

# ENTOMOLOGY

Dept. EN

A 4-H member enrolled in the Entomology Project may exhibit in the **Entomology Collection, Entomology Notebook** and/or **Educational Display** categories. Within each category, there are classes in Beginning, Intermediate or Advanced phases in which they enroll. The Notebook category also has an Introductory class that 4-Hers may exhibit in the State Fair as long as they meet age requirements and County Fair ribbon placing requirements. An Introductory Entomology Collection Class exhibit is encouraged for county fairs (first year members only), but these may not be exhibited at the State Fair. See class descriptions within categories for requirements. Resources for exhibiting can be found on the Kansas 4-H Entomology project page. <https://www.kansas4-h.org/projects/agriculture-and-natural-resources/entomology.html>

## Collection Classes

1. All entries should be submitted in an 18x24x3.5 inch wooden display box with a clear plastic top (such as Plexiglas). Boxes can be handmade or purchased as long as they are of the correct size. Please visit the website listed above for box instructions and plans. 4-Hers may choose to use one of two taxonomies:
  - a. As printed in "Insects in Kansas" book or
  - b. As printed on the "Insects in Kansas Book: 2016 Revised Taxonomy", which follows [www.bugguide.net](http://www.bugguide.net)
2. Each exhibitor is required to identify each box with two identification labels bearing Exhibitor's name, county or district, the collection class 4-Her is enrolled in and statement of taxonomy used. One label goes in the upper left corner of the box (inside) and the other on the lower right corner of the box (outside). Arrange specimens in the box so it can be displayed lengthwise.
3. The number of orders, specimens (and families where required) must be included on both of the exhibitor's box identification labels.
4. Arrangement of specimens: The preferred method is to arrange the insects in groups or rows parallel to the short sides of the box. Specimens are to be arranged by Order in the box, then Family where required.
5. Two labels should 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. Full county name and state abbreviation should be on the second label. Collector's name (or host) on the date/locality label is optional.
6. The specimens should be collected by the exhibitor and should focus on Kansas insects. Insects may be collected from one county into bordering states and labeled accordingly. Please refer to "*Entomology Collection Exhibit Resource*" for full details on out-of-state insects in collections.
7. Only specimens of the class insects should be included.
8. Purchased insects are not to be exhibited in collections, but they may be used in educational displays.
9. Specimens of soft bodied insects such as aphids, lice, termites, etc. should be exhibited in alcohol filled vials; however, the use of alcohol filled vials should be limited to only those specimens that lose their shape when pinned, since the vials pose a significant hazard to the rest of the collection if they become loose in transit.

**1320 - Introductory Entomology** - NOT eligible for the state fair. For 1<sup>st</sup> and 2<sup>nd</sup> year project members or members 7-8 years of age. Display in a cardboard box with a minimum of 15 and a maximum of 30 insects, representing at least 6 orders. See additional rules above.

**1321 - 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 the general guidelines listed for Collections. Members can exhibit in this class a maximum of 3 years, or until they receive a purple ribbon at the Kansas State Fair, whichever comes first, and then they are moved up a division.

**1322 - Beginning II Entomology Collection** Display in one standard box a minimum of 75 and maximum of 150 species representing at least 9 orders. Follow the general guidelines listed for Collections. Members can exhibit in this class a maximum of 3 years, or until they receive a purple ribbon at the Kansas State Fair, whichever comes first, and then they are moved up a division.

**1324 - Intermediate Entomology Collection** Display a minimum of 100 and a maximum of 300 species representing at least 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).

- a. "Insects] in Kansas" book - Orthoptera, Hemiptera, Homoptera, Coleoptera, Hymenoptera, and/or Diptera or
- b. "Insects in Kansas Book: 2016 Revised Taxonomy", which follows [www.bugguide.net](http://www.bugguide.net) - Odonata, Orthoptera, Hemiptera, Coleoptera, Hymenoptera, and/or Diptera. On a piece of paper list what you did to improve your collection during the current year. Members can exhibit in this class a maximum of 3 years. A 4-Her may move up if they receive a purple ribbon.

**1326 - 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 is required for all insects belonging to the six basic orders as outlined under the Intermediate phase. Only families in the above six orders will be counted for judging. Family identification of insects in the remaining orders is optional, but desirable as long as accuracy is maintained. On a piece of paper list what you did to improve

your collection during the current year. Examples: what insects did you add or replace; what orders and/or families you added; what Leadership you provided in this project; and/or what insects you have studied. Attach paper to the back of one of the display boxes. Members may continue to exhibit in this class at the Kansas State Fair for an unrestricted number of years as long as they remain eligible for 4-H membership.

#### **Notebook Classes**

1. Individual entries are to be placed for display in a three-ring notebook for competition.
  2. 4-Hers may choose to use one of two taxonomies:
    - a. As printed in "Insects in Kansas" book or
    - b. As printed on the "Insects in Kansas Book: 2016 Revised Taxonomy", which follows [www.bugguide.net](http://www.bugguide.net)
  3. 4-Hers who have been previously enrolled in or are currently enrolled in the other phases of the Entomology project need to start with the Beginning Phase of Entomology Notebooks, not the introductory phase.
  4. Each exhibitor is required to identify the notebook by placing a Title Page in the front of the notebook bearing the exhibitor's name, county or district and class 4Her is enrolled in and statement of taxonomy used:
    - a. "Insects in Kansas" book or
    - b. "Insects in Kansas Book: 2016 Revised Taxonomy", which follows [www.bugguide.net](http://www.bugguide.net)
- The number of orders, specimens and families (required in Intermediate and Advanced classes) must also be included on the Title Page.
5. 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.
  6. Date, common name, full county name, state abbreviation should be included for each species. Collector's name on the specimen page is optional.
  7. Specimen pages should have two different views of the insect if possible. If pictures are taken on different dates/localities, include information for both.
  8. A statement describing the habitat where found/host plant may be included and is encouraged and will be worth a bonus 10 points total, not per page. For Intermediate and Advanced notebooks, this is strongly encouraged.
  9. 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 as well on the front of the divider page.
  10. For the Intermediate and Advanced classes, insects are also to be grouped by family behind each order divider.
  11. 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 your notebook.
  12. A special project must be completed each year and included in the notebook. See project guideline materials for specifications.

**1328 - Introductory Entomology Notebook** Display a minimum of 10 and a maximum of 30 insect species representing at least six different orders. Follow the general guidelines listed for Notebooks. Including the Special project. A 4-H member must be of minimum age to compete at the Kansas State Fair. A 4H member may exhibit in this class for a maximum of two years.

**1329 - Beginning Entomology Notebook** Display a minimum of 20 and a maximum of 60 insect species representing at least 7 different orders. Follow the general guidelines listed for all Notebooks, including the Special project. Members can exhibit in this class a maximum of 3 years or until they receive a purple ribbon at the Kansas State Fair, whichever comes first.

**1330 - Intermediate Entomology Notebook** Display a minimum of 60 and a maximum of 100 species representing at least 9 orders. Follow the general guidelines listed for Notebooks, including the special project. In addition, family identification is required for all insects in any two of the following six orders: (Only two will be counted for judging)

- a. "Insects in Kansas" book - Orthoptera, Hemiptera, Homoptera, Coleoptera, Hymenoptera, and/or Diptera or
- b. "Insects in Kansas Book: 2016 Revised Taxonomy" which follows [www.bugguide.net](http://www.bugguide.net) -Odonata, Orthoptera, Hemiptera, Coleoptera, Hymenoptera, and/or Diptera

Members can exhibit in this class for a maximum of 3 years. A 4Her may move up if they receive a purple ribbon.

**1331 - Advanced Entomology Notebook** Display a minimum of 100 and a maximum of 200 species representing at least 12 orders. Follow the general rules listed for Notebooks, including for Notebooks, including the Special project. Follow the general guidelines listed for Notebooks. Family identification is required for all insects belonging to the six basic orders as outlined under the Intermediate phase. Only families in the above six orders will be counted for judging. Family identification of insects in the remaining orders is optional, but desirable as long as accuracy is maintained. Members may continue to exhibit in this class for an unrestricted number of years as long as they remain eligible for 4-H membership.

### **Educational Displays**

1. 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.
  2. Follow copyright laws as explained in the General Rules.
  3. The exhibit may be, but isn't limited to, original works, digital presentations (must provide printed hardcopy for exhibit purposes for duration of state fair), programs, websites, games, apps, display box, notebook, display or poster which you have made.
  4. If the exhibit is a wooden display box, it must be 18x24x3.5 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"x28". If the exhibit is a display, maximum size is not to exceed a standard commercial 3' x 4' tri-fold display board.
  5. Name and county/district must clearly be marked on educational exhibits.
- 1332 - Beginning Educational Exhibit** Class for individuals that are exhibiting in the Beginning I and II Collection or Beginning Notebook Classes. If only exhibiting in this category, then ages 9-12.
- 1333 - Intermediate Educational Exhibit** Class for individuals that are exhibiting in the Intermediate Collection or Intermediate Notebook Classes. If only exhibiting in this category, then ages 11-14.
- 1334 - Advanced Educational Exhibit** Class for individuals that are exhibiting in the Advanced Collection or Advanced Notebook Classes. If only exhibiting in this category, then ages 13 or older.