

# INSECT COLLECTION



**Buzzzz.** Insects are always around us, even if we can't see them! There are 925,000 identified insect species (many more are unidentified) worldwide, numbering an estimated ten quintillion insects on the earth at any time. Of all these species, only about 1,000 species are serious pests. Entomologists have identified more than 91,000 insect species in the United States alone!

Whether you want to start a new hobby, pursue a career in entomology, or wish to learn about insects and their role in the local ecosystem, this project may be perfect for you!

Making an insect collection is the best way to learn about insects, including what they look like, where they live, and what they do. Insects can be found almost anywhere:

- In the air
- On all types of vegetation
- Under and around bright outdoor lights
- In woodpiles throughout the year
- In the soil
- On and in decomposing organic matter
- On domestic animals
- Along all waterways
- Around and in our homes and buildings
- Just about anywhere

## What You Will Learn and Do in the 4-H Insect Collection Project

- Be introduced to the field of entomology and career opportunities associated with this field of study.
- Learn about the basic biology of insects and related organisms.
- Become knowledgeable regarding the biodiversity that exists in the world of insects.
- Research, classify, and identify species of insects.
- Create an insect collection containing a set number of species with required information depending on your level of competition.

Refer to [Alabama 4-H Competitive Events on the Alabama Extension website \(www.aces.edu\)](http://www.aces.edu) to review the General Contest Policy and the Age & Eligibility Chart.

### LEVELS OF COMPETITION

For details on eligibility, see the General Event Policy.

#### Junior Level I:

9 to 11 years old on December 31 of the current calendar year (compete only at local and regional levels).

#### Intermediate:

12 to 13 years old on December 31 of the current calendar year (compete only at local and regional levels).

#### Senior Level I:

14 to 15 years old on December 31 of the current calendar year.

#### Senior Level II:

16 to 18 years old on December 31 of the current calendar year.

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## Rules for All Levels

1. Individual entry only. Teams are not allowed.
2. Collections must be exhibited in a plexiglass or glass covered collection box with dimensions that are approximately 19"x16 ½" x 3" thick (outside dimensions). It must have a white pinning board backing.
3. Specimens need to be arranged in the box for horizontally display.
4. The number of specimens must meet the criteria for the level of competition.
5. Identification labels must be made from white card stock. (See "Labeling Insects" instructions located on 4-H Insect Collection webpage)
6. Use insect pins for pinning insects (Sizes 0, 1, 2, and 3 should meet most of your needs).
7. Include a "collection catalog" that is tucked into an envelope that is attached to the back of the display box. The catalog should list each insect in the collections, its order, and common name. A space should be left next to each specimen for judges' comments.

## Junior Level Rules

1. The insect collection for this level must contain a minimum of 25 different insect species with a maximum of 50 insects displayed in one box.
2. The collection must contain specimens from a minimum of four orders.
3. Identification must be made to the order.
4. The correct "common names" may also be included and will improve score.
5. All specimens must have the date-locality included on the label.
6. Keep the display neat and organized.

## Intermediate Level Rules

1. The insect collection for this level must contain a minimum of 50 different insect species with a maximum of 100 insects displayed in one to two boxes.
2. You may build from last year's display if desired.
3. The collection must contain specimens from a minimum of eight orders.
4. At least 25 of the insects must include common names.
5. Avoid cramming specimens together in the display as it needs to look well-organized.

## Senior Level I Rules

1. The insect collection for this level must contain a minimum of 100 different insect species with a maximum of 150 insects displayed in two to three boxes.
2. You may build from last year's display if desired.
3. The collection must contain specimens from a minimum of ten orders.
4. All insects must include common names.
5. Avoid cramming specimens together in the display as it needs to look well-organized and neat.

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## Senior Level II Rules

1. The insect collection for this level must contain a minimum of 150 different insect species and a maximum of 250 insects displayed in up to five boxes.
2. A pest box must also be included which focuses on pest insects. The pest display box counts as one of the total boxes and should contain an example of the insect's damage, the stage of the insect causing the damage, and any other stages of the insect necessary for diagnosing the problem. Include information in the display that tells how the insect is managed/controlled.
3. You may build from last year's display if desired.
4. The collection must contain specimens from a minimum of twelve orders.
5. All insects must include common names.
6. Avoid cramming specimens together in the display as it needs to look well-organized and neat.

## Where Do I Start?

When you start your insect collection, just look around as insects can be found living just about anywhere. Which species of insects you include in your collection is up to you. Just remember to look at your competition level and collect accordingly. Since you are collecting living organisms and dispatching them for scientific purposes, remember to use scientifically acceptable and humane means.

We recommend that you purchase a good insect field guide or at least check one out from the public library. If you do decide to purchase a field guide, there are several great ones available so look them over and pick the one that you find most helpful. The field guide will help you when you identify the insects.

To help you in completing this project successfully, we will provide instructional resources on the "4-H Insect Collection website page. The following is a list of some these helpful resources:

- Insect Collecting Equipment
- Dispatching Your Insects
- Mounting Your Insects
- Identifying Your Insects
- Labeling Your Insects
- Properly Storing and Displaying Your Insect Collection
- List of Common Alabama Insects

In addition to the resources that are provided on the Alabama 4-H Insect Collection webpage, there are also a lot of other helpful online resources that you can use as references.

## Remember to Stay Safe!

- Wear sunscreen and insect repellent when outdoors.
- Wear shoes and clothing that will protect you from injury.
- Some insects will sting and/or bite so use caution when collecting them.

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Alabama 4-H  
Alabama Cooperative Extension System

## Identification of Entry

Name, county, and level of participation should be displayed with each entry. An introduction at the beginning of your time would be appropriate.

## Disqualification of Entry

- Not following the instructions listed under the Rules for the level of competition.
- Purchasing insects for your collection.
- Senior Level 4-H member not submitting a community service report.

## Career Connections

Skills and knowledge developed through this project have direct connections to many exciting and rewarding careers and lifelong hobbies. These include beekeeping, naturalist, pathology, chemistry, forensic science, microbiology, wildlife biologist, ecologist, environmental engineer, pest management, and many others.

## Community Service

Telling a great story, showcasing projects at a community library, speaking at a local nursing home, or organizing a community cooking or building blocks workshop are great opportunities to serve others. Serving others helps you build academic skills, learn civic responsibility, and develop leadership. It may also give you a good opportunity to meet new people, publicize 4-H, and practice your communication skills. Alabama 4-H is now requiring all Senior Level 4-H members to add a community service component to all 4-H Competitive Events. Each Senior Level 4-H member will have to complete the 4-H Community Service Report as a part of his or her project. 4-H members will be disqualified if the community service report is not included.

You must decide what service you can provide and not have a parent or 4-H leader make this decision for you. Groups of young people are encouraged to work together to discover how they can serve their community.

An example for the 4-H Insect Collection is to take your insect collection to a county fair, senior center, or public library and talk to the community about insects.