



**Iowa 4-H After School Program**  
***Bugs, Lesson Plan***  
**Eight, 60 Minute Sessions**

**Grades:** 3-6

**Optimum Group Size:** 25

**Supplies Needed:** See lesson plans

**Reference Resources** (include citation and ISBN#):

- Birds, Beasts, Bugs and Us Activities for Environmental Education, 4H-818b
- Bug Watcher, Iowa Youth and 4-H Entomology, 4-H 423A
- Entomology, Group Helper's Guide,  
4-H Cooperative Curriculum System Publication, 4HCCS 6856
- What's Bugging You?  
4-H Cooperative Curriculum System Publication, 4HCCS 6854
- Dragons, Houses and Other Flies  
4-H Cooperative Curriculum System Publication, 4HCCS 6855

**Physical Setting:** Classroom, outdoors

**Life Skills Addressed:**

- Learning to learn
- Communication skills
- Hypothesizing, exploring, recording
- Leading a group
- Finding information and making comparisons

**Indicator** (What is the one thing the child should get out of each lesson):

- D1: Communication (5008): to clearly state my thoughts, feelings, and ideas to others
- D2: Marketable Skills (8007): to contribute as a member of a team
- D3: Wise use of resources (3030): to act in a responsible manner when using a natural resource
- D4: Wise use of resources (3030): to act in a responsible manner when using a natural resource
- D5: Wise use of resources (3043): to keep accurate and useful records
- D6: Wise use of natural resources (3030): to act in a responsible manner when using natural resources
- D7: Wise use of natural resources (3037): how I can improve the environment
- D8: Wise use of natural resources (3037): how I can improve the environment

**Content Objective:**

- D1: What do I know about bugs?
- D2: How do insects move, and where can I find insects?
- D3: How do insects grow?
- D4: Catching and observing insects
- D5: Observing insect behaviors through experimentation

- D6: Raising insects and testing behaviors
- D7: Planting for wildlife
- D8: Planting for wildlife

**Related School Standards and Benchmarks** (1-2; refer to National Standards and Benchmarks):

**Life Skills**

- **Life Work**
  - 1. Makes effective use of basic tools**
    - a. Chooses appropriate common materials for making simple mechanical constructions and controlling things
- **Working with Others**
  - 1. Displays effective interpersonal communication skills**
    - a. Communicates in a clear manner during conversations
    - b. Contributes to the development of a supportive climate in groups
    - c. Engages in active listening
  - 2. Contributes to the overall effort of a group**
    - a. Helps the group establish goals

**Science**

- **Life Sciences**
  - 1. Understands relationships among organisms and their physical environment**
    - a. Knows that an organism's patterns of behavior are related to the nature of that organism's environment (e.g., kinds and numbers of other organisms present, availability of food and resources, physical characteristics of the environment)
  - 2. Understands the structure and function of cells and organisms**
    - a. Knows that plants and animals progress through life cycles of birth, growth and development, reproduction, and death; the details of these life cycles are different for different organisms
    - b. Knows that the behavior of individual organisms is influenced by internal cues (e.g., hunger) and external cues (e.g., changes in the environment), and that humans and other organisms have senses that help them to detect these cues
- **Nature of Science**
  - 1. Understands the nature of scientific inquiry**
    - a. Knows that learning can come from careful observations and simple experiments
    - b. Plans and conducts simple investigations (e.g., formulates a testable question, makes systematic observations, develops logical conclusions)
    - c. Knows that different people may interpret the same set of observations differently

**Evaluation** (indicate if Targeted Life Skill evaluation is attached at end of lesson plan):  
Attached

<b>Time Allotment</b>	<b>Activity</b>	<b>Supplies</b>
<b>Day 1</b>		
15 minutes	What do you know about insects? pg 6, <i>Bug Watcher</i>	Copies of questions, pencils. This could be done verbally, as a group

<b>Time Allotment</b>	<b>Activity</b>	<b>Supplies</b>
15 minutes	Insect parts, pg 10, <i>Bug Watcher</i>	Copies of insect picture Insects to look at (grasshoppers are good)
30 minutes	Bigger than a Bread Box, pg 26, <i>Helper's Guide</i> . <ul style="list-style-type: none"> <li>This game could be played when ever there is a few minutes left in the hour</li> </ul>	Pencils paper,
<b>Day 2</b>		
15 minutes	Left, Right, Left, Right, pg 16, <i>Helper's Guide</i>	cloth strips or Velcro straps
30 minutes	Hop, skip and Jump, pg 6, <i>Helper's Guide</i>	grasshoppers, crickets poster board tape measure
15 minutes	Find Insects!, pg 13, <i>Bug Watchers</i> . <ul style="list-style-type: none"> <li>Look for insects the next day if there is not time to go outdoors.</li> </ul>	Paper Pencils outdoor spaces
<b>Day 3</b>		
30 minutes	How to make an insect net, pg 27, <i>Bug Watchers</i> or How to make a Viewing Cage, pg 28, <i>Bug Watchers</i> . <ul style="list-style-type: none"> <li>You can split the group so that both are made.</li> </ul>	See "What you need" on each activity
15 minutes	Trace the Life Cycle of an insect, pg 18, <i>Bug Watcher</i>	Copies of "Complete Metamorphosis"
15 minutes preparation, several months to complete	Turn Left at Mexico, pg 8, <i>Helper's Guide</i>	monarch eggs large container/box/jar with lid milkweed leaves sticks/twigs
<b>Day 4</b>		
30 minutes	Catch a few Insects, pg 20, <i>Bug Watchers</i> . <ul style="list-style-type: none"> <li>Here there are" A Bunch of Project Ideas".</li> <li>This is #2.</li> </ul>	Nets jars from previous day,
30 minutes	Be a Bug Watcher, pg 14, <i>Bug Watcher</i>	Insects magnifying glasses paper pencils (regular and colored) copies of pg 15, chart
<b>Day 5</b>		
30 minutes	Mr. Grasshopper's Neighborhood, pg 22, <i>Helper's Guide</i>	rope or heavy string-at least 15 feet long insect guides
30 minutes	Miss BEEhaving, pg 12, <i>Helper's Guide</i>	clear containers live insects

<b>Time Allotment</b>	<b>Activity</b>	<b>Supplies</b>
		soda straw flour pencils
<b>Day 6</b>		
60 minutes	Wiggle, wiggle, pg 22, <i>Dragons, Houses and other Flies</i> . Or Ants and ANTics, pg 8, <i>Dragons, Houses and other Flies</i> Groups can chose which insect to observe	Observation chamber (pg 23) food for ants paper
<b>Day Seven</b>		
60 minutes	Planting for Butterflies, pg 18, <i>Dragons, Houses and other Flies</i> Plan the garden and start the seeds indoors if possible Continue to observe mosquitoes, ants and monarchs	Plot of ground flower seeds
<b>Day Eight</b>		
60 minutes	Planting for Butterflies, pg 18, <i>Dragons, Houses, and other Flies</i>	Plot of ground flowers started indoors

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