

**DEPARTMENT 79**  
**NATURAL RESOURCES**  
(Entomology, Natural Resources and  
Environmental Education & Recycling)

-----  
**ENTOMOLOGY**  
-----

Saturday, August 21, 2010, 1:00- 4:00 p.m.  
*Superintendent- Diane Shephard*

**PROJECT REQUIREMENTS**

**Learning Objective:** Participants in this department should learn names, environment, and living conditions for insects in the environment.

1. 1<sup>st</sup> year members may enter only 1 exhibit in this department. 2<sup>nd</sup> year members may enter no more than 1 exhibit in 2 sections of this department. 3<sup>rd</sup> year and up members may enter 1 exhibit from each section of this department.
2. 1<sup>st</sup> year insect collections need to be exhibited in boxes that will protect them from damage. Cardboard, plastic or wooden boxes are acceptable and can be of any size. It is recommended that bug collections be displayed in wooden boxes with glass lids and moth balls for best protection.
3. All members should exhibit an understanding of concepts learned at the previous level.
4. 1<sup>st</sup> year members should identify insects by common name or family name. 2<sup>nd</sup> year members should identify insects by common name, family name and insect orders.

**SECTION 291**  
**ENTOMOLOGY**

*Note: It is important that 1<sup>st</sup> and 2<sup>nd</sup> year entomology exhibitors are able to display their insects in any kind of protective box. Exhibitors in the third year and beyond program then need a wooden box with a glass cover. Exhibitors in the second year and beyond may combine wooden boxes with plastic or cardboard boxes to display their insects.*

**Class**

- 2290 **Entomology I-** Individual exhibit of 25 or more labeled adult insects representing at least 4 orders. Maximum credit given for 8 orders. Exclude all immature insects and nymphs for Entomology I. Be sure to label and identify. Any protective box- any size acceptable, cover with clear plastic wrap and add moth balls under the Styrofoam.
- 2291 **Entomology II-** 50 or more adult labeled insects representing at least 6 orders with maximum credit given for 11 orders. Any protective box- any size acceptable, cover with clear plastic wrap and add moth balls under the Styrofoam.
- 2292 **Entomology III-** 100 or more adult labeled insects representing at least 10 orders with maximum credit given for 14 orders. May use 2 exhibit boxes.

**Class**

- Exhibitors need to bring collections in wooden boxes with glass covers. Have moth balls under the Styrofoam. May use 2 or more exhibit boxes of various kinds. Wooden boxes are recommended.
- 2293 **Entomology IV-** 140 or more labeled insects representing at least 10 orders with maximum credit given for 14 orders. New categories and orders should be added and older damaged insects should be replaced. 2 exhibit boxes may be used. All collections need to be in wooden boxes with glass cover. Have moth balls under the Styrofoam. May use 2 or more exhibit boxes of various kinds. Wooden boxes are recommended.

**SECTION 292**  
**ENTOMOLOGY SCIENCE**

**Class**

- 2300 **Entomology Science I-** Special Collections: Collect, prepare, and preserve 25 different insect immature (nymphs and larvae), or 25 non-insect arthropods, or 25 species from a single order.
- 2301 **Entomology II-** Economic Entomology: Collect, preserve and exhibit 30 different economic insects (pest and beneficial adults and/or immature) and include some information on their relationship to human society.
- 2302 **Entomology III-** Entomological studies: Display can include photos, drawings, field observation report book, live specimen exhibit or identification demonstration. Report should be accompanied by a 16 x 20" poster depicting results.
- 2303 **Entomology Science IV-** Entomological Experiments: This can include experiments in biology, ecology, genetics or behavior of insects. Display should be accompanied by a 16 x 20" poster depicting results.

**SECTION 293**  
**ENTOMOLOGY SKILLS**

**Class**

- 2315 Level I- Illustrations: prepare at least 10 illustrations (any medium) of insects showing form, habits, life cycle or other interesting information.
- 2316 Level I- Laminations: prepare at least 20 wing laminations, including a name for each species.
- 2317 Level I- Plastic embedment of various insects and/or arthropods and include names of species where possible.
- 2318 Level II- Illustrations: prepare at least 20 illustrations (any medium) of insects showing form, habits, life cycles, or other interesting information.
- 2319 Level II- Laminations: prepare at least 40 wing laminations including a name for each species.
- 2320 Level II- Plastic Embedment: prepare at least 25 plastic embedment of various insects and/or arthropods and include names of species where possible.

**SECTION 294**  
**BEEKEEPING**

**Class**

- 2330 **Beekeeping I** Exhibit 3 one-pound jars of extracted honey labeled light or dark or 3 one-pound sections of comb honey.
- 2331 **Beekeeping II** Exhibit 3 one-pound jars of creamed honey.
- 2332 **Beekeeping III** Mount the flowers and leaves of at least 10 honey plants, including plant name, time of peak bloom, habitat importance to bees, and local abundance on a 14 x 22 inch poster or exhibit 2 one-pound jars of extracted honey labeled light or dark.
- 2333 **Beekeeping IV** A single frame observation hive containing bees, brood and a queen.