

Environmental Education and Earth Science - Department H

Entomology

Entomology exhibits give 4-H'ers the opportunity to demonstrate their knowledge about insects and insect displays. This category has multiple projects that allows 4-H'ers to progress over numerous years. For help getting started with this project contact your county 4-H extension office.

GENERAL INFORMATION

- Specimens in display collections should be mounted properly and labeled with location and date of collection, name of collector, and order name.
- Follow mounting and labeling instructions in the Nebraska 4-H Entomology Manual.
- Boxes are preferred to be not more than 12" high X 18" wide, and landscape oriented, so they fit in display racks. Purchase of commercially-made boxes is allowed.
- All specimens are to be pinned and labeled by the exhibitor. No purchased specimens allowed.
- No projects over 50 pounds allowed.

Eligibility

All static exhibits must have received a purple ribbon at the county fair to advance to the State Fair. Exhibitors may, and should, correct and update collections for competition at the State Fair.

Scoresheets, Forms, and Contest Study Materials

Scoresheets, forms, contest study materials, and additional resources can be found at <https://go.unl.edu/ne4hentomology>.

Environmental Education and Earth Science - Department H

Division 800 – Entomology

- | | |
|----------------|--|
| CLASS 1 | ENTOMOLOGY DISPLAY, FIRST-YEAR PROJECT (Scoresheet SF186)
Collection to consist of 25 or more different kinds (species) of insects representing at least 6 orders. Limit of one box. |
| CLASS 2 | ENTOMOLOGY DISPLAY, SECOND-YEAR PROJECT (Scoresheet SF186)
Collection 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 must be present from after July 1 of previous year. Limit 2 boxes. |
| CLASS 3 | ENTOMOLOGY DISPLAY, THIRD-YEAR OR MORE PROJECT (Scoresheet SF186) |

Collection to consist of a minimum of 75 kinds (species) of insects representing at least 10 orders. Replace damaged or poorly mounted specimens. At least 25 species must be present from after July 1 of previous year. Limit of 3 boxes.

CLASS 4

SPECIAL INTEREST OR ADVANCED INSECT DISPLAY (Scoresheet SF187)

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, 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, etc.).

CLASS 5

INSECT HABITATS (Scoresheet SF186)

Habitats consist of any hand-crafted objects, made of natural or artificial materials, to be placed outdoors, which promote or conserve insects in the environment. Insects may include bee pollinators, butterflies, beneficial insects, etc. A one-page report must accompany the exhibit. Report should include placement, target insect, why materials were chosen, functional design, and indicators of success. See the following resources for reports:

- Nebraska Extension NebGuide: Creating a Solitary Bee Hotel (G2256)
- University of Minnesota: Wild Bees and Building Wild Bee Houses
- National Wildlife Federation: How to Provide Water in Monarch Gardens

CLASS 6

MACROPHOTOGRAPHY (Scoresheet SF189)

Subjects should be insects, spiders or other arthropods, or any nests, webs or constructions they make. All exhibit prints should be either 8" x 10" or 8½" x 11" and mounted on rigid, black 11" X 14" poster or matt board. Either orientation is acceptable. No frames are allowed. A short caption explaining the subject, printed on white paper, should be glued below the print on the poster or matt board.

CLASS 7

INSECT POSTER/DISPLAY EXHIBITS (Scoresheet SF190)

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.

CLASS 8 REPORTS OR JOURNALS (Scoresheet SF191)

Reports and 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 Project - Department H Division 810 – Entomology

CLASS 1 SPECIAL ENTOMOLOGY PROJECT EXHIBIT (Scoresheet SF190)

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.

CLASS 2 SPECIAL ENTOMOLOGY PROJECT DISPLAY (Scoresheet SF190)

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 2023 is the grasshopper.

*** The following 900 numbered classes are not eligible for State Fair consideration***

CLASS 901 BUILD A BUG

Build your own insect by using common household items such as egg cartons, disposable cups, modeling clay or Legos. An outline for this project is available at the Extension office. Be sure to include the following in your design:

Head: The head is where the insect interprets sensory information. That means the head is where the eyes, antennae, and mouth are located.

Thorax: The thorax is where the locomotion, or moving, parts of the insect are. All six legs and their wings are attached here. Insects can have either 2 wings or 4 wings.

Abdomen: The abdomen is where insects house their stingers but do not have legs or eyes attached to.

When designing your insect, you should keep these special jobs in mind. They will be your baseline rules, as in the head should have two eyes and two antennae, or the thorax should be where legs and wings attached.

Other than those rules, you can design your insect however you want. Once you finish your creation, you should come up with a name for your insect.

On a small note card include the following information.

- Your name
- Where does the bug lives
- What does it eats
- What color it is.
- All of these can help you name it. What is its name? We would like it if you gave your insect a scientific name, such as the Omaha bird eating beetle or Scarlet flower fly. Be creative and have fun. Do not give it a personal name like Bob or Judy.