

Division U

Entomology, Geology, & Lapidary

Judging: Refer to fair schedule

Entomology

1. Read all general rules. All exhibits must be entered by 11:00 a.m.
2. A 4-H member may choose to exhibit in the Collection or Educational class of each phase, or both.
3. Individual entries are to be placed in Plexiglass covered wooden boxes. The maximum sizes are 18"X24"X3 1/2". See the specific phase for the box and specific number limitations.
4. Identification should follow the taxonomy included in www.bugguide.net
5. Each exhibitor is required to identify each box by placing an identification label bearing the exhibitors name, county, and class. One label goes in the upper left corner of the box (inside) and the other on the back of the box (outside). Arrange specimens in the box so it can be displayed lengthwise.
6. Exhibition of the current year's collection is encouraged. However, each specimen should have a value in it. The 'rare find' shown in a beginning phase should have a place in the more advanced phases.

Special Rules For Collection Classes:

1. The number of orders, specimens and families (families are required in Intermediate and Advanced classes) must be included on the exhibitor's box identification label.
2. For each collection class, two labels will be centered on the pin beneath each specimen. First (closest to the specimen) is the common name label and the second label should include date/locality.
3. Purpose of the project is to encourage identification of Kansas insects. If there are 'exotics' in the collection, they should be in a separate area, and designate as out-of-state specimens. No points are given for exotic specimens except as they may enhance the overall appearance of the collection.
4. Specimens of soft bodied insects such as aphids, lice, collembola, termites and etc. should be exhibited in alcohol filled vials. However, the use of alcohol a filled vial should be limited to only those specimens that lose their shape when pinned, since the vial pose a significant hazard to the rest of the collection, if they become loose in transit.

Special rules for educational classes:

1. Educational classes are limited to one standard box and a maximum of 150 specimens. Title of exhibit should be indicated inside the box.
2. Purpose of the project is to learn more about the importance, life cycles, biology, ecology, diversity, etc. of insects and related Arthropoda. Subject matter can be varied as the animals themselves.

Introductory Entomology

Class 400 - Collection display in one standard box a minimum of 50 and a maximum of 125 species representing at least 7 orders. Specimens should be grouped according to order. Two lanes are required on each specimen. Order labels should be pinned to the

base of the box. Members can exhibit in this class a maximum of 3 years or until they receive a purple ribbon in the 'beginning phase' at the Kansas State Fair.

Class 402 - Educational

Advanced Entomology

Class 403 - Collection: Display a minimum of 300 species representing at least 10 orders and 15 families. Two standard boxes can be used. All specimens should be grouped to order, in addition, all insects in the orders of Orthopteran, Diptera and Hymenoptera are to be identified to family. Members can exhibit in their class a maximum of 3 years, or until they receive a purple ribbon in the 'Intermediate phase' at Kansas State Fair.

Class 404 - Educational

Advanced Entomology

Class 405 - Collection:

Display a minimum of 150 and a maximum of 450 species representing at least 12 orders and 30 families. Family identification is required for all insects belonging to the 6 basic orders as outlined under the Intermediate phase. Family identification of insects in the remaining orders is optional, but desirable as long as accuracy is maintained. Two lanes are required for each specimen- first the common name label, followed by date/locality label, both of which are centered on the pin beneath the insect. The guidelines detailed under the Intermediate phase may also be used in the Advanced phase except that all butterflies appearing in the collection should be labeled with the correct common name. Emphasis in the judging will be placed on the overall variety of Kansas insects represented in the collection, accuracy of identifications, skill and technique acquired in mounting of specimens and overall arrangement and appearance of the collection. Members can exhibit in the 'Advanced phase' until a purple ribbon is received at the Kansas State Fair. Member can continue to exhibit in the Educational class.

Class 406 - Education

List on the back of the box what you did this year to improve your project.

Entomology Collection

Notebook Classes

1. Individual entries are to be placed for display in a three-ring notebook for competition
2. Identification should follow the taxonomy included in www.bugguide.net
3. Each exhibitor is required to identify the notebook by placing the Title Page in the front of the notebook bearing the exhibitor's name, county or district, and class. The number of orders, specimens and families (required in Intermediate and Advanced classes) must also be included on the Title Page.
4. Species pages should be grouped according to order and should include one page per species.
5. Date, common name, full county name, state abbreviation and collector's name should be included for each species.
6. If picture is taken on different dates/localities include information for both. A statement describing the host plant/habitat should be included.

7. 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 divider page.
8. For the Intermediate and Advanced classes, insects are also to be grouped by family behind each order divider.
9. List on a sheet of paper how many years you have been in this division of the project and what you did this year to improve your project if you have been in for more than one year. Place the paper just behind the Title Page in the front of your notebook.
10. Note: Class ECN409 and ECN410 exhibitor should include a separate section that includes pictures of different life stages or a series of specialized body parts (such as legs, antennae, specialized mouth parts, or identifying features) for at least two orders of insects. Exhibitor may also include photos of damage or habitat in this section. A divider should be put in front of this section.

Class ECN407 - Introductory Notebook:

A collection of photos with a minimum of 10 and a maximum of 30 insect's species representing at least six different orders. Species pages should be grouped according to order. (Notebooks should contain 15 - 60 photos). May exhibit in this class for a maximum of two years.

Class ECN408 - Beginning Notebook:

A collection of photos with a minimum 30 and a maximum of 60 inset species representing at least seven different orders. Species pages should be grouped according to order. (Notebooks should contain 50 - 120 photos). In a separate section exhibitor should include pictures of different life statues or a series of specialized body parts (such as les or antennae) for at least one order of insects. May also induce photos of damage or habitat in this section. A divider should be put in front of this section. May exhibit in this class for a maximum of three years.

Class ECN409 – Intermediate Notebook:

A collection of photos with a minimum of 60 and a maximum of 100 insect species representing at least nine orders. Species pages should be grouped according to order. Species pages should be grouped according to order. Pictures in any tow of the following six orders should be identified to family: Orthopteran, Hemiptera, Homoptera, Coleoptera, Diptera and /or Hymenoptera. (Notebook should contain 100 to 200 photos). Exhibitor may exhibit in this class a maximum of three years.

Class ECN410 – Advanced Notebook:

A collection of photos with a minimum of 100 and a maximum of 200 species representing at least twelve orders. Species pages should be grouped according to order. In addition, family identification is required for all insects in the following six order: Orthopteran, Hemiptera, Coleoptera, Diptera and Hymenoptera. Family identification in the remaining orders is optional, but desirable as long as accuracy is maintained. (Notebooks should contain at least 150 photos) Members may continue in this class as long as they remain eligible 4-H members.

Educational Display Classes

General Guidelines

1. All entries should be submitted in an 18"X24"X3 ½" wooden display box with a clear plastic top. Boxes can be handmade or purchased as long as they are of the correct size and do not have a glass top.
2. Information on numbers and kinds of insects is not needed for educational exhibits.
3. Displays may consist of specialized groups of insects or their close relatives, or relate to any aspect of their behavior, biology or ecology.
4. Displays should be presented in a clear, concise, and interesting manner.
5. Displays should include only work performed during the current year.
6. Title exhibit should be indicated inside the box.
7. The purpose of the project is to learn more about the importance, life cycles, biology, ecology, diversity, etc. of insects related to arthropods. Subject matter can be as varied as the animals themselves.
8. Creativity is encouraged!

Class ECN11 – Beginning Educational Display

A 4-H'er may enrolled in this class if enrolled in Beginning or Intermediate Collection/Notebook classes or if ages 9-12. Follow general rules listed for Educational Displays.

Class ECN12 – Intermediate Educational Display

A 4-H'er may enroll in this class if enrolled in this class if enrolled in Intermediate Collection/Notebook class or if age 11-14. Follow the general rule listed for Educational displays.

Class ECN13 – Advanced Educational Display

A 4-H'er may enroll in this class if enrolled in this class if enrolled in Advanced Collection/Notebook class or if age 13 or older. Follow the general rule listed for Educational displays.

Geology

Special Rules

1. Read general rules. Rules specific to this project are available at the county extension office.
2. Individual entries are limited to two wooden boxes, Plexi-glass covered.
3. Specimens should be labeled with name below the specimen.

Class 407 – Geology collection of 15 different rocks, minerals, or fossils collected during the current 4-H year.

Class 408 – Geology collection of 30 different rocks, minerals, or fossils, at least 5 of each. At least 15 must be collected during the current 4-H year.

Class 409 - Geology collection of 45 different rocks, minerals, or fossils, at least 5 of each. At least 15 must be collected during the current 4-H year.

Class 410 - Geology collection of 60 different rocks, minerals, or fossils, at least 5 of each. More than one specimen of the same kind of rock or mineral or species of a fossil may be exhibited if this duplication represents different geological formations. Exhibit must include at least 15 must be collected during the current 4-H year.

Class 411 – Educational Exhibit

Exhibit relating to everyday living; or to a mineral test, a rock formation, geological history, sections of a fossil, forms of one mineral, a variation of one kind of rock, archaeological artifacts, or Indian artifacts. Exhibits limited to 4 feet of table space. Care should be taken to use durable materials that will withstand Fair conditions.