

basic idea. This class includes any educational displays, exhibits or science fair type projects which DO NOT have a power source, i.e. exhibits, posters or displays of wire types, conduit types, electrical safety, tool or motor parts identification or electrical terminology. Educational displays and exhibits must be legible from a distance of four feet, using a maximum tri-fold size of 3' x 4'.

Small Engines

All Exhibits should involve engines smaller than 20 horsepower.

Displays are limited to 4' wide and 4' deep - both upright and floor displays.

- Display - Exhibit a display, selecting one of the following options:
 1. A display identifying different engine or lawn and garden equipment parts or a display showing the function of the various engine or lawn and garden equipment parts.
 2. A display identifying and explaining the function(s) of different special tools needed for small engine work.
 3. A display illustrating and providing the results of any one of experiments that are included in the project books. No complete engines, lawn tractors, tillers, chainsaws are permitted for display. Maximum tri-fold size is 3' x 4'.

- Maintenance - Exhibit a display that illustrates either:
 1. Routine maintenance procedures
 2. Diagnosing and troubleshooting specific problems in an engine. No complete engines, lawn tractors, tillers, chainsaws, etc. are permitted for display, using a maximum tri-fold size of 3' x 4'.

- Operation - Exhibit an operable small engine (no more than 20 HP) overhauled or rebuilt by the member. Include maintenance schedule for the engine and a brief description of steps taken by the member overhauling or rebuilding the engine. Maximum tri-fold size of 3' x 4'. Engine should contain no fuel in tank or carburetor.

Alternative Energy

All exhibits in this division are limited in size to standard, tri-fold, display boards (36" x 48") and items may not extend beyond 12" from the back board. All displays must be self-standing.

- Educational Display - Create an exhibit that addresses a focused topic related to power generated from a renewable energy source. The purpose of the exhibit is to inform and create awareness.
- Experiment - Display an experiment addressing a problem or question related to power generated from a renewable energy source. Include hypothesis, background research, variables, a control, data, findings, conclusions and recommendations for future study.

- Only specimens of class Insecta should be included. Purchases insects are not to be exhibited in collections, but may be used in educational displays.
- Specimens of soft bodied insects such as aphids, lice, termites, etc. should be exhibited in alcohol filled vials.

***83 Entomology Shadow Box**

- Not eligible for state fair. 11x14 shadow box or 18 x 24 x 3.5inch wooden display box with plexiglass top, minimum of 15 species representing at least 3 orders. Follow labeling and arrangement guidelines above.

4900 Beginning I Entomology Collection

- Display in one standard box a minimum of 50 and a maximum of 125 species representing at least 7 orders. Follow general guidelines above

4901 Beginning II Entomology Collection

- a. Display in one standard box a minimum of 75 and a maximum of 150 species representing at least 9 orders. Follow general guidelines listed for Collections.

4903 Intermediate Entomology Collection

- a. Display a minimum of 100 and a maximum of 300 species representing 10 orders. Two standard boxes can be used. Follow the general guidelines listed for Collections. In addition, family identification is required for all insects in any two of the following six orders: (only two will be counted for judging)
 - i. “Insects in Kansas” book - Orthoptera, Hemiptera, Homoptera, Coleoptera, Hymenoptera, and/or Diptera or
 - ii. “Insect in Kansas Book: 2016 Revised Taxonomy”, which follows www.bugguide.net - Odonata, Orthoptera, Hemiptera, Coleoptera, Hymenoptera, and/or Diptera

On paper list what you did to improve your collection during the current year. Examples: insects you add or replace; orders and/or families added; what Leadership you provided in this project; and/or what insects studied. Attach paper to the *front* of one of the display boxes.

4905 Advanced Entomology Collection

Display a minimum of 150 and a maximum of 450 species representing at least 12 orders. Three standard boxes can be used. Follow the general guidelines listed for Collections. Family identification required for all insects belonging to the six basic orders outlined under the intermediate phase. Family identification of insects in the remaining orders is optional, but desirable as long as accuracy is maintained. On paper list what you did to improve your collection during the current year. Examples: insects you add or replace; orders and/or families added; what Leadership you provided in this project; and/or what insects studied. Attach paper to the *front* of one of the display boxes.

NOTEBOOK CLASSES

- Display in a three-ring notebook for competition.
- 4-Hers may choose to use one of two taxonomies:
 - As printed in “Insects in Kansas” book or
 - As printed on the “Insects in Kansas Book: 2016 Revised Taxonomy” which follows www.bugguide.net.
- identify the notebook by placing a Title Page in the front of the notebook bearing the exhibitor’s name, county or district and class 4-Her is enrolled in and statement of taxonomy used. The number of orders, specimens and families (required in Intermediate and Advanced classes) must also be included on the Title Page.
- Specimen pages should be grouped according to order and should include one page per species. If more than one insect is in the photo, an arrow to indicate identified insect should be used.
- Date, common name, full county name, state abbreviation and collector name should be included for each species. Collector’s Name on the specimen page is optional.
- Specimen pages should have two different views of the insect if possible. If pictures are taken on different dates/localities, include information for both.
- Statement describing the habitat where found/host plant may be included and is encouraged and will be worth bonus 10 points total, not per page. A divider page is to be placed in front of each order of insects with the order name printed on the tab for the page and also on the front of the divider page.
- For the Intermediate and Advanced classes, insects are also to be grouped by family behind each order divider.
- If the exhibitor has been in the same class for more than one year, a separate sheet of paper needs to be added stating how many years the exhibitor has been in this class of the project and what the exhibitor did this year to improve their notebook. Place the paper just behind the Title Page in the front of the notebook.
- A special project must be completed each year and included. Refer to publication “Entomology Collection Notebook Guidelines” on the KS 4-H Entomology webpage for more details.

4907 Introductory Entomology Notebook

- a. Display a minimum of 10 and a maximum of 30 insect species representing at least 6 different orders. Follow the general guidelines listed for Notebooks, including the Special Project.

4908 Beginning Entomology Notebook

- a. Display a minimum of 20 and a maximum of 60 insect species representing at least 7 different orders. Follow the general guidelines listed for Notebooks, including the Special Project

4909 Intermediate Entomology Notebook

- a. Display a minimum of 60 and a maximum of 100 species representing at least 9 different orders. In addition, family identification is required for all insects in any two of the following six orders: (only two will be counted for judging)
 - i. "Insects in Kansas" book - Orthoptera, Hemiptera, Homoptera, Coleoptera, Hymenoptera, and/or Diptera or
 - ii. "Insect in Kansas Book: 2016 Revised Taxonomy", which follows www.bugguide.net - Odonata, Orthoptera, Hemiptera, Coleoptera, Hymenoptera, and/or Diptera

4910 Advanced Entomology Notebook

- a. Display a minimum of 100 and a maximum of 200 species representing at least 12 different orders.. Family identification is required for all insects belonging to the six basic orders as outlined under the Intermediate phase. Only families in the above 6 orders will be counted for judging. Family identification of insects in the remaining orders is optional, but desirable as long as accuracy is maintained.

EDUCATIONAL DISPLAYS

- Share with others what you learned in this project. Exhibit any activity or learning experience related to the field of entomology or the Teaming with Insects curriculum that does not fit into Entomology Collection or notebook classes above.
- The exhibit may be, original works, digital presentations, programs, websites, games, apps, display box, notebook, display or poster which you have made.
- If the exhibit is a wooden display box, it must be 18 X24 X 3.5 inches with a clear plastic top (such as plexiglass) and displayed horizontally. If the exhibit is a poster, it must not be larger than 22" X 28". If the exhibit is a display, maximum size is not to exceed a standard commercial 3' X 4' tri-fold display board.
- Name and county/ district must clearly be marked on educational exhibits.

***83 Entomology Shadow Box**

- 11x14 shadow box or 18 x 24 x 3.5inch wooden display box with plexiglass top, minimum of 15 species representing at least 3 orders. Follow labeling and arrangement guidelines above.

4902 BEGINNING EDUCATIONAL EXHIBIT

Class for individuals exhibiting in the Beginning I and II Collection or Beginning Notebook Classes. Only exhibiting in this category, then ages 9-12.

4904 INTERMEDIATE EDUCATIONAL EXHIBIT

Class for individuals exhibiting in Intermediate Collection or Intermediate Notebook Classes. If only exhibiting in this category, then ages 11-14.

4906 ADVANCED EDUCATIONAL EXHIBIT

Class for individuals exhibiting in the Advanced Collection or Advanced Notebook Classes. If only exhibiting in this category, then ages 13 or older.

Department R - Field Crops

The variety or hybrid must be listed for exhibits. Exhibits should be mature as possible. Seed exhibits should be cleaned.

NOTE: All classes calling for a gallon sample may have a 2 ½ - 3 inch in diameter cylinder placed in a glass gallon container to reduce the amount of grain to about three quarts. Those classes include:

Wheat	Oats	Barley	Soybeans
Alfalfa	Brome Grass	Fescue	Sunflower Seed

- 2400 10 ears White Corn
- 2401 10 ears Yellow Corn
- 2402 10 heads Grain Sorghum - hybrid must be named
- 2403 10 stalks Forage Sorghum - hybrid must be named
- 2404 10 stocks other forage sorghums – variety must be named
- 2405 1 gallon Wheat – variety or hybrid must be named
- 2408 3 heads Confectionery Sunflowers
- 2409 1 gallon Confectionery Sunflower Seed
- 2410 3 heads of Oil Seed Sunflowers
- 2411 1 gallon Sunflower Oil Seeds
- 2412 1 gallon Oats
- 2413 1 gallon Barley
- 2414 1 gallon Alfalfa
- 2417 1 gallon Brome Grass
- 2418 1 gallon Other Tame Grasses
- 2419 1 gallon Soybeans (most recent harvest). 4-H should have been part of raising/harvesting the crop
- 2420 Soybeans – bundle of 5 plants, variety must be named
- 2421 Edible field beans: Exhibit to consist of one gallon sample of seed from most recent harvest.
- 2422 Edible field beans: Bundle of five plants (with roots intact) from most recent harvest.



- 2423 Miscellaneous Crops - exhibit to consist of 1 gallon sample of seed or 10 heads produced from current project.
- 2424 Cotton: Provide 10 open bolls, not 10 plants. Place bolls in a bag that can breathe (not a sealed plastic bag), so mold doesn't develop.
- 2425 1 gallon Corn, variety must be named

Hay – One flake from a rectangular bale **or** 10-inch section cut from a round bale. The flake/slice should be approximately 6 inches in thickness and tied in two directions.

- 2415 Alfalfa hay
- 2416 Native Grass hay
- 2426 Cool Season Grass Hay (fescue or brome)
- 2430 Wheat variety exhibit

These displays by members enrolled in the wheat variety plot project. Members must include the varieties provided in the display, but may include more varieties, if desired. Judged on 70 % educational value and 30% quality of display material

2440 Weed Control Exhibit

1. Collect, identify, press, mount, and label a minimum of 15 weeds. Try to include their roots, stems, leaves and flowers. Three of the weeds must be noxious weeds preferably found in your county. Standard 9"x12" scrapbook may be used. Identify the book with your name and county on the inside front cover.
2. Prepare a list of the weeds mounted, showing common name, scientific name, and where it was found. Place the list in a specially identified section of the scrapbook.
3. Collect and identify weed seeds found in crop seeds. Mount them for display purposes. Place them in a specially identified section of the scrapbook.
4. Write a story on "How We Control Weeds on Our Farm" Or "How We Control Weeds at Home". The story should be about 300 words in length. It must show definite methods used to control weeds. Place the story in a specially identified section of the scrapbook.

Basis for Awards:

Records - 50% - Weed seed collection and exhibit - 30%

Story: "How We Control Weeds on Our Farm" or "How We Control Weeds at Home 20%

Department S - Food Preparation

1. 4-H members may exhibit **one entry per class.**

2. **To qualify for the 4-H Fair Food Auction, the food item must earn a purple ribbon.** If an exhibitor qualifies more than two items for the auction, superintendents decide which two items sell.
3. Youth should be present for consultative judging. Anyone not present at time of judging is not eligible to compete for Grand and Reserve Champion or the 4-H Food Auction, but the exhibit will be judged provided the youth types a one page paper outlining their project, challenges, methods, etc.
4. **For food safety purposes,** any food with custard and dairy-based fillings and frostings (ex. Cream Cheese), raw eggs, flavored oils, “canned” bread or cakes in a jar, cut fresh fruit or any food requiring refrigeration will be disqualified and not judged. Refer to K-State Research and Extension Publication, 4H488, Judge’s Guide for Food and Nutrition Exhibits, or call the Extension for more information. **Further Clarification: If cream cheese or sour cream (or anything considered a dairy product) is mixed into the entire batter and baked sufficiently, it does not require refrigeration will be allowed. If the dairy product (cream cheese, etc.) is in a filling, then it is not considered baked in with the dry ingredients and remains moister, therefore requiring refrigeration and will NOT be allowed.**
5. Alcohol (ex. Wine, beer and hard liquor) is not allowed as an ingredient. Entries with alcohol in the recipe will be disqualified and not judged.
6. Recipes are required for all food product exhibits including box mixes. Products without recipes will be discounted one ribbon group.
7. Food exhibits should be in food grade plastic bags, disposable plastic containers or boxes and placed on paper or foam plates or foil covered cardboard. Container will not be judged.
8. Attach gummed label to bottom of plate or cardboard. Labels are available at the Extension Office. **Please do this prior to arriving at the fair.**
9. All un-frosted cakes should be exhibited in an upright position with crust showing, except for cakes made with special designs such as Bundt cakes. They should have top crust side down.
10. Educational classes: Exhibits may be in the form of a poster, notebook or display. No card table displays. If the exhibit is a poster, it must not be larger than 22" x 28". If a display, maximum size is a 3' x 4' tri-fold display board. Name and district must be clearly marked on educational exhibit.

Classes for 7-8 year old exhibitors

117. *Five baked or no-bake cookies
118. *Five muffins
119. *One serving of a walking snack
120. *Favorite recipes box or notebook with a minimum of five recipes
121. *Educational exhibit



Classes for 9-11 year old exhibitors

122. One quick bread exhibit. May be five muffins, one loaf or one coffee cake
123. Five bar cookies (recommended size 2" x 2" each).
124. One microwave product. May be five cookies, one cake or one loaf of bread.
125. One single layer frosted cake.
126. *Favorite recipes box or notebook with a minimum of 10 recipes.
127. Educational exhibit



Classes for 12-14 year old exhibitors

128. Five baked cookies
129. One loaf quick bread. The use of whole grain, fruits and/or nuts is encouraged.
130. One unfrosted angel food or chiffon cake
131. Five yeast rolls
132. One loaf of yeast bread
133. One specialty bread (i.e. five pretzels, five bread sticks, a fruit bread or tea ring)
134. One microwave product. May be five cookies, one cake, or one loaf of bread.
135. *Favorite recipes box or notebook with a minimum of 15 recipes.
136. Educational exhibit.

Classes for 9-11 year old exhibitors

Classes for 15-18 year old exhibitors

137. One cake, frosted or unfrosted.
138. One microwave baked product. (May be five cookies, one cake, or one loaf of bread.)
139. Five yeast rolls
140. One loaf of yeast bread
141. One specialty bread exhibit (i.e. five pretzels, five bread sticks, a fruit bread or tea ring)
142. One two-crust fruit pie
143. *Favorite recipes box or notebook with a minimum of 20 recipes
144. Educational exhibit

Classes for all exhibitors

145. *One decorated food item. Open to all ages
4306. One food gift package. Open to all ages. No alcoholic beverages. Package must contain at least 3 different items (prepared for human consumption), made by the 4-H member, in suitable container no larger than 18" x 18" x 18". Prepared food items must have recipes attached with the entry. Additional homemade food items beyond the 3 minimum or purchased items may also be included in the gift basket. **Food items in the gift basket will NOT be tasted. The gift package will be judged based on recipes, appearance and usefulness.**

On back of the entry card, answer these questions:

a) What is the intended use? b) What food safety precautions were taken during and after preparation? c)

Home canned foods must follow Food Preservation rules. Canning jars should not be used for baking per manufacturer's instructions.

Department T - Food Preservation

1. All exhibits must have been preserved since the previous year's county fair.
 2. Recommended recipes and processing methods must be used. Recipes must be from 1995-present and be adjusted for altitude based on processing location or it will be disqualified. Processing methods that will be disqualified include: open kettle canning, oven canning, and sun canning. Untested recipes will be disqualified for food safety reasons. Tested recipe resources include:
 - K-State Research and Extension Food Preservation Publications
 - Other university Extension Food Preservation publications
 - USDA Complete Guide to Home Canning
 - So Easy to Preserve, 6th Edition, University of Georgia Cooperative Extension
 - Ball Blue Book Guide to Preserving
 - Ball Complete Book of Home Preserving
 - All New Ball Book of Canning and Preserving
 - Canning Mixes (i.e. Mrs. Wage's Ball)
 - Pectin Manufacturers (i.e. SureJell, Ball)
 - <http://www.rrc.k-state.edu/preservation/recipes.html>
- Refer to K-State Research and Extension publications for more information:
- 4H712, Food Safety Recommendations for Food Preservation.
 - MF3170 "10 Tips for Safe Home-Canned Food"
 - MF3171 "Sassy Safe Salsa at Home"
 - MF3172 "What's Your Elevation?"
 - MF3241 "How to Guide to Water Bath Canning and Steam Canning"
 - MF3242 "How to Guide to Pressure Canning"
3. Alcohol not allowed as an ingredient in food preservation entries.
 4. **4-H member may exhibit one entry in each class.**
 5. Each exhibit must have the complete recipe and instructions attached with the entry card, or it will be lowered one ribbon placing. Recipe must include exhibitor name, recipe source, date of publication and altitude where food was processed.
 6. Exhibits must be in clean, clear standard **canning** jars, with matching brand (ex. use Ball lids on Ball jars, or Kerr lids on Kerr jars, etc.) two-piece lids. Do not add fancy padded lids, fabric over wraps or cozies as they interfere with the judging process. Jars must be sealed when entered. For food safety reasons, the size of jars used must not be larger than the jar size stated in the recipe. Note: There are 12-ounce and 24-ounce canning jars available. Use

ping jar process recommendations for 12 ounce jars. Use quart jar recommendations for 24 ounce jars.

7. Each jar exhibited must be labeled. The label must not cover brand name of jar. The label must give: Class No, Product, Altitude where processed, Canning Method (water bath, weighted gauge or dial gauge pressure method), Process Time, Pressure (psi), date processed including month and year, Name, and County/District. Labels are available at the Extension Office or on the fair website.
8. If dried food product is not in a canning jar, it will be lowered one ribbon. Suggested amount: 1/3 – 1/2 cup, or 3 to 4 pieces per exhibit. Meat jerky must be heated to an internal temperature of 160 degrees F before or after drying. This is not the drying temperature! Dried products must include the recipe, preparation steps and heating instructions. Jerky not heated to an internal temperature of 160 degrees F will be disqualified. Heating information can be found in “Dry meat Safely at Home”
www.ksre.ksu.edu/bookstore/pubs/MF3173.pdf



- 4350 Sweet Spreads (Fruit and/or Vegetables); Syrups, one jar
- 4351 Fruits, Juices, Fruit mixtures (Salsa, Pie Filling, etc.); one jar
- 4352 Low-acid Vegetables (green beans, corn, etc. or veg. mixtures); one jar
- 4353 Pickles (Fruit or Vegetable) Fermented Foods and Relishes and Chutney; one jar
- 4354 Tomato/Tomato Products Tomato Juice and Tomato Salsa; one jar
- 4355 Meats; one jar
- 4356 Dried Foods; One small jar

Department U - Forestry



- 1) All leaf exhibits are to be mounted on 8 1/2 x 11 inch heavy stock paper and placed in loose leaf binders. (Magnetic or adhesive filler sheets for photographic prints or sheet protectors are recommended.) Twigs and fruit collections maybe exhibited in whatever manner you choose. Max tri fold size 3'x 4'. Resources on www.kansas4-h.org/projects/agriculture-and-natural-resources/plant-sciences/forestry
- 2) **Name, club, age, and year in project** should be on the front cover or in a prominent location
- 3) Leaves should be identified with an appropriate label located near the leaf on the same page. These labels should include (1) the proper common name (2) location (city and/or county) where collected; and (3) day, month, year (or month, day, year) collected.
- 4) Have samples grouped according to the year collected.
- 5) Variations of varieties do not count as different species or specimens.

- 6) When replacing previously displayed samples, due to degradation, improper mounting or incorrect identification, the specimen label must be updated. Replacements do not count as new specimens. Replacements should be displayed according to the year originally collected.
- 7) If you retrieve information for your forestry exhibit, you must include a reference citation to the source.
- 8) In all leaf collections, exhibit one complete leaf where possible. If leaf is too large, exhibit as much as possible. Sketch in reduced scale the entire leaf and illustrate where the exhibited portion is from. Note: A “leaflet” is incorrect when displayed as the complete leaf for the tree.

Knowing Trees as Individuals (Leaf Collections)

- 5100** Exhibit a minimum of 10 different leaves from trees collected within the year. Exhibit can include non-native leaves in addition to the required number of leaf specimens collected from native Kansas trees.
- 5101** Exhibit a minimum of 5 trees showing leaf, twig and fruit from each species collected.

Educational/Creative Exhibit

- 5102** Must be directly related to tree identification **or** forestry. Type of exhibit is open (notebook, poster, collection box, etc.) given a maximum tri-fold size of 3' x 4'. Care should be taken to use durable materials to withstand fair conditions. This is a good class to exhibit an unusual collection.

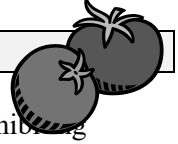
Department W - Home Environment
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- Summary including plans, explanation of how the items was made or refinished, and how it fits into the color and design of the room. Summary could also include project inspiration, challenges, who helped you, and any other information that could be helpful to the judge. Summary should be in a plastic protective sleeve and attached to exhibit.
- Projects with missing or insufficient summary will be docked.
- Exhibits should be of high quality (as compared to quick, simple crafts), suitable for use in the home several months throughout the year. Holiday-specific items are discouraged.

- 4400 Single Exhibit. An article made or refinished by the 4-H member for the home. Must include attached summary.
- 4401 Design Board. Boards must be on foam core or a standard tri-fold display. Include: color scheme, wall treatment, floor treatment, samples, etc. and/or floor plan for a room. Must include attached summary.

- 4402 Notebooks may include floor plans, swatches, colors, stories, photographs, and project records which detail what was accomplished with a given indication of long-term plans. Should also include project inspiration, challenges, who helped you, and any other information helpful to the judge. Additional summary is not required for Notebook exhibits.

Department X - Horticulture



Information about exhibiting produce available in publication “Exhibiting Fruits and Vegetables” at <http://www.bookstore.ksre.ksu.edu/pubs/c405.pdf>

Use sturdy plate, bowl, or container and tape entry card to container.

*A county fair exhibitor earning a purple ribbon for a particular type of vegetable (i.e. early peas) is eligible to exhibit another vegetable (i.e. late pumpkins) at the State Fair.

May enter 1 garden display and 4 different vegetable or fruit exhibits.

- 2500 Garden Display** –Limited to 4 square feet of space. Garden Display must be exhibited in a tray, basket or container that can be easily moved. Exhibit consists of 5 different fresh vegetables or fruits. Canned and shelled vegetables are not acceptable. Only one variety of each type of vegetable or fruit may be exhibited. The numbers of the 5 vegetables or fruits to be exhibited are as follows:

Large Vegetables (One Each): Cabbage, Cantaloupe, Eggplant, Large Pumpkin, Squash, Watermelon.

Medium Vegetables (Five Each): Beets, Carrots, Cucumbers, Decorative Gourds, Potatoes, Miniature Pumpkins, Okra, Onions, Peppers, Radishes, Sweet Potatoes, Tomatoes, or other similar sized vegetable.

Small Vegetables (Twelve Each): Green snap beans, wax beans, English peas, radishes or other similar sized vegetables.

Small Fruits (one half pint box): Strawberries, blackberries, raspberries, or other similar sized fruits.

Tree Fruits (5 each): Apples, pears, peaches or similar sized fruits.

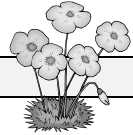
Grapes (2 bunches)

- 2501** Small Vegetable specimen plate (12) Ex: green snap beans, yellow wax beans, radishes, other small vegetables.

- 2502** Medium Vegetable specimen plate (5) Ex: cucumbers, cherry tomatoes, tomatoes, beets, white onions, yellow onions, red onions, bell peppers, other peppers, okra, parsnips, turnips, radishes, sweet potatoes, red potatoes, white or Russet potatoes, carrots, miniature pumpkin, decorative gourds, or other medium sized vegetables

- 2503** Large Vegetable specimen plate (1) Ex: watermelon, summer squash, winter squash, large type pumpkin, eggplant, cabbage, cantaloupe, other large vegetable.
- 2504** Fresh Culinary herbs (6) Ex: parsley, basil, dill, etc. Six stems (or a comparable quantity) of ONE VARIETY of fresh herbs exhibited in a disposable container of water. Dried herbs are not accepted.
- 2505** Small fruits (one half pint box) Ex. Strawberries, blackberries, raspberries, or other similar sized fruits. If other, please include name of fruit on entry.
- 2506** Tree Fruits (plate of 5) Ex. apples, pears, peaches, or similar sized fruits.
- 2507** Grapes (plate of 2 bunches).

Department Y - Floriculture



1. **A 4-H member may enter up to 4 floral exhibits, plus a notebook.** Each cut flower specimen must be of a different species.
2. Potted plants are not accepted.
3. All materials should be grown and collected rather than purchased. Entries should not take over one square foot of table space.
4. Display should be exhibited in a disposable container that is easily moved by staff. Fair association is not responsible for the loss or damage of vases or containers. Container will not be judged.
5. Information about exhibiting flowers can be found online in the publication "Preparing Cut Flowers for Exhibit", at www.bookstore.ksre.ksu.edu/pubs/4H826.pdf

- 5600** Annual Garden Flower, cut specimen, single stem
- 5601** Perennial Garden Flower, cut specimen, single stem
- 5602** Fresh Flower Arrangement. Flower materials must be grown and/or collected by exhibitor, not purchased.
- 5603** Dried Flower Arrangement, no fabric or plastic material allowed
- 5604** Horticulture Notebook –three ring binder written narrative describing a horticulture project such as: landscape design, landscape installation, lawn renovation, water garden, flower garden, vegetable garden, lawn mowing service, landscape maintenance business, farmer’s market business, or other horticulture project. Encouraged to include photographs, illustrations and/or landscape drawings that help explain work done by the member. Photos taken from the same location before, during and after the completion of the project are helpful. Exhibitor may enter two different horticulture notebooks. Horticulture notebook

scoring is as follows: Organization and General Appearance (neat, title page table of contents, original, creative, etc.) 20%; Narrative (goals, successes, failures, etc.) 40%; General Content (subject matter, photos, maps, knowledge gained, etc.) 40%.

Department AA - Photography

1. Photographs exhibited must be the result of the current year's project work by the club member. All photos must be no larger than 8" x 10" and no smaller than 7" x 9" (**except 4 picture exhibit**).
2. Photos are to be mounted across the narrow (11 inch) dimension of an 11" x 12.5" sheet of matte board (board available at Independence, KS Extension office \$1.25) with the top edge of the print 1 inch below the top of the mount. A permanent mount should be made, using photographic adhesive such as a permanent spray adhesive. Do not use double sided tape or rubber cement. Remove the white border from enlargement before mounting. The sides of the print must be equal distance from the sides of the mount. Improperly mounted photos will be penalized one ribbon placing. Visual instructions available at Extension office.
3. No lettering (including dates) will be permitted on the front of the mount or on the pictures. No underlay or borders are to be used.
4. Each exhibitor's *name, photo class, and state plus county* should be written on the back of the mount.
5. Photographs taken with a digital camera and having no more adjustments than exposure, color intensity or correction, one click filter effects, red eye removal, cropping, dodging and burning should be entered in the standard color or black and white classes. HDR (High-Dynamic-Range) photos are to be entered in the standard photo class.
6. The black and white classes are for black and white prints only. Monochromatic prints, sepia prints are considered color photos and must be entered in the appropriate color photo class.
7. Photos with live subject(s) on railroad right away or taken from railroad right of way property will not be displayed and will be disqualified.
8. Copyright protections must be observed.
9. Each exhibitor will be **limited to 6 entries, no more than 2 per class**.

Classes for 7-8 year old exhibitors

191. *4-picture exhibit. Four pictures (3 ½" x 5" or 4" x 6") untouched, not enlarged, mounted on 11" x 12 ½" matte board. Must include one picture of a building, one of a person, one landscape shot and one picture of an animal.



- 192. Color photo taken by 4-H member.
- 193. Black and white photo taken by 4-H member
- 194. *Digital Composite Image

Classes for 9-11 year old exhibitors

- 196. Color photo taken by 4-H member.
- 197. Black and white photo taken by 4-H member
- 198. Digital Composite Image

Classes for 12-14 year old exhibitors

- 200. Color photo taken by 4-H member.
- 201. Black and white photo taken by 4-H member
- 202. Digital Composite Image

Classes for 15-18 year old exhibitors

- 204. Color photo taken by 4-H member.
- 205. Black and white photo taken by 4-H member
- 206. Digital Composite Image

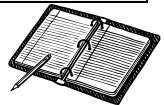
*Digital Composite Image: Photo must be created from two or more originals taken by the exhibitor. Exhibitor must include a second 11 x 12-1/2 matte board (Explanation Board) mounted with standard size prints of the original photos, 3 x 5 card(s) explaining what manipulation was done and a standard size print of the final photo. May include prints of editing steps. Photos showing editing steps may be layered. Please put name and Extension Unit on the front of the second board. Explanation Boards will be displayed along with the finished board. Place both matte boards in the same protective plastic bag. HDR photos do not qualify for this class Photos will be judged on photographic merit as well as manipulation technique and process. Ribbon placement will be determined by combining the score of each judging section.

Department BB - *Project Notebooks/Displays

Limit of 1 entry per class.

This class is for projects that do not have exhibit classes in the fair.

Any of the classes below may be done over a pet project.



This class is for 4-H projects which do not lend themselves easily to fair exhibition. Educational project notebooks and displays are exhibited for a 4-H member to tell about something they learned in a 4-H project. It is important that notebooks and displays contain pertinent, easy to read information. The following criteria will be considered when judging notebooks and displays:

General Appearance (30 Points)

- Neat, clean
- Printing or lettering well done
- Readability
- Sufficient space (margins) allowed around the edges and between lettering to read easily.
- Any additional art work added to the notebook or display.

Information (50 Points) –Accurate, Brief, Correct spelling, Central idea clear to reader

Organization (20 Points) -Easy to understand & Logical

208. *Project Notebook

209. *Educational Display

- must be the standard tri-fold board only maximum 3' wide x 4' tall

210. *Educational Poster

- Must be flat and no larger than 22" x 28"

Department CC - 4-H Shooting Sports



Limit two (2) entries per exhibitor.

- Exhibits in this department are open to educational displays or promotional posters. Exhibits must follow copyright and game laws, see general rules.
- Exhibitors must comply with all state and federal laws and fair policies. No “live” ammunition containing propellant or explosive powders may be used in display! Artistic substitutes must be used in lieu of powder and live ammunition - **label artistic substitutes on back for clarification.** The substitution must be clearly described on the back of the poster, display or in a notebook.
- Exhibits will not be accepted if they are related to reloads
- *Name, district/county, age and year in project* should be in a prominent location on the FRONT of exhibit along with branding logos outline above.

Educational displays will be judged on the following points:

- Stopping Power, idea presented clearly, simply, forcefully? (15pts)
- Interest, Holding Power, facts in a clear, concise way? (15pts)
- 4-H Project Application, subject an effective showcase? (15pts)
- Mechanical Power, easy to read, pleasing colors, (5pts)
- Personal Growth, knowledge was gained & Enthusiasm (25pts)
- Educational Value (25pts)

Posters will be judged on:

Stopping Power – 30%; Interest/Holding Power – 30%
4-H Project Application – 25%; Mechanical Power – 15%

- 6200** Educational Display- Must be directly related to the 4-H Shooting Sports project (standard tri-fold boards only, no larger than 3'x4'), no additional table space for promotional materials
- 6201** Promotional Poster- Must promote the 4-H Shooting Sports project (flat poster no larger than 22" x 30")
- 6202** Notebook – Contents pertain to some phase, story/information about 4-H Shooting Sports. Must be or larger than 8.5x11

Department DD - 4-H STEM



ASTRONOMY

Each exhibitor may enter one exhibit per class. Exhibit must have been completed during the current 4-H year.

1. Telescopes entered in this division may be built from a kit or by original design. Pre-finished telescopes, which require no construction or painting are not acceptable exhibits.
2. Telescopes are limited to no more than six feet in length. They must be placed on a stationary stand that does not allow the telescope to roll and/or fall over. The stand cannot extend past 2 feet in length or width.
3. Each telescope exhibit must include construction plans (or a photocopy) for the telescope and place it inside the manila envelope. For notebooks, display boards, and posters, no additional exhibit information is required; no manila envelope is needed.
4. See the last section for full details about exhibiting posters, display boards and notebooks.
5. Two photographs showing telescope construction and operation are required. Photographs should be mounted on one side of an 8 ½" x 11" page. A brief caption should accompany each photograph. Place photos in the 10" x 13" manila envelope.
6. Exhibitor's name, county/district, age, and year(s) in project must be tagged or labeled in a prominent location on the telescope stand.
7. If a safety violation is noted by the judges, superintendent, or other staff, the exhibitor's exhibit, at the judges' discretion, will receive a participation ribbon.

5500 Telescope made from kit

ROCKETRY

1. Each exhibitor may enter up to two rocket exhibits that have been constructed during the current year. If two rockets are entered, one rocket must be a “model rocket kit” or the second may be entered into any other applicable class. May not enter two rockets in the same class.
2. 4-Hers are to complete rocketry information The envelope should contain:
 - Instructions on how to construct the rocket
 - Up to 5 pages of pictures from both construction and launch
 - Documentation of any flight damage that occurred
 - Any modifications made to the rocket
 - .
3. Rockets are to be displayed upright on a display stand with a sturdy rod that does not extend past the top of the rocket or stand unassisted, unless the rocket is taller than 4 feet in which case no display stand is required and the rocket may be displayed on its side, rockets are not to be displayed on launch pads to save space and prevent someone from being poked in the eye.
4. Rockets ARE NOT to be displayed with used or unused rocket engines either in the rocket or as part of the stand.
5. Rockets should be flown, unless there is an active burn ban in the county or conditions are too dangerous to safely launch the rocket. Just flying the last stage (the part with the nose cone) of a multi-stage rocket is acceptable.
6. All rockets, except those in the JR division, are not to be “beginner’s kits” or use prefabricated fin assemblies or pre-finished rockets requiring no painting, these are not acceptable outside the JR division, and should be disqualified
7. Fins and launch lugs are to be filleted to reduce drag and properly secure them to the model.
8. Engine mounts are to be securely attached to the body tube.
9. Any seams on plastic parts are to be sanded smooth.
10. The recovery system (typically a parachute or streamer) should be attached according to the instructions
11. The nose cone is to fit snugly but still allow for easy removal.
12. “Scale models*” may be judged based on their paint scheme. Judge may deduct up to one ribbon placing for not following paint scheme.
13. “Scale Model*” Rockets are to be finished and completed with a majority (greater than 70%) of decals.
14. For a rocket entered in the original design classes, describe in the summary how the rocket was tested for stability prior to flying. Swing testing of the rocket is required. Other tests and calculations are

encouraged. Exhibitors must include documentation of the swing test. Failure to swing test a rocket will result in a deduction of TWO ribbon placings.

15. A minimum of one additional page must be added to the rocketry information pack detailing the test(s) performed to insure stability. Encouraged to provide as much detail as possible.
16. Rockets that use more than one 'D' engine or equivalent are consider mid or high power rockets in 4-H.
17. Mid and High Power exhibitors must be at least 14 years of age by January 1 of the current year.
18. For rockets launched using an engine(s) that have 160.1 ('H' engine or equivalent amount of smaller engines) Newton's-seconds or larger, supervision must be provided by an individual having at least a level 1 high power certification. The 4-H member should also hold or be attempting to attain their level 1 high power certification if launching on this large of an engine.

Division JR - Exhibitors 7 and 8 years old

5520a Rocket made from kit, without pre-assembled fin units. Include plans.

5520b Rocket made from "beginner's kit." Include plans. Rockets in this class may have pre-assembled fin units. (This class is for first and second year 4-H members to explore the rocketry project.)

Division A - Exhibitors 9 through 13 years old

5520 Rocket made from kit. Include plans.

Division C - Exhibitors 14 years and older

5525 Rocket made from kit. Include plans.

5526 Rocket designed by exhibitor: not merely a modification of an existing kit. Include original plans.

AG MECHANICS -

1. Total exhibit dimensions should not exceed 3 feet high, by 3 feet wide, by 3 feet deep (call the extension office and ask for exceptions if needed). Exhibit should be movable by a team of 2 people. Wheeled exhibits must be stabilized.
2. Each exhibit must be free-standing or sufficiently supported
3. Repair projects having adequate original finish need not be repainted
4. Cutting surfaces, such as blades or knives, are to have a protective covering over them to prevent injury. The covering should be easily removed and reinstalled for judging.
5. Exhibits that include weaponry of any kind will be disqualified.
6. If the exhibit is powered by flammable liquids (gas, propane, kerosene, etc.) the fuel tank and lines should be drained and allowed to dry, to avoid spills and potential fires

7. Electric powered (battery, corded, solar, or alternative energy) should have a primary shutoff or disconnect switch
8. Exhibitor's name(s) and county or district must be tagged or labeled in a prominent location on the display
9. Exhibit must include an Ag Mechanics information packet and "4-H STEM Ag Mechanics Exhibit Information Form" which is available through your local office or at www.STEM4KS.com. This form must be attached to the outside of a 10" x 13" manila envelope.
10. Each exhibit information packet should include the following items:
 - a. Bill of materials for the project with associated costs, scrap items used may be listed as having a \$0.00 cost
 - b. 1 to 5 pages of photos showing work on the exhibit, preferably from a beginning state to final or completed state
 - c. Appropriate schematics or working drawings relating to the creation or repair
 - d. If appropriate operating instructions

5550 Welding display board – a 3 foot by 3 foot display board with different pieces of metal attached illustrating different types of welds

5551 Welding or Brazing repair – repair of equipment

5552 Welding or Brazing fabrication – creation of new equipment

5555 Welding artistic fabrication – creation of artistic or interpretive pieces with welding

5558 Smithing display board – a 3 foot by 3 foot display board with different pieces of forged metal attached illustrating different forms, each form being labeled

5559 Smithing – A design forged with at least one formed element

ARCHITECTURAL BLOCK CONSTRUCTION

- 1.
2. Exhibit dimensions may not exceed 2 ft high, by 2 ft wide, by 2 ft deep.
3. All exhibits should be placed in a see-through enclosure with a top, bottom, and 4 sides. A fish tank would be an acceptable enclosure.
4. The primary building component should be interlocking blocks, commonly referred to by the brand name Lego®
5. Other architectural components can be integrated to illustrate architectural aspects that may be difficult to convey with traditional interlocking blocks
6. "store bought" sets for major architectural elements is not allowed, use of figurines from sets is allowed as is using individual bricks to create something different than the architectural component of the set it came from.
7. Displays must have significant architectural components (walls, windows, doors, roofs, canopies flying buttresses, etc.)
8. Gaps or cracks should not be visible between assembled blocks
9. Doors should open and close, windows can be fixed or open and close.

10. Vehicles intended to stay in a single place should be affixed to base plates
11. Reveals that show the inside of a structure are acceptable, such as only having three walls to allow an unobstructed view into a room.
12. Mechanical enhancements or motion elements that add motion to the diorama encouraged.
13. The exhibitor's name(s) and county or district must be tagged or labeled in a prominent location on the display
14. Each exhibit must include an Architectural Block Construction information packet
16. Each exhibit information packet should include the following:
 - a. At least one drawing of the desired architecture on graph paper, multiple views (top, front, side) are preferred
 - b. 1 to 5 pages of photos showing work, preferably from a beginning state to final or completed state
 - c. If appropriate operating instructions for mechanical portions

5710 Diorama illustrating at least 2 architectural features beyond floors, ceilings, and walls

STEM EDUCATIONAL EXHIBITS – POSTERS, NOTEBOOKS AND DISPLAY BOARDS

- 1 Educational display boards, posters and notebooks should be creative and showcase details about the knowledge learned in the project during the current 4-H year. Value is placed on youth who can demonstrate how their skills have increased while completing the project. Each exhibit will be judged on uniqueness, creativity, neatness, accuracy of material, knowledge gained, and content.
2. “Construction Kits” that are part of Educational displays must be contained in cases (tackle boxes, sealable containers, etc.) that may not be larger than 1’ X 2’ X 2’ and must have a latch which securely keeps all components contained in the “Construction Kits”. Other components are to adhere to appropriate dimensions as stated elsewhere.
3. Educational Project notebooks must be organized in a 3-ring binder.
4. Any three dimensional display exhibits may not be thicker than 1”.
5. Engines and igniters for rockets ARE NOT permitted with the exhibit and constitute an immediate disqualification. This is for safety reasons and includes both spent and live engines.
6. Exhibitor's name, county or district, age, and year(s) in project must be tagged or labeled in a prominent location on the, notebook, and/or “Construction Kit.” For education displays and/or posters the exhibitor's name, county, or district, age, and year(s) in project **must** be

tagged or labeled on the back of the exhibit. Failure to label an exhibit may result in one ribbon placing deduction.

- Exhibits should possess the following qualities (in no particular order):
A Central theme, What you want others to learn, Be designed and constructed in a manner befitting the exhibit , Be something you are interested in, Be related to Astronomy, Computer Systems, Robotics, Rocketry, or Unmanned Aerial Systems

STEM Displays– one age division

- 5731a Educational Display
- 5732a Educational Notebook
- 5733a Educational Poster

Department EE - Wildlife



- A member may make only one entry in this division.
- No card table exhibits are allowed.*
- Exhibitors must comply with state and federal laws.** It is illegal to possess threatened or endangered wildlife, or the feathers, nests, or eggs of non-game birds. Game birds and game animals taken legally during an open season may be used. The use of live wild animals in educational exhibits is prohibited.
- Name, county/district, age and year in project should be in a prominent location on the exhibit.
- Notebooks and Displays will be judged on the following points:
 - Stopping Power (15) main idea specific, presented clearly, simply, forcefully?
 - Interest, Holding Power (15) facts in a clear, concise, informative way?
 - 4-H Project Application (15) subject matter an effective showcase?
 - Mechanical Power (15) Correct letter size, appropriate symbols, and models
 - Personal Growth (25) Knowledge was gained & Enthusiasm shown
 - Educational Value (25) Knowledge shared. Note: Credit all resources
- Posters will be judged on the following points:

General Appearance.....	30
Information.....	50
Organization.....	20
- 5400** Notebook. Contents pertain to some phase, results, story or information about the wildlife project.
- 5401** Promotional Poster. Must be related to something learned in the wildlife project. (Flat poster board or foam board no larger than 22” x 28”.)

- 5402** Educational Display. Maximum size is a 3' x 4' tri-fold display board. Must be directly related to the wildlife project.
- 5403** Taxidermy/Tanning Exhibit. Should include an attachment that shows the work in progress through photos with captions, or a detailed journaling of the process.

Department FF - Woodworking



Each exhibitor may enter up to two woodworking articles.

- 1. The plan from which it was constructed must be with the article exhibited.** The plan may be a photocopy, actual pattern, or a scale drawing. It must be complete and accurate to the extent that a duplicate article could be built using the plan as a guide. Step by Step instructions is not a plan.
 2. Projects with missing or insufficient plans will be lowered one ribbon group. (I.e. blue exhibit will receive a red ribbon.)
 3. Projects that have unsecured glass, i.e. glass shelves, glass top of a coffee table, etc. should not be brought to the fair. Glass that is secured in the project, i.e., glass front of a gun case or cabinet, etc., is permissible since it cannot be easily removed.
 4. The entry card, plans and all other paperwork should be secured to the project in some manner. Tape is usually not adequate to accomplish this. It is recommended to use a self-sealing plastic bag with a hole punched through it and use string to tie this to the exhibit.
 5. Refinished/repaired furniture should be exhibited in Home Environment - Single Exhibit.
 6. Projects made from pre-cut kits are not allowed.
 7. In judging woodwork articles, consideration will be given to:
Workmanship, including accuracy to the plan; design; choice of wood; suitability and quality of finish; and usefulness.
 8. Firearms and weapons are not to be entered or displayed.
- 279.** Article made by 7 to 9 year old member
- 280.** Article made by 10 to 13 year old member
- 281.** Article made by 14 to 18 year old member