State Fair judging day. Students must obtain permission from necessary authorities and property owners before planting any trees.

- Labeling: the following information about the tree must be included in the display: 1. common name 2. scientific name 3. planting location 4. planting date 5. tree source 6. planter's name 7. proper tree planting steps 8. tree care (after planting)

Supplemental information about the tree: e.g. why the species was chosen, growth measurements, uses for that species, etc., may be included in an attached notebook, poster, etc. to enhance educational value. Supplemental information will be an important factor in judging but should not exceed three printed pages of text. Cite sources of information.

RANGE MANAGEMENT - Division 330

GENERAL INFORMATION:

Each exhibit must be properly identified with Unit and Class. Exhibits will be judged based on completeness of plant mount, accuracy of identification, labeling, neatness and conformation to project requirements. Refer to Scoresheet SF260. All plant displays and display covers must be the result of the current year's work.

Plant identification and lists of appropriate plants in each category (grasses, forbs, shrubs, and grass-like plants) can be found in the Range Judging Handbook and Contest Guide (EC150, Revised July 2016), Common Grasses of Nebraska (EC170), and Common Forbs and Shrubs of Nebraska (EC118).

For books, plants must be mounted on sheets that are no larger than 12" wide by 14" high. Plants should be glued rather than taped and the mounts should be protected with a clear cover. Proper plant mount should include root as well as stem and leaf tissue. 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. Collection number, indicating order that plants were collected. 7. Other information, depending on class selected, i.e., value and importance, life span, growth season, origin, major types of range plants. This information should be typed or printed neatly.

Scientific name: *Schizachyrium scoparium* (Michx.) Nash

Common name: Little bluestem

County of collection: Hall County

Collection date: 6 August 2011

Collector's name: Joe Smith

Collection number: 3

Value and Importance: Livestock Forage: High, Wildlife

Habitat: High, Wildlife Food: Medium

PREMIUM CODE 13

1. Value and Importance for Livestock Forage and Wildlife Habitat and Food Book - A collection of 12 different plant mounts, with 4 classified as high value, 4 as medium value, and 4 as low value for livestock forage, wildlife habitat, or wildlife food. Value and importance classifications can be found in the Range Judging Handbook and Contest Guide (EC150, Revised July 2016). 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.

2. Life Span Book - A collection of 6 perennial plant mounts and 6 annual plant mounts selected from grasses or forbs.

3. Growth Season Book - A collection of 6 cool-season grass mounts and 6 warm-season grass mounts

4. Origin Book - A collection of plant mounts of 6 native range grasses and 6 introduced grasses.

5. Major Types of Range Plants Book - A collection of plant mounts of 3 grasses, 3 forbs, 3 grass-like and 3 shrubs.

Display boards should be should 30" wide by 36" tall or if hinged in the middle a maximum of 60" wide by 36" tall. Display boards should be adequately labeled.

6. Range Plant Book - A collections 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.

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 with the scientific and common name of the plant. Put your name and 4-H county on the back of the poster. No larger than 28" x 28". The entry should be neatly titled.

8. Special Study Board - This is a display of the results of a clipping study, a degree of use study, range site study, etc.

Boards should be no larger than 30" wide by 36" tall. Boards should be adequately labeled. A short essay must accompany the display to explain the reason for the study, what was learned and study results and should be placed in a sheet cover attached to the board.

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. Boards should be no larger than 30" wide by 36" tall. Boards should be adequately labeled. A short essay must accompany the display to explain the purpose of the rancher board, what was learned, etc.

CONSERVATION & WILDLIFE - Division 340

WHAT YOU DID & LEARNED- All exhibitors will 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.

PROPER CREDIT- Show proper credit for 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, address, and parent's (or guardian's) name must be on the back or bottom of all displays.

WILDLIFE AND WILDLIFE LAWS- "Animals" or "wildlife" in the following classes includes wild fish, amphibians, reptiles, birds, or mammals. Please make sure you are following the appropriate 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 & 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") but half size, 22" by 14", is recommended.

PREMIUM CODE 9

1. Mammal Display

2. Bird Display

3. Fish Display

4. Reptile or Amphibian Display

Classes 1-4 are board or poster exhibits. Display 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.

Rules - 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.

5. Wildlife Connections 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 number (populations) change through the year. 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 make a display of what you saw.

6. Wildlife Tracks Exhibit- Three options: 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. Positive casts (impressions as they would be in nature) are preferred. Include a brief description of your experiences in making the tracks so the judge better understands what you did and learned. Board or diorama-type box exhibit.

7. Wildlife Knowledge Check- Use electrical circuits, pictures or other methods of teaching wildlife identification or other wildlife related knowledge. Maximum size 24 x 24 inches.

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 and show at least five kinds of wild animals that should occur there.

9. Wildlife Essay- 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 on a farm, in town, in a backyard, at a backyard feeder, or at other places. You might write about hunting, or fishing. The essay is between 100 and 1000 words long and should be typed, double spaced, on standard size paper (8 ½ x 11). 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. This would include aesthetic, scientific, commercial, game, genetic, and/or ecological. Follow the 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).

WILDLIFE HABITAT - Division 342

PREMIUM CODE 9

1. Houses- Make a house for wildlife. Examples: 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.

2. Feeders/Bath- Make a bird feeder or bath. Examples: seed, suet, or nectar feeders. Include the following information: 1) the kinds of animal(s) for which the water/feeder is intended, 2) where are 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 bird houses and shelves.

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.

HARVESTING EQUIPMENT - Division 343

PREMIUM CODE 10

1. Fish Harvesting Equipment- Board exhibit. Display of equipment used in fish harvesting. Example: fishing knots, hooks (with corks over ends for safety), and lures. Label all items displayed. Include a brief explanation of purpose of each item and when or where it is used and any personal experiences you've had with the item(s).

2. Build a Fishing Rod- Rod building kits with instructions are available for this purpose. May not exceed 96 inches in length. Mount on a board and label with name, county, class number. Include explanation of cost of materials/components, where materials/components were purchased, how made, and number of hours required for construction. Label all parts. Necessary components are: grip, line guides, 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.

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.

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: the purpose of each item, when or where it is used, and any personal experiences you've had with the item(s).

5. Inventing Wildlife/Fish Harvesting Equipment- 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), how the equipment works, how you tested it and the results of testing your prototype and any adjustments you made.

TAXIDERMY - Division 346

No firearms can be entered as an exhibit, nor live ammunition; however, information can be shared through pictures.

PREMIUM CODE 10

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. The exhibit should show the animal's name and include information about the exhibitor's personal field experiences, study, or observations related to the exhibit.

SHOOTING SPORTS - Division 347

PREMIUM CODE 10

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. Include your design or plans you adapted and what the item is and how it is used.

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

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 by 4-H 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.

4. Science, Engineering, Technology Advancements 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 1000 words and should be on 8 ½ x 11 paper.

5. Healthy Lifestyles Plan – Include a shooter's (camper, angler, hiker) 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.

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, Conservation or Wildlife. Examples could be range development, conservation planting to attract wildlife, a camp, or 4-H recruitment event. Include who benefitted from the project, what the 4-H member's role was, and any results.

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 1000 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.

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.

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 findings in an interesting way for the public to learn.

OTHER NATURAL RESOURCES - Division 361

PREMIUM CODE 14

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 (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.

OUTDOOR ADVENTURES – Division 343

PREMIUM CODE 9

Level 1 – County Only exhibits

11.+ Poster -Create a poster or display no larger than 22" X 28". Topics may include one of the following, but not limited to: trail map(s) you have hiked, hiking essentials, your hiking adventures, wildlife or plants observed while hiking (birds, animal prints, butterflies, etc.), plan a hike, explain "Leave No Trace" and how this was followed during hiking, collection of photos from your hikes.

12.+ Journal/Binder- Written report of actual, virtual or imagined trail(s) hiked with observations, OR field journal

(notes of actual experiences, sights, sounds, smells, etc.), OR camping trip diary. Feathers/leaf/flower pressings must be securely attached if included. Photos or drawings of observations encouraged. Exhibits measure no larger than 16" X 16".

13.+ Hiking Safety - Must include explanation of use of item, why selected/purpose of item and how it meets hiking needs. May include, but are not limited to, one of the following: a compact hiking safety kit, homemade compass or homemade water purifier. Exhibits measure no larger than 18" X 24".

14.+ Hiking Adventures Game - Create a game of trails of outdoor adventures. Must be educational on one or more aspects of hiking, must include clear instructions as to the purpose and what can be learned by playing the game. Exhibits measure no larger than 18" X 24".

15.+ Other Hiking Items - Must include what inspired the creation of the item and its purpose. May include, but are not limited to one of the following: hiking backpack, nature art, nature poem or story, homemade hiking snack mix displayed in a re-sealable plastic bag. (include why ingredients were selected and nutritional value). Exhibits measure no larger than 18" X 24".

Level 2

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.

2. Journal/Binder - Written report of actual, 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".

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".

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.

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".

Level 3

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.

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".

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".

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.

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 a re-sealable plastic bag with ingredients, instructions, and nutritional facts included). Exhibits measure no larger than 18" X 24".

Rules - See General Rules.

· 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.

DEPARTMENT - Healthy Lifestyles SAFETY - Division 440

PREMIUM CODE 15

1. First Aid Kit- Assemble according to instructions in 4-H 425, pages 6 and 7 of the Citizen Safety Manual (refer to score sheet SF 110). A written description of the kit's purpose, purpose of each item, and a colored labeled inventory list of contents is required. Any kit containing prescription medications (can be included only on the written list-- do not put in kit), dated material that has expired at date of judging, or any controlled substance will be disqualified.

2. Disaster Kit- Disaster kit of materials to prepare a person or

family for emergency conditions caused by a natural or man-made incident. Selection of materials is left to the exhibitor. Family or group kits must have enough material or items for each person. A description of the kit's purpose and a list of individual contents are required. Please include short explanation of water needs for your disaster kit. Do not bring actual water to the fair in the kit. (Contact office for a copy of score sheet.)

3. Safety Scrapbook- To consist of 15 news articles from both print and internet about various incident types. Mount each clipping on a separate page accompanied by a description of events leading to the accident and any measure that might have prevented this kind of accident. Should be bound in a standard size hardcover binder or notebook for 8 ½" x 11" paper. Correct sentence structure, readability and thorough explanations are an important part of judging.

4. Safety Experience- Share an experience you had related to safety such as first aid or first responder training, farm safety day camp, babysitting workshop; or youth's response to an emergency situation. Provide details of the experience, the youth's role, evidence of the youth's leadership in the situation and a summary of the learning that took place. Exhibits may be a poster with supplemental documentation, a notebook including up to 10 pages of narrative and pictures, or a multimedia presentation on a CD lasting up to five minutes.

5. Careers in Safety Exhibit should identify a specific career in safety and include: education and certification requirements, salary, demand, and summary of the youth's interest in the field. Some examples of careers in safety: firefighters, paramedics, emergency management, law enforcement, etc. Exhibit may be a poster with supplemental documentation, a notebook including up to 10 pages of narrative and pictures, or a multimedia presentation on a CD lasting up to five minutes.

FIRE SAFETY - Division 450

PREMIUM CODE 15

1. Fire Safety Poster- This is a home floor plan drawn to scale showing primary and secondary escape routes and where fire extinguishers and smoke detectors are located. Draw every room, including all doors and windows. Use black or blue arrows showing primary escape routes from each room. Use red arrows showing secondary routes to use if the primary routes are blocked. Primary and secondary escape routes must lead outside to an assembly location. Documentation should include evidence the escape plan has been practiced at least four times.

2. Fire Safety Scrapbook- This scrapbook will contain at least 10 news articles from print and/or internet sources about fires. Each clipping will be mounted on a separate page and include description of events leading to the incident and measures that could have prevented it. The scrapbook should be bound in a standard hard cover binder or notebook for 8 ½" x 11" paper. Correct sentence structure, readability and thorough explanations are an important part of judging.

3. Fire Prevention Poster- Use poster board at least 11" x 14" but not larger than 22"X28" for posters that could be used during National Fire Safety week or at special times of the year (i.e. Christmas, Halloween, camping, 4th of July). Originality, clarity and artistic impression will all be judged. Do not include live fireworks, matches or other flammable/explosive/hazardous materials. Any entry containing this material will be disqualified.

DEPARTMENT – Entrepreneurship ESI - Division 531

General Information:

All exhibits are directly related to activities in the project manual. Refer to the manual for ideas, suggestions and additional information to enhance project exhibits.

All static exhibits must have received a purple ribbon at the county fair to advance to the State Fair.

Exhibit Guidelines:

The 4-H member's name, age, town and county must be listed on the back of the exhibit. Entry cards should be stapled (not paper-clipped or taped) to the upper right-hand corner of posters.

If exhibit is a poster, it must be 14" x 22" and may be arranged either horizontally or vertically. Poster may not use copyrighted materials, such as cartoon characters or commercial product names.

Exhibits which do not conform to size or content guidelines will be lowered one ribbon placing. Posters may include photographs, charts or examples as well as a written explanation.

Posters may be laminated to protect them. Loose plastic coverings used to protect the exhibit while being transported will be removed by the superintendent for evaluation and display.

PREMIUM CODE 13

ESI Unit 1 Discover the E-Scene

For classes 1-3, follow guidelines for posters.

1. Interview an entrepreneur. Share what you learned from the person about starting and running a business or how they deliver excellent customer service. How will what you have learned through this interview change your future plans or ways of thinking about business? (based on pages 2.1 - 2.4 of manual)

ESI Unit 2 The Case of ME

2. Social Entrepreneurship Presentation. Prepare a five slide power point presentation about a social entrepreneurship event to benefit a group or individual in your community. Submit a printout of the note pages which show each slide and include an explanation of each slide. Enter exhibit in a report cover with fasteners (no slide bars). Refer to 2.4 of Unit 2 The Case of Me for ideas.

ESI Unit 3 Your Business Inspection

3. Marketing Package (mounted on a 14" x 22" poster) must include at least three items (examples) developed by the 4-H'er from the following list: business card, brochure, advertisement, business promotional piece, printout of an internet home page, packaging design, signs, logo design, direct mail piece, etc. The marketing package should be for an original business developed by the 4-H'er and not an existing business.

4. Original Product with an information sheet (8 ½" x 11") answering the following questions:

- 1) What did you enjoy the most about making the product?
- 2) What challenges did you have when making the product? Would you do anything differently next time? If so, what?
- 3) What is the suggested retail price of the product? How did you decide on the price?
- 4) Market analysis of the community-data gathered through a survey of potential customers. Use the three questions on page 3.3 and survey at least 10 people in your community about your product.
- 5) How much would you earn per hour? Show how you determined this figure.

6) What is unique about this Product?

5. Photos of an Original Product (mounted on a 14" by 22" poster) must include three photos of developed product and a mounted information sheet answering the following questions.

1. What did you enjoy the most about making the product?
2. What challenges did you have when making the product? Would you do anything differently the next time? If so, what?
3. What is the suggested retail price of the product? How did you decide on the price?
4. Market analysis of the community – data gathered through a survey of potential customers. Use the three questions on page 3.3 and survey at least 10 people in your community about your product.
5. How much would you earn per hour? Show how you determined this figure.

6. What is unique about this product?

If exhibiting in both Class 4 and Class 5, products must be entirely different products.

PREMIUM CODE 11

6. Entrepreneurship Challenge – Take on the entrepreneurship challenge. Entrepreneurship Challenge is open to 4-H'ers enrolled in any of the three units of ESI. Complete five (5) or more of the challenges from the following list. The exhibit will include highlights from these five (5) challenges. Consider labeling each challenge so the viewer will understand what the challenge was. Enter a poster, video, report or scrapbook related to the learning from the challenge. Use your creativity to show and share what you learned. Select your five (5) challenges from the list below:

1. Sell something.
2. Introduce yourself to a local entrepreneur and take a selfie with them.
3. Be a detective! Look for Nebraska-made products and find out more about the business.
4. Tour 2 - 3 entrepreneurial businesses and create a photo story.
5. Investigate what it takes to be an entrepreneur (Skills Assessment ESI 4.1.)
6. Make a prototype (sample/model) of a new product idea. (Include the prototype or a photo of prototype.)
7. Work with a friend to develop a new business idea!
8. Contact your local Extension Office to learn about entrepreneurship opportunities.
9. Create an activity to teach others about entrepreneurship (coloring page, puzzle, game, etc.)

DEPARTMENT - Agronomy FIELD CROPS - Division 750

GENERAL INFORMATION:

The purpose of these exhibits is to demonstrate to the public the benefits from the study and application of crop, weed, and range and soil sciences to solving problems in management, conservation, sustainability and environmental protection. For guidelines on specific projects, refer to appropriate project manuals.

A. IMPORTANT: A completed crop production worksheet must accompany grain and plant exhibits. You can download the worksheet

here:

<https://go.unl.edu/cropproductionprojectworksheet>. The

worksheet must include the exhibitors name and address, county,

plant hybrid or variety, plant population, whether crop production was irrigated or dry land, 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. 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 Score sheet SF259.

B. 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 at state fair.

C. 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.

PREMIUM CODE 15

CROPS - Division 750

1. Corn (includes yellow, white, pop, waxy, or any other type)

2. Soybeans

3. Oats

4. Wheat

5. Any other crop (includes grain sorghum, alfalfa, millets, barley, rye, triticale, amaranth, dry beans, sugar beet, mung bean, canola, forage sorghum, safflower, etc)

DISPLAYS

A. 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 24" wide by 24" 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.

B. 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.

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.,

7. Crop Technology Display - Display information about aspects of technology used in crop production, such as genetic engineering, crop breeding, GPS, yield mapping, etc.

8. Crop End Use Display - Display information about final product or end uses such as food, feed, fuel, or other products for example corn can be processed into livestock feed, ethanol, plastics, etc. or soybeans can be processed into bio-diesel, pet bedding, crayons, oil, etc. This should not be about the process of crop production, but focus on an end product.

9. Water or Soil Display - Display information about water or soils, such as how soils are being used for crop production, range, conservation, wildlife, or wetland use, or ways to protect or conserve water and soil resources,

10. Career Interview Display The purpose of this class is to allow youth to investigate a career in agronomy. Youth should interview 1 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.

11. Special Agronomy Project -Educational Exhibit (SF259)- Educational exhibit based on what was learned from the project. 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, full address, 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.

12. Special Agronomy Project -Video Presentation - 4-H exhibitor designs a multimedia presentation related to the crop. 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.

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:

- 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.

WEED SCIENCE - Division 751

A. Any individual with a range or conservation project may exhibit a weed book. At least 15 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).

B. Exhibits will be judged based on completeness of plant mount, accuracy of identification, label, neatness, and conformity to exhibit requirements. See score sheet SF261.

C. Plants must be mounted on sheets that are no larger than 12" wide x 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. Each completed mount must have a 3"x 5" cardstock label glued flush in the lower right corner of the mounting sheet. The label (see example below) 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 indicating order that plants were collected, 7. Other information depending on class selected, i.e., noxious, life form. This information should be typed or printed very neatly.

PLANTS OF NEBRASKA

Scientific name: *Abutilon theophrasti* Medik.

Common name: Velvetleaf

County of collection: Lancaster County

Collection date: 6 July 2016

Collector's name: Dan D. Lion

Collection number: 3

Life cycle: Annual

PREMIUM CODE 13

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

2. Life Span Book - A collection of 7 perennial, 1 biennial and 7 annual weeds.

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 24" by 24" 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.

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, effects of weed control, herbicide resistant weeds, what makes a weed a weed, or uses for weeds.

DEPARTMENT - Science & Technology ENTOMOLOGY - Division 800

Specimens to be mounted properly and labeled with the date and location of collection, name of collector, and order. Follow mounting and labeling instructions in the Nebraska 4-H Entomology Manual. Purchased and other insects - not collected by a 4-H'er can be included, but must have accurate labels and will not be counted in meeting minimum requirements for the exhibit. Box not to be more than 12" high x 18" wide x 3" deep. Scoresheets, forms, contest study materials, and additional resources can be found at

<https://go.unl.edu/ne4hentomology>.

PREMIUM CODE 8

1. Entomology Display, First-Year Project. To consist of 25 or more different kinds (species) of insects representing at least 6 orders. Limit of one box.

2. Entomology Display, Second-Year Project. To consist of a minimum of 50 kinds (species) of insects representing at least 8 orders. Replace damaged or poorly mounted specimens. At least 25 species should be from after July 1 of previous year. Limit of 2 boxes.

3. Entomology Display, Third or More Year Project. To consist of a minimum of 75 kinds (species) representing at least 10 orders. Replace damaged or poorly mounted specimens. At least 25 species should be from after July 1 of previous year. Limit of 3 boxes.

4. Special Interest Display or Advanced Insect Display. Educational display developed according to personal interests and/or advanced identification capability. This also is an opportunity to highlight favorite insects in a creative arrangement. Insects should conform to pinning and mounting standards as in Classes 1-3 and be protected in an insect box. Each specialty display should include names of the insects, interesting information about them, and why the display was made. Advanced identification collections should have insects grouped with labels that correspond with identification level (e.g. family, genus, and species). A specialty collection may consist of insects by taxonomic group (e.g. butterflies, grasshoppers, dragonflies, scarab beetles) or by host, subject or habitat (e.g. insect pests of corn, aquatic insects, insect mimicry, insect galls, insects from goldenrod, insect pollinators).

5. Insect Habitats Consists of any hand-crafted objects, made of natural or artificial materials, placed outdoors, which promote or conserve insects in the environment. Insects may include bee pollinators, butterflies, beneficial insects, etc. A one-page report describing activities must accompany the exhibit.

6. Macrophotography Subjects should be insects, spiders or

other arthropods, or any nests, webs or constructions they make. All exhibit prints should be 8 ½" by 11" and mounted on rigid, black 11" by 14" poster or matt board. Either orientation is acceptable. No frames or mat board framing is allowed. A caption of a few sentences should explain the subject, and be printed on white paper, and glued below the print on the poster board.

7. Insect Poster/Display Exhibits can be posters or three-dimensional displays, and artistic creativity is encouraged. Posters should be no larger than 22" x 28". They should be instructional and can be attractive and have pictures, drawings, charts, or graphs. Posters and displays may show any aspect of insect life, habitat, or related conservation or management.

Examples include life history and other facts about an insect; insect anatomy; how to manage insects in a farm, home, lawn, or garden setting; experiences rearing one kind of insect; survey of an important insect; insect behavior (ex. nesting, finding food, mobility, defenses, etc.); habitats (e.g. forests, grasslands, wetlands, rivers, or lakes) and what insects are found there, etc. Three-dimensional displays, such as dioramas, sculptures, models or decorative boxes should have a page of explanatory information accompanying them and fit within a 22" x 28" area.

8. Reports or Journals should be in a 3-ring binder. A report may be informational, that is, an original article about a favorite insect, a history of insect outbreaks, diseases caused by insects, insects as food, etc. Or, it may be a research report about an investigation or experiment done in a scientific manner. It then should have a basic introduction of the insect studied, methods used, observations, and results of the project. Tables, graphs and images are helpful to include. A journal is an observational study over a period of time with personal impressions. It may cover watching changes in kinds of butterflies over the summer, rearing a specific insect from egg to adult, managing a bee hive, observations of insects in a specific habitat, accounts of insect behavior in a forest or flower garden, etc.

SPECIAL ENTOMOLOGY PROJECT - H810

1. Special Entomology Project Educational exhibit based on what was learned from the project. Present information on a poster no larger than 22" x 28" either vertical or horizontal arrangement or in a clear plastic report cover. The 4-H member's name, age, full address, and county must be on the back of the poster or report cover. Reports may include life cycle, distribution of the insect, insect behavior (ex. nesting, finding food, mobility, defenses, etc.); habitats (e.g. forests, grasslands, wetlands, rivers, or lakes). May include a certain species or broad overview of the family or group of insects.

2. Special Entomology project display - The current years' Special Entomology Project pinned species along with a one to two report of what was learned from researching the insect type. Reports may include life cycle, distribution of the insect, insect behavior (ex. nesting, finding food, mobility, defenses, etc.); habitats (e.g. forests, grasslands, wetlands, rivers, or lakes). May include a certain species or broad overview of the family or group of insects.

Rules - The insect of the year for 2022 is the tiger beetle.

ANIMAL SCIENCE EDUCATION – Division 90

4-H'ers create a poster highlighting an educational aspect of their animal project. The poster could focus on a current livestock issue, animal industry career, animal care or health, economic impacts of the livestock industry.

Posters should increase the education experiences of both the member and the general public increasing agricultural literacy. Poster should be sturdy enough to advance to state fair for display in the livestock barn, and be no larger than 22 x 28 inches. Entries must match the specie of livestock the exhibitor has entered at the county fair. Species include dairy, beef, sheep, swine, goat, poultry, or rabbit.

PREMIUM CODE 13

100.+ Educational Displays

VETERINARY SCIENCE - Division 840

The purpose of the Veterinary Science display is to inform the public regarding a common health problem of animals or a veterinary principle. Do not confuse veterinary science exhibit topics with animal husbandry or production topics. Exhibits can be posters or displays.

Posters: sends simple and direct message. A poster should not exceed 22" x 28" and may be either vertical or horizontal.

Displays: May include a 3-dimensional exhibit, a scale model, the actual product (i.e. Skeleton, teeth, samples of leather, fur, or dried skin damaged by disease or parasites), or a notebook. Displays are not posters. A display may be mounted on poster board not to exceed 22" x 28" or on 1/4" plywood or equivalent that does not exceed 24" high or 32" wide.

If photos are to be part of the exhibit, remember that they will be viewed by the public. Make sure that the photographs are in good taste and will not be offensive to anyone. Graphic photographs of excessive bleeding, trauma or painful procedures are not appropriate. For exhibits related to veterinary surgical procedures, aseptic techniques need to be shown, for example, use of drapes, use of sterile procedures, wearing of gloves, and other appropriate veterinary medical practices.

First-Aid Kits: Because of public safety concerns and risk of theft of first-aid kit contents (veterinary drugs/equipment) with perceived potential for drug abuse, animal first aid kits containing any drugs or medications will be immediately disqualified and not displayed. First Aid kits wishing to include medication information should instead utilize written descriptions, photographs, drawings, computer generated print-outs, or empty packaging of pharmaceuticals.

Appropriate vet science topics include: maintaining health, specific disease information, photographic display of normal and abnormal characteristics of animals, animal health or safety, public health or safety, proper animal management to ensure food safety and quality, efficient and safe livestock working facilities, or other. All references need to be properly cited.

PREMIUM CODE 13

- 1. Vet Science Large Animal Poster or Display**
- 2. Vet Science Small Animal/Pet Poster or Display**

AEROSPACE - Division 850

General Instructions

1. The name and county of each exhibitor should appear separately on the back of each board, poster or article and on the front cover of the notebooks so owner of the exhibit may be identified if the entry tag is separated from the exhibit.

2. Rockets must be supported substantially to protect the rocket from breakage. Rockets are to be mounted on a base that has dimensions equal or less than 12" x 12" and the base should be 3/4" thick. No metal bases. If the rocket fins extend beyond the edges of the required base (12" x 12"), then construct a base that is large enough to protect the fins. The base size is dictated by the size of the rocket fins.

3 The rockets must be mounted vertically. Please do not attach sideboards or backdrops to the displays. In addition, a used engine or length of dowel pin is to be glued and/or screwed into the board and extended up into the rockets engine mount to give added stability.

4. Rockets must be equipped as prepared for launching, with wadding and parachute or other recovery system. Rockets entered with live engines, wrong base size or sideboards will be disqualified.

5. A report, protected in a clear plastic cover, must include: 1) rocket specification (include original or photo of manufacture packaging stating rocket skill level), 2) a flight record for each launching (weather, distance, flight height), 3) number of launchings, 4) flight pictures 5) Safety (how did you choose your launch site? Document safe launch, preparations, and precautions) 6 objectives learned and 7) conclusions.

6. The flight record should describe engine used, what the rocket did in flight and recovery success. Points will not be deducted for launching, flight or recovery failures described. This includes any damage that may show on the rocket. Complete factory assembled rockets will not be accepted at the State Fair.

7. Judging is based upon display appearance, rocket appearance, workmanship, design or capabilities for flight, number of times launched and report. Three launches are required to earn the maximum launch points given on the score sheets. For scoring for the State Fair, only actual launches count, misfires will not count towards one of the required three launches.

- For self-designed rockets only, please include digital recorded copy of one flight. In the documentation please include a description of stability testing before the rocket was flown.
- Skill level of project is not determined by number of years in project. Skill level is determined by the level listed on the manufacturing packaging.
- 4-H Rocket project levels are not intended to correspond to National Association of Rocketry model rocket difficulty ratings or levels.

8. High power rockets (HPR) is similar to model rocketry with differences that include the propulsion power and weight increase of the model. They use motors in ranges over "G" power and/or weigh more than laws and regulations allow for unrestricted model rockets. These rockets are NOT appropriate for 4-H projects and will be disqualified.

9. Posters can be any size up to 28" by 22" when ready for display. Example: tri fold poster boards are not 28" by 22" when fully open for display.

PREMIUM CODE 15

ROCKETS/AEROSPACE

PRE-FLIGHT - Unit 1

COUNTY ONLY ENTRIES IN UNIT 1

9. + Any rocket or exhibit made using skills from Unit 1.

10. + Space Buggy - use household items to make a spacecraft. On a piece of paper draw your design and briefly explain the jobs your space buggy can do.

11. + Space Station - build a model space station include plans drawn on paper. Describe how a scientist would use your space station.

Rules

1. Youth enrolled in Aerospace 2, 3, or 4 may exhibit in any class within this division.

LIFT OFF - Unit 2

1. Rocket - (SF92) - Any Skill Level Rocket with wooden fins and cardboard body tubes painted by hand or air brush.

2. Aerospace Display - (SF93) - Poster or display board that displays or exemplifies? one of the principles learned in the Lift Off project. Examples include: display of rocket parts and purpose, explains the parts of a NASA rocket or shuttle, interview of someone in the aerospace field, or kite terminology. Include notebook containing terminology (definition), and what was learned. Display can be any size up to 28" by 22".

3. Rocket - (SF92) - Any Skill Level Rocket with wooden fins and cardboard body tubes painted using commercial application, for example: commercial spray paint.

Self-Designed Rocket

4. Rocket (SF92) Any self-designed rocket with wooden fins and cardboard body tubes.

Drones

5. Drone Poster - Exhibit must be designed to educate yourself and others on one or more of the following topics: drone technologies, uses of drones, the different types of drones, types of training needed to operate drones, and the laws and regulations users must follow. Posters can be any size up to 28" by 22".

6. Drone Video - Exhibit must demonstrate how the drone interacts with the outside world. Examples include: field scouting, surveying damage from natural disasters, drones used in commercial applications and settings, and drones used for structural engineering. Video should not exceed 5 minutes. Videos selected for state fair should be submitted to Amy Timmerman at atimmerman2@unl.edu by August 15th, 2022. Videos should also be uploaded to a video streaming application and exhibitors must provide a hard copy QR code for viewing.

MODELS - Division 855

COUNTY ONLY ENTRIES

PREMIUM CODE 15

1.+ Exhibit will consist of two models built in this project. One must be an auto with interior, engine and chassis painted. You may paint more than this if desired. Both models are to be mounted together on Styrofoam. You may use background accessories, figures, etc. if you want.

LEGOS – Division 865

COUNTY ONLY ENTRIES

PREMIUM CODE 17

2.+ Lego/K'nex Purchased Kit-

PREMIUM CODE 15

3.+ Lego/K'nex Original Design- no kits included in exhibit

4.+ Lego/K'nex Diorama- Include 1 or more items, kit or original design in setting/scene, maximum 18" x 24" base. Ex: cardboard box with sides/top partially cut down for display purposes.

COMPUTER - Division 860

Computer posters shall be mounted on a 14" x 22" poster either in a vertical or horizontal arrangement. Please put your name and county on the back of all exhibits.

PREMIUM CODE 13

COMPUTER MYSTERIES – Unit 1

COUNTY ONLY ENTRIES IN UNIT 1

15. + Computer Art Poster (Black & White)- exhibit should be created on at least 8 ½" x 11" paper using a commercially available graphics software package and a single-color printer-plotter.

16. + Computer Art Poster (Color)- exhibit should be created on at least 8 ½" x 11" page using a commercially available graphics software package and a color printer-plotter.

17. + Slide show or Movie -using digital technology on a CD. Contact the Extension Office for software compatibility prior to entry.

Rules

1. The name and county of each exhibitor should appear separately on the back of each board, poster or article and on the front cover of the notebooks so owner of the exhibit may be identified if the entry tag is separated from the exhibit.

2. Demonstration boards should include an overall title for the display, plus other necessary labeling.

3. Reports should be written using the scientific method whenever possible (Background, the Question or hypothesis, what you plan to do and what you did, Method used and observations, Results: what you learned.) All reports should be computer generated and enclosed in a clear plastic cover. The reports should be attached securely to the display.

4. Reports should be written using the scientific method whenever possible (Background, the Question or hypothesis, what you plan to do and what you did, Method used and observations. Results: What you learned. All reports should be computer generated and enclosed in a clear, plastic cover. The reports should be attached securely to the display.

5. Please refer to the General Rules for the policy regarding firearms, items with a blade, and other related items.

6. Please refer to the General Rules for the policy regarding use of copywritten images.

7. Premier 4-H Science Award is available in this area.

8. Team Entries: To qualify for entry at the Nebraska State Fair team materials entered in H860007 - Maker Space/Digital Fabrication must clearly be the work of a team instead of an individual, and must have at least 50% of all team members enrolled in 4-H. Additionally, all enrolled 4-H members on the team should complete and attach an entry tag to the materials. A supplemental page documenting the individual contributions to

the project should be included. The entry will be judged as a team, with all team members receiving the same ribbon placing.

COMPUTER MYSTERIES – Unit 2

1. Computer Application Notebook - (SF277) - 4-H exhibitor should use computer application to create a graphic notebook utilizing computer technology. 4-H'er may create any of the following: greeting card (5 different cards such as a birthday, wedding, anniversary, sympathy get well or other); a business card (3 cards for 3 different individuals and businesses); menu (minimum of 2 pages including short description of foods and pricing); book layout (I-book); promotional flyer (3 flyers promoting 3 different events); newsletter (minimum 2 pages); or other: examples such as precision farming or family business logo etc. This exhibit consists of a notebook (8.5x11 inches) which should include a (1) a detailed report describing: (a) the task to be completed, (b) the computer application software required to complete the task, (c) specific features of the computer application software necessary for completing the task (2) print out of your project. Project may be in color or black and white.

2. Produce a Computer Slideshow Presentation - (SF276) - Using presentation software a 4-H exhibitor designs a multimedia computer presentation on one topic related to youth. All slide shows selected for state fair should be emailed to Amy Timmerman atimmerman2@unl.edu before August 15. Files must be saved in a PC compatible format with county name and last name of participant before emailing. OR the slide show may be shared through a share link or QR code which is included in the notebook. A notebook with a printout of all the slides should be submitted. Slideshow should include a minimum of 10 slides and no more than 25. Incorporate appropriate slide layouts, graphics, animations and audio (music or voice and transition sounds do not count). Each slide should include notes for a presenter. All slideshows must be up loaded.

COMPUTER MYSTERIES – Unit 3

3. Produce an Audio/Video Computer Presentation - (SF276) - Using presentation software a 4-H exhibitor designs a multimedia computer presentation on one topic related to youth. All presentations selected for state fair should be emailed to Amy Timmerman atimmerman2@unl.edu before August 15. OR the presentation can also be uploaded to a video streaming application and exhibitors must provide a hard copy QR code for viewing. The presentation must be able to be played and viewed on a PC using Windows Media Player, Real Player, iTunes or QuickTime Player. A notebook with a printout of all the slides should be submitted. 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.

4. How to STEM (Science, Technology, Engineering and Math) Presentation - (SF276) - Youth design a fully automated 2 to 5 minute 4-H "how to" video. Submissions should incorporate a picture or video of the 4-H'er, as well as their name (first name only), age (as of January 1 of the current year), years in 4-H, and their personal interests or hobbies. Videos should be designed for web viewing or may be uploaded to a video streaming application and exhibitors can provide a hard copy QR

code for public viewing. . Any of the following formats will be accepted: .mpeg, .rm, .wmv, .mp4, .mov, .ppt, or .avi.

5. Create a Web Site/Blog or App - (SF275) - Design a simple Web site/ blog or app for providing information about a topic related to youth using either software programs such as an HTML editor like Microsoft's FrontPage or Macromedia's Dreamweaver, and image editor like IrfanView or GIMP OR online using a WIKI such as Google Sites. If the Website, Blog, or App isn't live include all files comprising the Website, Blog or App should be submitted on a flash drive in a plastic case along with the explanation of why the site was created or may be shared through a hard copy share link or QR code for viewing. If developed using a WIKI or other online tool include a link to the website in the explanation of why the site was created.

6. 3D Printing

3D printing uses plastic or other materials to build a three-dimensional (3D) object from a digital design (including 3D Pen Creation). Youth may use original designs or someone else's they have redesigned in a unique way. Exhibits will be judged based on the motivation and/or problem identified. For example, 3D objects printed as part of the design process for robot or other engineering project. Must include design notebook that addresses the following questions:

1. What was the motivation for your design or the problem you were solving with your design? ie. is your item a functional or decorative piece?
2. Please include a picture of original design, citation of designer/website OR if design is completely original (you created it using CAD software), then state that it's original. If item was not completely original, indicate what you did to the original design to modify it to better meet the design problem stated in #1 above. Its design was modified multiple times, please indicate what change was made with each modification, and what prompted the need for the change. I.e. I printed it and the design was too fragile, so I resliced the print to make thicker external walls, or to have a denser infill.
3. Define your process for designing/printing. What software and/or hardware was used (indicate type of 3D printer or if item was created with 3D pen)?
4. What materials were selected for your project?
5. If your final design has any moving parts, define how you determined appropriate allowance in your design.
6. Identify any changes that you would make to improve your design.

7. Maker Space/Digital Fabrication - (SF1051) - This project is a computer generated projected created using a laser cutter, vinyl cutter, heat press or CNC router. Vector or 3D based software such as Corel Draw or Fusion 360 would be an example of an appropriate software used to create your finished project. Project should include a notebook with the following:

1. What motivated you to create this project
2. Software and equipment used
3. Directions on how to create the project
4. Prototype of plans
5. Cost of creating project
6. Iterations or modifications made to original plans
7. Changes you would make if you remade the project

Team Entry Option: To qualify for entry at the Nebraska State Fair team materials entered in H860007 – Maker Space/Digital Fabrication must clearly be the work of a team instead of an individual, and must have at least 50% of all team members enrolled in 4-H. Additionally, all enrolled 4-H members on the team should complete and attach an entry tag to the materials. A supplemental page documenting the individual contributions to the project should be included. The entry will be judged as a team, with all team members receiving the same ribbon placing.

ELECTRICITY - Division 870

If using a display board it should be a height of 24 inches and not to exceed 1/4" in thickness. A height of 23 7/8" is acceptable to allow for the saw kerf (width) if two 24 inch boards are cut from one end of a 4' X 8' sheet of plywood. Nothing should be mounted within 3/4" of the top or bottom of the board.

PREMIUM CODE 13

COUNTY ONLY ENTRIES IN UNIT 1 & 2

ELECTRICITY - Unit 1

14.+ Any Display/Item Based On What You Learned in Unit 1

ELECTRICITY - Unit 2

17.+ Any Display/Item Using Skills Learned in Unit 2.

ELECTRICITY- Unit 3

1. Electrical Tool/Supply Kit - Create an electrical supply kit to be used for basic electrical repair around the house. Include a brief description of each item and its use. Container should be appropriate to hold items.

2. Lighting Comparison - Display studying the efficiency of various lighting (incandescent, florescent, halogen, Light Emitting Diodes, etc.). Exhibit could be a poster display, or an actual item.

3. Electrical Display/Item - Show an application of one of the concepts learned in the Wired for Power project. Examples include: re-wiring or building a lamp, re-wiring or making a heavy duty extension cord or developing an electrical diagram of a house. Exhibit could be a poster display, or an actual item.

4. Poster - should exemplify one of the lessons learned in the Wired for Power Project. Posters can be any size up to 28" x 22".

ELECTRICITY - Unit 4

5. Electrical/Electronic Part Identification - Display different parts used for electrical/electronic work. Exhibit should show the part (either picture or actual item) and give a brief description, including symbol of each part and its function. Display should include a minimum of 10 different parts.

6. Electronic Display - Show an application of one of the concepts learned in the Electronics project. Examples include: components of a electronic device (refer to p. 35 of the Electronic manual).

7. Electronic Project - Exhibit an electronic item designed by the 4-H'er or from a manufactured kit that shows the electronic expertise of the 4-H'er. Examples include: a radio, a computer, or a volt meter.

8. Poster - should exemplify one of the lessons learned in the Entering Electronics Project. Posters can be any size up to 28" x 22".

ROBOTICS - Division 861

Youth enrolled in Virtual Robotics, Junk Drawer Robotics (Levels 1, 2, or 3), Robotics Platforms may exhibit in any class within this division.

Rules

1. The name and county of each exhibitor should appear separately on the back of each board, poster or article and on the front cover of the notebooks so the owner of the exhibit may be identified if the entry tag is separated from the exhibit.

2. Reports should be written using the scientific method whenever possible (Background, the Question or hypothesis, what you plan to do and what you did, Method used and observations, Results: what you learned. All reports should be computer generated and enclosed in a clear plastic cover. The reports should be attached securely to the display.

3. Posters can be any size up to 28" by 22" when ready for display. Example: tri fold poster boards are not 28" by 22" when fully open for display.

PREMIUM CODE 14

Team Entries: To qualify for entry at the Nebraska State Fair team materials entered in robotics classes that are clearly the work of a team instead of an individual must have at least 50% of all team members enrolled in 4-H. Additionally all enrolled 4-H members on the team should complete and attach an entry tag to the materials. A supplemental page documenting the individual contributions to the project should be included. The entry will be judged as a team, with all team members receiving the same ribbon placing.

Creating a video of your robot in action would be helpful for the judges but is not mandatory present as a CD Rom with your robot entry.

1. Robotics Poster - Create a poster (14" X 22") communicating a robotics theme such as "Robot or Not", "Pseudocode", "Real World Robots", "Careers in Robots" or "Autonomous Robotics", "Precision Agriculture" or a robotic topic of interest to the 4-H'er.

2. Robotics Notebook – Explore a robotics topic in-depth and present your findings in a notebook. Documentation should include any designs, research, notes, pseudocode, data tables or other evidence of the 4-H'ers learning experience. The notebook should contain at least three pages. Topics could include a programming challenge, a programming skill, calibration, sensor exploration, or any of the topics suggested in Class 1.

3. Robotics Video – This class should be displayed in a notebook. The notebook should include a video clip on a CD/DVD that demonstrates the robot performing the programmed function. Include your pseudo code and screenshots of the actual code with a written description of the icon/command functions.

4. Robotics /Careers Interview – Interview someone who is working in the field of robotics and research the career in robotics .Interviews can either be written or in a multimedia format (CD/DVD). Written interviews should be in a notebook. Written reports should be 3 to 5 pages, double spaced, 12 point font, and 1" margins. Multimedia reports should be between 3 to 5 minutes in length.

5. Robotics Sensor Notebook – Write pseudo code which includes at least one sensor activity. Include the code written and explain the code function.

6. Build a Robot (may use kit) – Include a robot and notebook including the pseudocodes for at least one program you have written for the robot, the robot's purpose, and any challenges or changes you would make in the robot design or programming. Robots will not be displayed in locked case. Consider entering under Robotic video class 3.

7. Kit Labeled Robot (cannot be programmed) and Notebook – This class is intended for explorations of robotic components such as arms or vehicles OR educational kits marketed as robots that do not have the ability to be programmed to “sense, plan and act.” The exhibit should include a notebook with the robot the youth has constructed. Included in the notebook should be (1) a description of what the robot does, (2) pictures of programs the robot can perform, (3) why they chose to build this particular form, and (4) how they problem solved any issues they might have had during building and programming. A picture story of assembly is recommended.

8. 3D Printed Robotics Parts This class is intended for youth to create parts, through 3D printing, to help create their robot or aid the robot in completing a coded function. Project should include notebook describing the process used to create the project, describe the success of your designed piece (did it work), intended use of the product and the modifications made to the item.

GEOSPATIAL - Division 880

Youth enrolled in Geospatial may exhibit in any class within this division.

Rules

1. The name and county of each exhibitor should appear separately on the back of each board, poster or article and on the front cover of the notebooks so owner of the exhibit may be identified if the entry tag is separated from the exhibit.
2. Reports should be written using the scientific method whenever possible (Background, the Question or hypothesis, what you plan to do and what you did, Method used and observations, Results: what you learned. All reports should be computer generated and enclosed in a clear plastic cover. The reports should be attached securely to the display.

3. Please refer to the General Rules for the policy regarding firearms, items with a blade, and other related items.

4. Please refer to the General Rules for the policy regarding use of copywritten images.

PREMIUM CODE 15

1. Poster – Create a poster (14" x 22") communicating a GPS theme such as How GPS or GIS works, Careers that use GPS or GIS, How to use GPS, What is GIS, GPS or GIS in Agriculture, Precision Agriculture, or a geospatial topic of interest.

2. 4-H Favorite Places or Historical Site Poster – The 4-H exhibitor identifies a favorite place or historical site (including grave sites) in Nebraska. Exhibit should include latitude and longitude, digital picture, and local area map. Poster size should not exceed 22" x 30".

3. GPS Notebook – Keep a log of at least 5 places visited using a GPS enabled device. At least one site should be from a community other than where you live. For each site, record the latitude, longitude and elevation. Also include a description of the site, a paragraph explaining what was interesting about the site or finding it. Photos of each site and/or cache are optional but

encouraged.

4. Geocache – Assemble a themed geocache. Each geocache should include a logbook and pencil for finders to log their visits and may include small trinket, geocoins, etc. for the finders to trade. Documentation should include a title, teaser description and the geographic coordinates of Intended placement. Register the site a geocaching.com and include a print-out of its registry.

5. Agriculture Precision Mapping – Create a notebook that will include a minimum of two data layers that can be used in precision agriculture to identify spatial patterns and/or correlations (printed copies of websites where applications can be purchased is acceptable). Report how the analysis of the various data will be used to make a management decision.

6. 4-H History Map – include in a note book: Preserve 4-H History: Nominate a Point of Interest for the 4-H History Map Project: include copy of submitted form in folder or notebook. To nominate a site for the 4-H history map please go to <http://arcg.is/1bvGogV>. For information about 4-H history go to http://4-hhistorypreservation.com/Repos_National.asp. For a step by step video on nominating a point, please go to this link: <http://tinyurl.com/nominate4h> Write a brief description of historical significance of 4-H place or person. (a minimum of one paragraph).

7. GIS Thematic Map – Using any GIS software, create a thematic. Thematic maps can utilize any subject of interest to the 4-H'er.

Example map would be Amelia Earhart's or Sir Francis Drake's voyage population density maps, water usage maps or 4-H project in Nebraska. Create GIS Map using data from books, and or internet. Use reliable data, (U.S. Center or U.S. Census Bureau etc.) Map any size from 8.5" x 11" up to 36" x 24", should include Title, Base Map, Neat Line, North Arrow, and Legend. Identify the source of your information on the back of map.

ENERGY - Division 900

PREMIUM CODE 15

Rules

1. The name and county of each exhibitor should appear separately on the back of each board, poster or article and on the front cover of the notebooks so owner of the exhibit may be identified if the entry tag is separated.

2. Reports should be written using the scientific method whenever possible (Background, the Question or hypothesis, what you plan to do and what you did, Method used and observations, Results: what you learned. All reports should be computer generated and enclosed in a clear plastic cover. The reports should be attached securely to the display.

3. Posters can be any size up to 28" by 22" when ready for display. Example: tri fold poster boards are not 28" by 22" when fully open for display.

1. Create and Compare Energy Resources Poster-Poster should explore 2 alternative/renewable energy resources. Compare and contrast the 2 resources including two of the following information: amount of energy created, costs of production, usability of the energy, pros/cons of environmental impacts, etc. Posters can be any size up to 28" by 22"

2. Experiment Notebook - Notebook will explore the scientific method involving alternative/renewable energy sources. Information required 1.) Hypothesis 2.) Research 3.) Experiment 4.) Measure 5.) Report or Redefine Hypothesis.

3. Solar as Energy Display - Item should be the original design of the 4-Her. Include the item, or a picture if item is in excess of 6' tall or 2' X 2'. Include a notebook of why the item was designed and how it harnesses the power of the sun. Examples include solar ovens, solar panels, etc.

4. Water as Energy Display - Item should be the original design of the 4-Her. Include the item, or a picture if item is in excess of 6' tall or 2' X 2'. Include a notebook of why the item was designed and how it harnesses the power of water.

5. Wind as Energy Display – Item should be the original design of the 4-Her. Include the item, or a picture if item is in excess of 6' tall or 2' X 2'. Include a notebook of why the item was designed and how it harnesses the power of wind.

6. Other Nebraska Alternative Energy -Notebook should explore Nebraska an alternative energy source besides wind, water, and solar power. Include information on type of power chosen, infrastructure for distribution, what resources are needed to create this alternative resource, cost of production, and potential uses of bio-products.

WOODWORKING - Division 911

PREMIUM CODE 6

Rules

1. The name and county of each exhibitor should appear separately on the back of each board, poster or article and on the front cover of the notebooks so owner of the exhibit may be identified if the entry tag is separated from the exhibit.

2. Requirements: All articles exhibited must include a plan (with drawings or sketch or blueprints) stating dimensions and other critical instructions a builder would need to know how to build the project. Plans may include narrative instructions in addition to the dimension drawings and include any alternations to the original plan. Part of the score depends on how well the project matches the plans. If the plans are modified, the changes from the original need to be noted on the plans. All plans used for making the article must be securely attached and protected by a clear plastic cover.

3. 4-H'ers must be in Unit 3 or Unit 4 for the exhibit to be considered for State Fair. All projects must have appropriate finish.

4. If the project (i.e. picnic tables, wishing wells, swings, chairs, bridges, doghouses, etc.) is designed to be used outside and is selected for state fair, it will be displayed outside.

5. All outside projects MUST have entry tag and supporting information placed in a protective bag to prevent damage from weather events such as rain and be ATTACHED to projects with string, zip ties, etc.

Nailing it Together: Unit 3

1. Woodworking Article - (SF91) - Item should be made using either joints, hinges, dowels, or a dado joining made using skills learned in the Nailing It Together manual. Item is required to be appropriately finished. Examples include: bookcase, coffee table or end table.

3. Recycled Woodworking Display - (SF95) – Article made from recycled, reclaimed or composite wood. Article must be appropriately finished and/or sealed and utilize one or more woodworking techniques from page 2 of the Unit 3 manual. Exhibit must include the woodworking plan and a minimum one-page report of how the engineering design process was used to develop the woodworking plan. Engineering Design Process 1. State the problem (Why did you need this item?) 2. Generate possible solutions (How have others solved the problem? What other alternatives or designs were considered?) 3. Select a solution (How does your solution compare on the basis of cost, availability, and functionality?) 4. Build the item (What was your woodworking plan, and what processes did you use to build your item?) 5. Reason for article finish (What type of finish, how did you finish or why you choose this finish?) 6. Evaluate (How does your item solve the original need?) 7. Present results (How would you do this better next time?)

4. Composite Wood Project - (SF96) - 60% of the project must be wood and 40% made from other materials such as metal, rubber, resin, etc. All plans and plan alternations must be attached to the article. Protect plans with a cover. If project is designed to be outside it is required to have appropriate outdoor finish because project may be displayed outside.

5. Outdoor Wood Project made with Treated Wood - (SF97) - Treated wood projects DO NOT have to have a finished coating. All plans and plan alternations must be attached to the article. Protect plans with a cover. If project is designed to be outside. Examples include: picnic tables, planters, outdoor furniture, etc.

Finishing Up: Unit 4

6. Woodworking Article - (SF91) Item made using skills learned in the Finishing It Up Project. Examples include: dovetailing, making a pen using lathe, overlays, using a router, etc. Item is required to be appropriately finished.

8. Recycled Woodworking Display - (SF91) Article made from recycled, reclaimed or composite wood. Article must be appropriately finished and/or sealed and utilize one or more woodworking techniques from page 2 of the Unit 4 manual. Exhibit must include the woodworking plan and a minimum one-page report of how the design and engineering process was used to develop the woodworking plan. 1. State the problem (Why did you need this item?) 2. Generate possible solutions (How have others solved the problem? What other alternatives or designs were considered?) 3. Select a solution (How does your solution compare on the basis of cost, availability, and functionality?) 4. Reason for article finish (What type of finish, how did you finish or why you choose this finish?) 5. Build the item (What was your woodworking plan, and what processes did you use to build your item?) 6. Evaluate (How does your item solve the original need?) 7. Present results (How would you do this better next time?)

COUNTY ONLY ENTRIES IN UNITS 1 & 2 WOODWORKING 1

9.+ Article - Select from Unit 1 or use comparable plans from other sources.

WOODWORKING 2

10.+ Article-Select from Unit 2 or comparable plans from other

sources.

compare on the basis of cost, availability, and functionality?) 4)

WELDING - Division 920

PREMIUM CODE 9

SET WELDING

Rules

1. The name and county of each exhibitor should appear separately on the back of each board, poster or article and on the front cover of the notebooks so owner of the exhibit may be identified if the entry tag is separated from the exhibit.
2. All welds exhibited in class 1 or 2 must be mounted on a 12" high x 15" long display board of thickness not to exceed 3/8". Attach each weld on a wire loop hinge or equivalent, so the judge can look at the bottom side of the weld when necessary. Each weld should be labeled with information stated 1) type of welding process (stick, MIG, TIG, Oxy-Acetylene, etc.) 2) kind of weld, 3) welder setting, 4) electrode/wire/rod size, and 5) electrode/wire/rod ID numbers. Attach a wire to display board so it can be hung like a picture frame. No picture frame hangers accepted.
3. Fabricated board such as plywood, composition board, or particle-type lumber may be used for demonstration displays.
4. Demonstration boards should be sanded and finished to improve their appearance. The finish on a demonstration board will be judged as a woodworking exhibit.
5. Reports should be written using the scientific method whenever possible (Background, the Question or hypothesis, what you plan to do and what you did, Method used and observations, Results: what you learned. All reports should be computer generated and enclosed in a clear plastic cover. The reports should be attached securely to the display.
6. If no plans are included with welding art, welding article, welding furniture or composite weld project item will be disqualified.
7. All outside projects MUST have entry tag and supporting information placed in a protective bag to prevent damage from weather events such as rain and be ATTACHED to projects with string, zip ties, etc.

SET WELDING

6. **Plasma Cutter/Welder Design** - (SF279) – Plasma cutters/welders allowed for detailed design(s) to butt cut into metal. 4-H members will create a notebook describing the design process to create the "artwork" to butt cut into metal. In the notebook include: 1) A photo (front and back) of the finished project; 2) Instructions on how the design was created (include software used), this allows for replication of the project; 3) Lessons learned or improvements to the project; 4) Steps to finish the project.
7. **Composite Weld Project** - (SF280) - 60% of the project must be welded and 40% made from other materials such as wood, rubber, etc. **Type of welder, welder settings, all plans, plan alternations, and a bill for material must be attached to the article.** Protect plans with a cover. If project is designed to be outside it is required to have appropriate outdoor finish because project may be displayed outside.

ARC WELDING

1. Welding Joints - (SF281) - a display of one butt, one lap and one fillet weld.

. 4-H Welding Project Tips and Suggestions For Class 1

1. All welds should be made with the same electrode/wire/rod size and number.
2. Welds should be made only on one side of metal so penetration can be judged.
3. Welds should be cleaned with chipping hammer and wire brush. Apply a coat of light oil (penetrating oil) to the metal to prevent rusting. Wipe off excess oil.
4. It is suggested that all welds be on the same size and thickness of metal. These pieces, referred to as coupons, should be 1.5 to 2 inches wide and 3.5 to 4 inches long. A good way to get this size is to buy new cold rolled strap iron and cut to length. The extra width is needed to provide enough metal to absorb the heat from the welding process and prevent the coupons from becoming too hot before the bead is completed. Narrower coupons will become very hot, making an average welder setting too cold at the bead start, just about right in the middle, and too hot at the end. The correct way to weld narrow strips is to make short beads and allow time to cool, however this project requires a full length bead.
5. Stick welding: Suggested coupon thickness - 1/4" if using 1/8" rod. Suggested rod-AC and DC straight or reverse polarity- first E-7014, second E-6013
6. MIG welding: Suggested coupon thickness - 1/4" if using .035 wire and 1/8" if using .023 wire

2. Position Welds - (SF281) - a display showing three beads welded in the vertical down, horizontal and overhead positions.

. Welding Project Tips and Suggestions For Class 2

1. It is suggested that all welds be on same size and thickness of metal. These pieces are referred to as coupons. The welds can be on one coupon that is about 4" x 4" or on individual coupons that are about 2" x 4" inch and 1/4" thick. Suggested rods for this class of position welds for AC and DC straight or reverse polarity is, first E-6013, second E-7014 and E-6010 for DC reverse polarity only.
2. Welds should be cleaned with a chipping hammer and wire brush. Apply a coat of light oil (penetrating oil) to the metal to prevent rusting. Wipe off excess oil.
3. 4-H Welding Project Tips and Suggestions: Class 3 & 4 1. All welds should be cleaned and protected from rust with paint or light oil. Plans are to be complete enough that if they were given to a welding shop, the item could be made without further instructions. Bill of materials should include a cost for all items used including steel, electrodes, paint, wheels, etc.
3. **Welding Art** – (SF283) – any art created using tack welds to hold the metal pieces together (examples include horseshoe projects). Type of welder, welder settings, all plans, plan alternations, and a bill for material must be attached to the article. Protect plans with a cover. If project is designed to be outside, it is required to have appropriate outdoor finish.
4. **Welding Article** - (SF281) - any shop article where welding is used in the construction. 60% of item must be completed by 4-Her and notes regarding laser welding or machine welding must be included. **Type of welder, welder settings, all plans, plan alternations, and a bill for material must be attached to the article.** Protect plans with a cover. If project is designed to be outside it is required to have appropriate outdoor finish

because project may be displayed outside.

5. Welding Furniture - (SF282) – any furniture with 75% welding is used in the construction. 60% of item must be completed by 4-Her and notes regarding laser welding or machine welding must be included. **Type of welder, welder settings, all plans, plan alternations, and a bill for material must be attached to the article.** . Protect plans with a cover. If project is designed to be outside it is required to have appropriate outdoor finish because project may be displayed outside.

AWARD AVAILABLE

Top General Area Exhibit

**DEPARTMENT -County Only
ALL ENTRIES IN LET'S CREATE CRAFTS,
SCRAPBOOKING, JEWELRY, LEADERSHIP, &
MISCELLANEOUS ARE COUNTY ONLY AND NOT
CONSIDERED FOR STATE FAIR**

LET'S CREATE CRAFTS - Division 265

Exhibits in this section are not eligible for state fair and will not be judged. Each entry will receive a participation ribbon and a \$1.00 premium. Each exhibitor may bring up to three entries. Ideas for exhibits include crafts made using some type of material such as: appliqué, clay, leather, weaving, painting, paper, plastic, glass, holiday, etc.

PREMIUM CODE 18

- 1.+ First Entry**
- 2.+ Second Entry**
- 3.+ Third Entry**

SCRAPBOOKING - Division 268

- 1.+ Scrapbook**

JEWELRY - Division 270

- 1. + Leather**
- 2. + Hemp**
- 3. + Beaded**
- 4. + Metal**
- 5. + Other**

LEADERSHIP UNIT 1, 2 AND 3 - Division 275

4-H'ers will develop exhibits that show what they have learned and may include but is not limited to: Posters, 14 inches by 22 inches; notebooks, 8½ inches by 11 inches; PowerPoint with copy of slides; scrapbook, any size; or any other means that would best show skills learned in the project. Leadership manuals include My Leadership Workbook for grades 3-5, My Leadership Journal for grades 6-8; and My Leadership Portfolio for grades 9-12.

PREMIUM CODE 17

- 1.+ My Treasure Chest** Develop an exhibit that shows your skills as a leader and/or skills that you would like to achieve to become a better leader.
- 2.+ Leader Essay** Write an essay that identifies a local, regional, state or national leader; discussing their strengths and weaknesses as a leader and leadership characteristics.
- 3.+ Plan a vacation** Follow guidelines from My Leadership Workbook, pages 26-27, on Step Out and Step Inward Activities to help you develop a vacation timeline to depict what needs to

be completed to have a successful vacation. Exhibit could be a poster, notebook or calendar with steps listed and dated.

4.+ Goal setting Write three goals you want to achieve. When writing your goals consider what actions you must take to reach these goals, how you are going to do it and when you are going to do it. Make sure all your goals include all three parts.

5.+ Interview a Leader Interview a leader or a person close to you. What is very important to them? Explain an activity or event they enjoy. Why is it important? Who is important to them, and why? What leadership characteristics do they possess? What are their strengths and weaknesses as a leader? What would they like to improve? How will what you have learned through this interview change your future plans or way of thinking about leaders? What can you apply to your own life and how? Exhibit can be recorded or written and should include the questions asked and the responses.

6.+ Career Essay Choose a career and job shadow in that career. Write an essay to share your experience and what you learned. What type of leadership skills did this person utilize in their position? What goals will you set as a result of this experience?

7.+ Decisions, Decisions, Decisions Explore an issue and develop recommendations on how you should respond to the issue. Examples: homelessness, school violence, community improvement or any other topic facing youth today.

8.+ Youth Leadership Experience Share what you have learned while participating in a youth leadership role through photos and narrative. May cover a single event or ongoing experience.

9.+ Educational Display or Poster about Leadership

MISCELLANEOUS- Division 940

This is for any 4-H entry completed in conjunction with a 4-H project or 4-H workshop that does not fit in another class. Please ask an Extension Educator for more information.

PREMIUM CODE 15

- 1. + County eligible only**
- 2. + County eligible only**