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## ENTOMOLOGY

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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.

### Resources:

Entomology 1 - Make an insect collection; Learn where to look for insects; Learn how to identify and classify insects.

URL: [https://4hcurriculum.unl.edu/index.php/main/program\\_project/62](https://4hcurriculum.unl.edu/index.php/main/program_project/62)

Entomology 2 - Complete an insect collection table; Plan an insect collection trip; Raise meal worms; Explore insect legs and collect insects with an extractor.

URL: [https://4hcurriculum.unl.edu/index.php/main/program\\_project/63](https://4hcurriculum.unl.edu/index.php/main/program_project/63)

Entomology 3 - Test ant food preferences; Conduct honey bee learning experiments; Record insect observations; Identify insect mouth types.

URL: [https://4hcurriculum.unl.edu/index.php/main/program\\_project/64](https://4hcurriculum.unl.edu/index.php/main/program_project/64)

Insectigator - Learn the difference between an insect and a bug; Identify insect parts and know why each is important; Find and examine bugs and insects in the field; Design your own insect or create a home for an insect.

URL: [https://4hcurriculum.unl.edu/index.php/main/program\\_project/61](https://4hcurriculum.unl.edu/index.php/main/program_project/61)

Nebraska 4-H 26 Entomology Manual - Mounting and labeling instructions

<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1366&context=a4hhistory>

### Rules:

1. Specimens in display collections should be mounted properly and labeled with location, date of collection, name of collector, and order name.
2. Boxes are preferred to be 12" high X 18" wide, and landscape orientation, so they fit in display racks. Purchase of commercially-made boxes is allowed. All specimens must be from the collector.

**H 800 001 ENTOMOLOGY DISPLAY, FIRST-YEAR PROJECT** Collection to consist of 25 or more different kinds (species) of insects representing at least 6 orders. Limit of one box.

**H 800 002 ENTOMOLOGY DISPLAY, SECOND-YEAR PROJECT** 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 the previous year. Limit 2 boxes.

**H 800 003 ENTOMOLOGY DISPLAY, THIRD-YEAR OR MORE PROJECT** 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.

**H 800 004 SPECIAL INTEREST OR ADVANCED INSECT DISPLAY** Educational display developed according to personal interests and/or advanced identification capability. This is also 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.).

**H 800 005 INSECT HABITATS** Habitats consist 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.

**H 800 006 MACROPHOTOGRAPHY (Extreme Closeup Photography)** 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 mat 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.

**H 800 007 INSECT POSTER/DISPLAY EXHIBITS** 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.

**H 800 008 REPORTS OR JOURNALS** 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.

PREMIUM: Purple \$2.00; Blue \$1.50; Red \$1.20; White \$0.85

## SPECIAL ENTOMOLOGY PROJECT

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



Exhibitors should be enrolled in Entomology 1, 2, 3, or Insectigator.

### **Resources:**

Includes the Entomology Resources listed on the beginning of this department, plus Tiger Beetles of Nebraska – University of Nebraska Department of Entomology

URL: <https://entomology.unl.edu/tiger-beetles-nebraska>

**H 810 001 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.

**H 810 002 SPECIAL ENTOMOLOGY PROJECT DISPLAY** – The current years' Special Entomology Project pinned species along with a one to two page 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.

PREMIUM: Purple \$2.00; Blue \$1.50; Red \$1.20; White \$0.85

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## VETERINARY SCIENCE

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The purpose of a Veterinary Science exhibit is to inform the public about a common health problem of animals, a veterinary science principle or public health/zoonotic diseases. Do not confuse veterinary science exhibit topics with animal husbandry, history or production topics.

### Resources:

Animal Disease - Study bacteria, viruses and parasites; Learn about diseases, relationship to nutrition, stress, heredity and poison; Learn basic disease prevention techniques.

URL: [https://4hcurriculum.unl.edu/index.php/main/program\\_project/22](https://4hcurriculum.unl.edu/index.php/main/program_project/22)

Animal Health and Its Relationship to Our World - Study environmental influences on animal health; Learn about maintaining animal health; Explore veterinary medicine as a career.

URL: [https://4hcurriculum.unl.edu/index.php/main/program\\_project/23](https://4hcurriculum.unl.edu/index.php/main/program_project/23)

The Normal Animal - Take an animal's temperature and pulse; Recognize healthy skin and membranes; Clean and disinfect animals quarters.

URL: [https://4hcurriculum.unl.edu/index.php/main/program\\_project/21](https://4hcurriculum.unl.edu/index.php/main/program_project/21)

Veterinary Science - Understand animals basic needs; Keep health records; Learn about future veterinary science technology.

URL: [https://4hcurriculum.unl.edu/index.php/main/program\\_project/20](https://4hcurriculum.unl.edu/index.php/main/program_project/20)

### Rules:

1. A Veterinary Science exhibit may consist of a poster, notebook or a display. The exhibit may represent material from any of the Veterinary Science projects including entry level exhibits from Unit I.
2. If photographs 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.
3. 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.**
4. Veterinary Science Posters: This exhibit presents the viewer with a design that is simple and direct, unlike a display that usually presents more information. A poster should not exceed 22" x 28" and may be either vertical or horizontal.
5. Veterinary Science Displays: A display may include but is not limited to:
  - o a 3-dimensional exhibit,
  - o a scale model,

- the actual product (for example: skeleton; teeth; samples of leather, fur, or dried skin damaged by disease or parasites)
- or a notebook. A display is not a poster.

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 or in a three-ring binder or another bound notebook format.

6. Appropriate Veterinary Science Topics:

- 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 & quality
- Efficient and safe livestock working facilities
- Or a topic of the exhibitors choosing related to veterinary medicine or veterinary science.

\*Remember, since these are science displays, all references and information needs to be properly cited. Proper sources include but are not limited to: Professional journals and publications, professional AVMA accredited websites, interviews with Veterinarians and excerpts from Veterinary Educational Literature.

**H 840 001 4-H VETERINARY SCIENCE LARGE ANIMAL POSTER, NOTEBOOK, OR DISPLAY**

**H 840 002 4-H VETERINARY SCIENCE SMALL ANIMAL/PET POSTER, NOTEBOOK, OR DISPLAY**

PREMIUM: Purple \$2.00; Blue \$1.50; Red \$1.20; White \$0.85