



# Entomology Project



Did you know that nearly three-fourths of all animals are insects? Because there are so many insects, they impact our daily lives in both good and bad ways. In this 4-H project you will learn about entomology – the study of insects. They compete with us for food, they can carry diseases, and they impact renewable resources affecting our economy. But insects are major benefactors, too, controlling other insect pests, pollinating a wide variety of crops, and recycling organic matter.

## Starting Out *Beginner*

Level 1 introduces the world of insects. Activities focus on how they look and move and provide some background for studying important entomology topics. You may build a compound eye to see how an insect sees, identify insects, use a pit-fall trap to collect insects, and observe insect habits.

## Learning More *Intermediate*

Level 2 shows how to make insect collection tools, and expands on the basic concepts of biodiversity, invasive species, integrated pest management, and forensic entomology. You may make an insect collection tool kit, make insect traps and baits, create a spreading board, and investigate invasive species.

## Expanding Horizons *Advanced*

Level 3 dives deeper into basic concepts and encourages you to take control of your learning by doing your own research using the scientific method. You may use the scientific method to investigate insects, create a dichotomous key, measure insect diversity, and experiment with meal worms.

## Inspire Kids to Do

### Explore

#### **"I might like to do this."**

Youth who explore a variety of interests before high school, through experiences like 4-H camps and educational events, can develop early interest in a career path and improve their academic performance.

### Learn

#### **"I can do this."**

4-H project-based learning, guided by adult volunteers, improves youth understanding of skills and concepts, as well as their ability to problem-solve and collaborate.

### Practice

#### **"I'm interested in this."**

Youth who have participated in sustained hands-on learning and engaged with professional mentors and volunteers before entering high school are more likely to explore studies and potential career paths.

### Experience

#### **"I will be this."**

Real-world application is key — 91% of Kansas 4-H members have a plan for reaching their goals. Youth that have been active participants in hands-on learning, combined with strong decision-making skills, are more able to effectively navigate life.

# Kansas 4-H Entomology Project

## Expand Your Experiences!

### Healthy Living

- Conduct a workshop to teach people about household pests and how to control them.
- Discover how other cultures utilize insects as important food source.

### Science and Agriculture

- Learn about the proper use of insecticides as a component of pest management.
- Job shadow an agronomist to scout for infestations.
- Study the benefits of pollinators.

### Community Vitality

- Plant a butterfly garden for an elementary school, daycare, or nursing home.
- Create a caterpillar or butterfly display for a classroom so students can see the real life change from caterpillar to chrysalis to butterfly!

### Communication and the Arts

- Visit the local nursing home and give a presentation about insects. Bring your insect collection or jars of insects to share for show and tell.
- Make a video about the importance of pollinators.

## Career Development

Young people with a passion for insects and the study of entomology can pursue a wide variety of careers.

- Agrochemical industry
- Forensic entomology
- Public health
- Conservation and environmental biology
- Urban pest control
- Crop consultants
- Military
- Cooperative Extension
- Higher education
- Zoos

To pursue a degree in Entomology, visit: [K-State Department of Entomology](#)

## Local Contact Information

Resources and Events	Curriculum and Resources	4-H Record Keeping	Project Exhibit Ideas
<p>Participating in educational events and learning opportunities will expand your knowledge and skills in the project area. Contact your local K-State Research and Extension office for local opportunities.</p> <ul style="list-style-type: none"><li>• Kansas 4-H Insect Spectacular</li><li>• Kansas Wetlands Education Center- Butterfly Festival</li></ul>	<ul style="list-style-type: none"><li>• <a href="#">Teaming with Insects Curriculum</a></li><li>• <a href="#">Insects of Kansas</a></li><li>• <a href="#">BugGuide.net</a></li></ul> <p>Supplemental Resources:</p> <ul style="list-style-type: none"><li>• <a href="#">Entomology Collection Notebooks Guidelines</a></li><li>• <a href="#">Insect Orders Taxonomy</a></li><li>• <a href="#">Tips on Exhibiting Collections</a></li><li>• <a href="#">Insect Life Cycles</a></li><li>• <a href="#">Pinning and Labeling Insects</a></li><li>• <a href="#">Tips on Spreading Butterflies and Moths</a></li></ul>	<p>Learning to keep accurate records is a life skill. The following forms can help you:</p> <ul style="list-style-type: none"><li>• <a href="#">Setting 4-H Project Goals (4H1100)</a></li><li>• <a href="#">Kansas 4-H Record Keeping</a></li><li>• <a href="#">Insect Collection Record</a></li></ul>	<ul style="list-style-type: none"><li>• Insect collection box</li><li>• Insect collection notebook</li><li>• Educational displays based upon lessons and activities from Teaming with Insects Curriculum. Some ideas may include:<ul style="list-style-type: none"><li>• Butterfly life cycle</li><li>• Importance of pollinators</li><li>• Benefits of insects</li><li>• Parts of an insect</li><li>• Types of insect mouths</li><li>• Pest management</li></ul></li></ul>

