

ENTOMOLOGY

LEVEL/GRADE:

Level 1 – Grades 3, 4, 5

Level 2 – Grades 6, 7, 8

Level 3 – Grades 9, 10, 11, 12

Level 4 – Independent Study – Grades 9, 10, 11, 12

RULES:

1. Community Judging of all 4-H Entomology projects will be at Project Check-In.
2. Create an exhibit that shows the public what you learned in the entomology project this year. Follow the “Notes” under each section (Insect Collection and Poster).
3. At any level you may choose to exhibit either an insect collection or a poster.
4. Specimens must be displayed in a 24” x 18” box(es) orientated horizontally, with a project exhibit label in the lower right-hand corner (name, grade, and county). All insects must be labeled with their common name.
5. Reference: One of the following: 4-H 764 – How to Study, Collect, Preserve and Identify Insects. How to Make an Awesome Insect Collection, ID 401 (available online, extension.entm.purdue.edu/401Book/default.php?page=home, or through Education Store).
6. All posters, notebooks, and display boards must include a reference list indicating where information was obtained, giving credit to the original author, to complete the 4-H member’s exhibit. This reference list should/might include web site links, people and professionals interviewed, books, magazines, etc. It is recommended this reference list be attached to the back of a poster or display board, be the last page of a notebook, or included as part of the display visible to the public. A judge is not to discredit an exhibit for the manner in which references are listed.

Grade	Display	Max. # Collection Boxes
3	10 insects, identified and pinned on cards. Include card ID 401 A.	1
4	20 insects, mounted (pins or vials). Identify all insects by common name and identify five (5) to order. Include card ID 401 B.	1
5	30 insects, mounted (pins or vials). Identify all insects by common name and identify 15 to order. Include ID 401 C.	1
6	40 insects, exhibit a minimum of 6 orders, mounted (pins or vials). Identify all insects by common name and order. Include card ID 401 D.	2
7	50 insects, exhibit a minimum of 8 orders, mounted (pins or vials). Identify all insects by common name and order. Identify ten (10) to family. Include card ID 401 E.	2
8	60 insects, exhibit a minimum of 10 orders, mounted (pins or vials). Identify all insects by common name and order. Identify 30 to family. Include card ID 401 F.	2
9	70 insects, exhibit a minimum of 12 orders, mounted (pins or vials). Identify all insects by common name, order, and family. One educational box; theme: insect behavior.	3
10	80 insects, exhibit a minimum of 14 orders, mounted (pins or vials). Identify all insects by common name, order, and family. One educational box; theme: insect pest management.	3
11	90 insects, exhibit a minimum of 16 orders, mounted (pins or vials). Identify all insects by common name, order, and family. One educational box; theme: insects in the environment.	3
12	100 insects, exhibit a minimum of 18 orders, mounted (pins or vials). Identify all insects by common name, order, and family. One educational box; theme: benefit of insects.	3

EXHIBIT:

Insect Collection Option

- Orders: Use the orders listed in the reference material (above), which are found on page 57 in ID-401 and the Table of Contents of in 4-H 764.
- Display: Collect, mount (pins or vials) and identify insects personally collected in the U.S. only. Display your best specimens in an 18" x 24" box(es), orientated horizontally, with your personal identification (name, grade, and county) in the lower right hand corner. When multiple boxes are used: list the box order (i.e. "box 1 of 3 boxes) and include your name in each box. Cards A-F (for grades 3-8) are to be placed inside the display box in an attractive manner. ID-401-I cards, (for grades 9-12), should be placed in the lower right hand corner of box #1.
- Identification: Collection display boxes are expected to contain the specified number of insects, families, and orders specified (see chart below). All insects must be in the adult stage and be properly mounted on insect pins or be contained in vials as directed.
- Pin Labels: Each pin or vial must contain two labels: 1) Top label is to include collection date, location, and collector name. 2) Bottom label is to include common name and other optional identification data.
- Box Labels: Box labels (computer generated or neatly printed) are used for orders and families as required (see chart below) and are to be placed flat against the bottom of the box. Insects must be properly grouped directly under the correct order and family box label. For example, all insects belonging to a particular order must be placed under that order label. Orders to be used are listed in the reference book ID-401. If family level identification is required, the insects should be further grouped together under that family label.
- Educational Box: One additional box (educational), based on the specific theme (see chart below), is required for grades 9-12, in addition to the insect collection boxes. This box can be created in any manner chosen (without the mounting, pinning or identifying restrictions specified above). One educational box, based on the theme given, is required for grades 9-12, in addition to the insect display boxes. This box should be created in such a way as to teach something about the assigned theme to the general public.

POSTER OPTION

1. 4-H members may choose to exhibit a poster relating to something they learned in this project rather than an insect collection. Refer to poster section on page 23 for poster requirements. All posters must comply with these rules.
2. 4-H members must choose a new topic each year for their poster; and no insects may be mounted on the posters.
3. Choose one of the topics listed, appropriate for the 4-H member's grade in school, and use that topic for the exhibit title, so the judges know which activity was completed. A creative subtitle may be used.
4. Posters must be displayed horizontally, sized 22" x 28", mounted on a firm backing (foamcore board or other), and covered in clear plastic or other transparent material. Be sure to include a label with your name, grade, and county.

LEVEL 1 - GRADES 3 – 5

Poster Entomology: (Creepy Crawlies BU 6853)

Display a poster based on the following activities:

- Big Mouth Bugs – Show the 4 different mouth types that you studied. Include the completed chart describing the mouth types, an insect with this mouth type, food they eat, and where these insects might be found.
- Pit Stop – Make two pit traps and use them to collect insects. Exhibit your completed record sheet. You can use the format given for your data collection, or make your own. Include some of the insects, or pictures of your trap and insects collected.
- Buz-z-zing Around – Present three to five ways that insects communicate. Include an insect, or picture of each insect that communicates in each of the ways you are describing.
- FACETnating! – Show how insects see (compound eyes) and explain how they see colors.
- Ants and Uncles – Compare insects with their non-insect relatives by completing the chart in your book (copy or make your own). Include some of the insects and their non-insect relatives, or pictures of them, on your poster.

LEVEL 2 - GRADES 6 – 8

Poster Entomology: (What's Bugging You? BU 6854)

Display a poster based on the following activities:

- **Dots Before My Eyes** – Show the importance of color for communication, camouflage, and defense. Use the chart in your manual (copy or make your own) and one other method.
- **Designer Bugs** – Show your creative talents! Design an insect and show your drawing and model (or picture of your model). Give it a name, genus, species, and indicate the habitat you would expect your insect to live in.
- **How Sweet It Is** – Show how you completed the experiment using water, a diet drink, and a regular drink. Show what you observed using the chart given or one you make yourself. You may use the scientific method (described in Level 3, Chapter 1), if you want to try it.
- **Computer Bugs** – Show how you raised mealworms with pictures, information, and the completed chart (copy or make your own).
- **Things that Buzz in the Night** – Exhibit your night collection set-up and results. You can use pictures, drawings, and include insects (real or pictures) that you saw. Include the chart.
- **GrassHOPper To It** – Show some different ways that insects move by completing the chart and a labeled drawing of an insect leg.

LEVEL 3 - GRADES 9 – 12

Poster Entomology 3: (Dragons, Houses, and Other Flies BU 6855)

Display a poster based on the following activities:

- **A Meal from a Worm** – Show how you used the scientific method to study how mealworm larvae survive on a fixed amount of food. Include your hypothesis, data charts, and conclusions. Drawings or pictures will help tell the story.
- **BEEhavior** – Show how you used the scientific method to study honey bee response to symbols. Include your hypothesis, data charts, and conclusions. Drawings or pictures will help tell the story.
- **Bugs R Us** – Show how you taught others about entomology. Include all the items listed in the planning outline (copy or make your own). Drawings or pictures will help tell the story.
- **Planting for Butterflies** – Show how you planned, planted, and cared for your butterfly garden. Include the table (copy or make your own) and information about any help you received, resources you used (people and publications), and the cost of your project. Drawings or pictures will help tell the story.
- **The Monarch: King or Queen?** – Explain the life cycle of the monarch by completing the table (copy or make your own). Discuss migration (when and where) of monarchs. Research (library or Internet) to find out more. Drawings or pictures will help tell the story.

LEVEL 4: INDEPENDENT STUDY: GRADES 9 - 12

- **Advanced Topic** – Learn all you can about a topic of your choice and present it on a poster. Include a short manuscript, pictures, graphs, and list the works cited to describe what you did and what you learned. Title your poster, "Advanced Entomology."
- **Mentoring** – Exhibit a poster that shows how you mentored a younger 4-H member. Include your planning, the time you spent, the challenges and advantages of mentoring, and how the experience might be useful in your life. Photographs and other documentation are encouraged. Title your poster, "Advanced Entomology – Mentor."

STATE FAIR ENTRY:

One poster and one display exhibit in each division.