

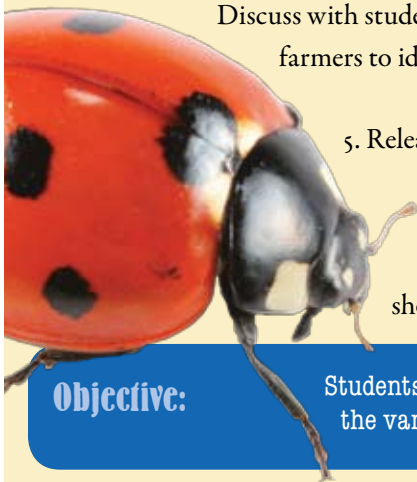


OBSERVING AND IDENTIFYING GARDEN INSECTS

Bug Sweep

1. Explain to the class that there are countless insects found in the garden. Some insects are beneficial, while others are considered pests. Distribute one hanger, tape and a gallon zipper-type plastic bag or panty hose to each student group. Tell students to stretch the bag (or panty hose) across the frame of the hanger to create a bug sweeper to collect garden pests.
2. Give students 15 minutes to collect as many different bugs as possible in the garden area. Encourage students to gently examine the leaves of plants to locate bugs. Transfer each group's collection to a clear jar with holes.
3. Ask students to count and categorize the insects according to physical attributes. Students may select their own criteria to categorize their findings. This may include the number of legs, winged or non-winged, color, weight, body structure, size, antennae, etc. Encourage students to share their discoveries with the class.
4. Instruct students to closely observe their pests and draw realistic pictures of their pest in an insect journal. Challenge students to make their drawings as detailed as possible. Students may need to use a magnifying glass or in some cases, a microscope, to make their observations. Once groups have completed their drawings, they can use an insect guide to identify their collection. Try to determine if each insect is a beneficial insect or a pest.

Discuss with students why it is important for gardeners and farmers to identify the insects in their growing area.



5. Release the insects outside when the study is completed. Students can gently tip their collecting jar on its side and remove the lid. The insects should crawl or fly out of the jar.

Objective:

Students will collect, observe and categorize the various insects in the garden.

California State Board of Education Content Standards

Grade 1: Science: 2a, 4a, 4b
Math: Statistics, data analysis and probability 1.0

Visual Arts: 1.1, 1.3

Grade 2: Science: 2c, 2d, 4c, 4f

Visual Arts: 1.1, 1.3

Grade 3: Science: 3a, 3c
Visual Arts: 2.1, 2.4

This lesson can be easily adapted to meet the educational standards for a variety of grade levels.

Materials:

- Gallon zipper-type plastic bag or panty hose, one per group
- Coat hangers, one per group
- Tape
- Notebook or journal
- Jars and lids with holes
- Insect identification book
- Magnifying glass
- Pest identification resources
ipm.ucdavis.edu

Vocabulary:

Antennae: a feeler organ on the head of an insect, crustacean, or other animal.

Beneficials: organisms that provide a benefit to crop production, applied especially to natural enemies of pests and to pollinators such as bees.

Entomologist: a person who studies the classification, life cycle and habits of insects and related life forms.

Pest: any unwanted and destructive insect or other animal that attacks food, crops or livestock.

This lesson has been adapted from National 4-H Cooperative System, Inc. curriculum by California Foundation for Agriculture in the Classroom. For additional educational resources, visit www.n4hccs.org.