INDOORS, OUTDOORS ❀ GRADES 3-6 ❀ FALL, SPRING ❀ ACTIVITY

Insect Anatomy, or Make No Bones About It!

DESCRIPTION

Students examine insect anatomy and draw garden insects.

OBJECTIVE

To identify the parts of insects.

TEACHER BACKGROUND

All insects, even though they look as different as a moth and an ant, have similar body parts: head, thorax, and abdomen. Attached to the thorax are three pairs of legs and, in most species, two pairs of wings. The head has one pair of antennae. This combination of features distinguishes insects from closely related animals such as spiders, ticks, mites, centipedes, and millipedes.

MATERIALS

- 1 Insect Anatomy blackline master per student, page 392
- 1 bug box per group of three students
- science journals
- drawing materials
- insect reference guide (optional)

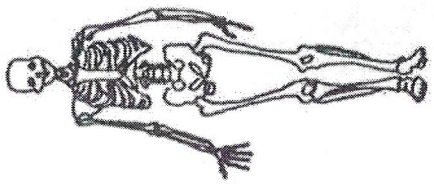
CLASS DISCUSSION

How many different insects can you name? *(List responses on the board.)* They look very different, don't they? What makes each of these animals an insect? *(Let students generate as many ideas as possible.)* Let's find out what these insects have in common.

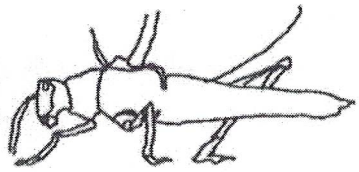
ACTION

1. Distribute the Insect Anatomy drawing and give students a few minutes to study it.

2. Point out to students that virtually all insects share the following characteristics:
   - six jointed legs (Note that spiders, which have eight legs, are not insects.)
   - a body divided into three main parts: head, thorax, and abdomen
   - a pair of antennae
   - most have wings – usually two pairs
   - a hard outer covering called an exoskeleton



Human skeleton



Insect skeleton

3. Discuss and identify each of the parts on the Insect Anatomy drawing. Point out that one big difference between insects and other animals is that insects have an exoskeleton, a skeleton on the outside of their bodies. Discuss the human skeleton and its function. *(It supports the tissues and protects the internal organs.)* What is the main advantage of a hard exoskeleton? *(It acts as a coat of armor that protects the insects.)*

4. *(Optional)* Give students time to color in the insect anatomy.

5. Have students bring their science journals and their Insect Anatomy drawings to the garden or outdoor natural area. Give each group of three one bug box and drawing materials. Discuss with students how to catch an insect without hurting it.

6. Each group should carefully collect one insect in the bug box, study it, and identify its parts. Then they can draw it in their journals and label the parts on the drawing. Be sure to release the insects before leaving the garden.

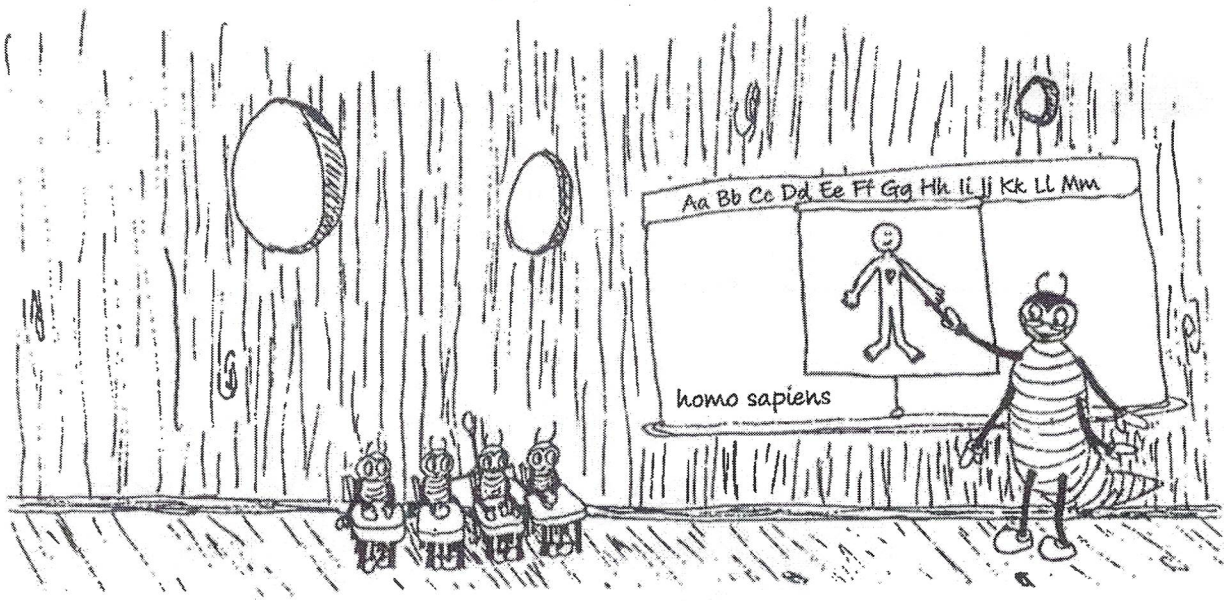
7. Have groups share their drawings, comparing ways that insects differ and ways that they are alike.

WRAP UP

A moth and an ant have many characteristics in common. What are they? Why do insects have an exoskeleton? How do you think insects grow if they have an exoskeleton? *(They shed it.)* What would life be like if you had an exoskeleton?

DIGGING DEEPER

Using an insect reference guide, identify the garden insects that were collected and drawn.



Insect Anatomy

(From: Insect Anatomy, or Make No Bones About It!, page 255)