



**COLORADO STATE UNIVERSITY**  
**EXTENSION**

# Entomology

Each level is designed for members 8-18 years old and builds upon each other.



## Level 1 (Grades 3-5) Teaming With Insects

### Inspiring youth to:

- Study the parts of an insect
- Make either an insect collection with between 25 and 75 adult insects OR a display board telling about some phase of your project work (equipment, activities, etc.)
- Construct and operate a pitfall trap
- Study how insects communicate
- Learn about beneficial and destructive insects (invasive insects)
- Study the biodiversity of insects in different habitats
- Learn about integrated pest management
- Observe cricket behavior and communication

## Level 2 (Grade 6-8)

### Inspiring youth to:

- Learn more ways to trap insects
- Study the different orders of insects
- Learn which plants attract butterflies
- Make a metamorphosis wheel
- Study the stages of mosquito development
- Develop special insect collections
- Learn more about invasive species, integrated pest management, and forensic entomology

## Level 3 (Grades 9-12) is designed for older members who have completed all other units

## Level 3 (Grades 9-12)

### Inspiring youth to:

- Explore entomology careers
- Use the scientific method to learn about insects
- Make a dichotomous key
- Seek out new resources and dig deeper into project topics

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# Entomology

## Project Tips:

- Exhibits are limited in insect specimens only. Insects have three body regions, three pairs of legs and one pair of antennae, and wings in adult stage. (Spiders have four pair of legs, two body regions and no antennae.)

## Display Board Tips:

- The standardized display board size of 4 ft. x 3 ft.
- Represent some phase of your project work: a chart, special equipment, what you learned in project activities, etc.

## Judging Criteria:

- Neatness - readable, well-organized, clear, legible and understandable
- Creativity - originality, freshness, imagination
- A minimum of 12 activities completed in manual
- e-Record completed with photos & story.

## Collection Tips:

Acceptable sizes of handmade Entomology Display Boxes include:

12" W x 16" L x 3" deep

12" W x 18" L x 3 ½" deep

18" W x 24" L x 3 ½ "deep

Glass tops on display cases should slide to the top or side to prevent them from slipping out and breaking.

Commercially available display cases are acceptable. Regular insect pins are required. The display must include date and location where insects were collected placed on labels attached to insect pins.

## Resources:

- Exhibit & Judging Requirements
- Record Books
- Manual Information

Located at: [Colorado4h.org](http://Colorado4h.org)

# Entomology Industry Careers



## Natural Resource Conservationist

Conservation of plants  
and animals around  
entomology



## Research

To study the effect of  
insects on different  
environments, plants,  
animals, and consumers



## Education

Teach others about  
gardening and insects  
(i.e. Extension educator  
or school faculty)



## Inspection

Provide inspection  
services for plants and  
animals and producer  
quality to ensure  
consumer safety



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## **Degrees/Certifications:**

Public Health Entomology Certificate  
Forensic Entomology  
Apiculture  
Conservation  
Microbiology  
Disease Management  
Agronomy/Crop Science  
Entomology  
Forestry



## Regulation

U.S. Customs & Border  
Patrol/Inspection Officer;  
Help prevent unwanted  
diseases and invasive  
species going in and out of  
the United States



## Public health

Reduce and prevent  
disease spread through  
insects into the general  
human population



## Career Information Technology

Support individuals and  
businesses as they provide  
services utilizing technology



## Consulting

Provides the opportunity  
for education and  
analysis surrounding  
insects