

#9047

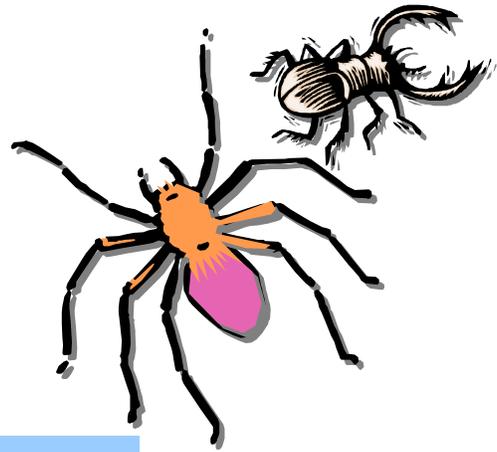
# A CLOSE-UP LOOK AT SPIDERS AND INSECTS

ALLEGRO PRODUCTIONS

2000

Grade Levels: 4-8

25 minutes



## DESCRIPTION

New technologies and improvements in photography let us see into the private lives of insects and spiders. Shows both groups cleaning themselves, recycling, and building protective coverings. Comments on the two types of metamorphosis and observes some mating rituals.

## ACADEMIC STANDARDS

### Subject Area: Life Sciences

- Standard: Understands biological evolution and the diversity of life
  - Benchmark: Knows different ways in which living things can be grouped (e.g., plants/animals, bones/no bones, insects/spiders, live on land/live in water) and purposes of different groupings

## INSTRUCTIONAL GOALS

1. To illustrate how insects and spiders spend their lives finding food, laying eggs, building their homes, and protecting themselves.
2. To observe how various insects hid from their enemies.
3. To observe how a colony of ants builds its house.
4. To examine the difference between an insect and a bug.
5. To depict how insects and spiders mature.

## BACKGROUND INFORMATION

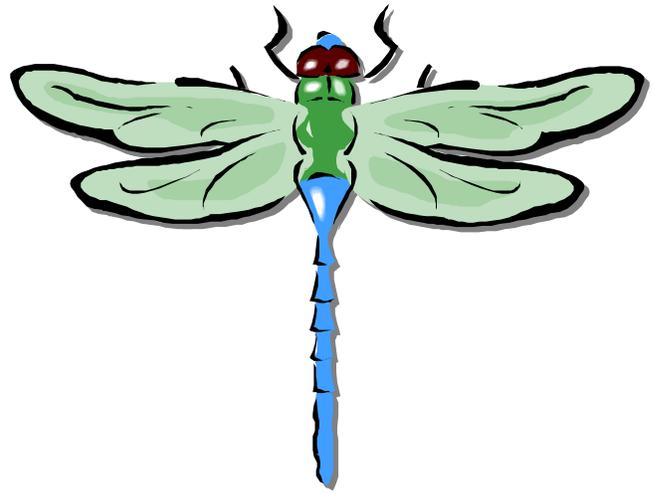
Scientists have discovered about one million different kinds of insects. There may be ten times that many that has not yet been identified. This program shows students how insects and spiders spend their lives finding food, laying eggs, building their homes, and protecting themselves.

Insects hide from their enemies using numerous types of camouflage. Some beetles defend themselves by emitting a cloud of smelly gas. Weaver ants squirt acid at their enemies.

The program shows how a colony of ants builds its house. The program also explains the difference between an *insect* and a *bug*. It explains that insects and spiders mature in one of two ways. Some mature by incomplete metamorphosis, growing until they reach adult size. Others mature through the four stages of complete metamorphosis, and students see how an insect changes from an egg to a larva to a pupa to an adult.

## VOCABULARY

1. arthropod
2. camouflage
3. cuticle
4. exoskeleton
5. formic
6. instinctual
7. larva
8. metamorphosis
9. molting
10. nymph
11. ovipositor
12. pupa
13. thorax



## AFTER SHOWING

### Discussion Items and Questions

1. How do insects differ from spiders?
2. What is the most common defense for insects?
3. What are the four stages of complete metamorphosis?

### Applications and Activities

1. Show students two pictures, one of a spider, the other of an insect. Then ask students to compare and contrast the bodies of spiders and insects. Make a chart on the blackboard comparing the information side by side.
2. Assign a group of students the project of researching how spiders spin webs. Then ask the group to explain the process to the rest of the class using drawings.
3. Ask students to look at the pictures and descriptions of ants and make notes. Then ask students to pick one ant and prepare a 5-minute lecture about it. The same assignment can be given for termites, roaches, fleas, and others.
4. Send your students on an insect safari by asking them to search various Web sites related to insects and make a list of the different types of insects and spiders they come across within one hour.
5. Ask students to write a story in the first person from the point of view of one insect. The story should be about what the insect does all day.
6. Ask students to select an insect that develops during complete metamorphosis and to draw what it looks like during each of the four stages.

## RELATED RESOURCES



### Captioned Media Program

- Bill Nye the Science Guy: Spiders #9045
- Insects #3143
- Tarantulas #8916





## World Wide Web

The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and "kid safe" sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

- **ALIEN EMPIRE**

<http://www.pbs.org/wnet/nature/alienempire/>

Click on one of the several words on an insect graphic to discover more about insects. Then click on other topics such as "Enter the Hive" to see what the daily life of a honeybee is like, and other activities (including bug mask patterns to wear!).

- **ENATURE**

[http://www.enature.com/guides/select\\_insects\\_and\\_spiders.asp](http://www.enature.com/guides/select_insects_and_spiders.asp)

Select from several different types of insects or spiders to view a picture, to see the Latin name, and to read the short description, food, life cycle, habitat, and range for that species.

- **ARCHNOLOGY: THE STUDY OF ARACHNOIDS**

<http://www.ufsia.ac.be/arachnology/arachnology.html>

Directory of links, with descriptions, to good Web resources for the study of arachnoids (spiders and their relatives).

- **INSECTCLOPEDIA**

<http://www.insectclopedia.com>

Directory of insect information, databases, research, identification, and more!