

# Birds & Caterpillars

## Lesson Objectives:

As a result of this lesson, students will be able to:

- (1) Explain the use of camouflage as a defense mechanism.
- (2) List examples of insects that use camouflage to protect them from predators.
- (3) Identify other types of defense mechanisms used by insects.

## IL Learning Standards/Descriptors:

12.B.3a. Compare and assess features of organisms for their adaptive, competitive, and survival potential (e.g. camouflage and defensive structures).

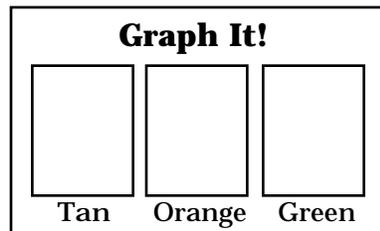
Stage G: Describe how animal characteristics help them survive in their environments.

## Materials:

1 bag of colored pasta pieces - tan, orange, and green

1 posterboard for graphing - see diagram

A grassy area in the schoolyard



Glue three pieces of colored paper (tan, orange, and green) to a posterboard. Add a title and laminate if possible.

## Method:

For this lesson, students take on the role of a bird in search of a caterpillar. The caterpillars for this activity are pieces of green, orange, and tan pasta. Scatter a supply of “caterpillars” (1/2 to 3/4 of a bag) in an area of the schoolyard. Divide the students into two teams for a relay-type race.

For the first part of the lesson, instruct the students to find one caterpillar and return to the end of the line. Do not tell them to find any specific color, but they should not actually eat the caterpillar or pasta. Once each team is finished searching for food, use the poster to display the results and discuss their observations. A chart is provided to record the results for later discussion. Keep the caterpillars from the first race. Do not throw them back out in the search area.

For the second part of the lesson, students search for food again, but should be told that they prefer the green caterpillars, as they are more nutritious. If they cannot find a green caterpillar, they may bring back two orange or three tan caterpillars. Once each team has finished, use the poster to display the results, record in the chart, and discuss their observations.

Repeat the relay race 2-3 more times. After each race, graph the results and discuss. Students will start to worry about having enough food and this can lead into some great follow-up discussions.

After the races are done, have the students search the area to find leftover “food” or pasta pieces. Graph the results and discuss.

**Evaluation:**

After the activity, lead the students in a discussion of their observations of the bird-caterpillar game and challenge them to explain them in terms of camouflage. Ask the students to identify other methods of defense used by insects and make a list of items.

Allow time for students to explore the schoolyard (or garden area if you have one available) in search of insects to find examples of defense mechanisms. They should record their finds on the Daily Defenders worksheet.

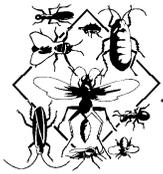
If a garden or “green space” is not available, allow the students to search ID guides or Internet sites to find insects for the Daily Defenders worksheet. Visit the Biology Links or Insect Links pages of the Kid Zone for some great sites. The URL is <http://sciencespot.net/Pages/kidzone.html>.

**Extension Activities:**

- Have the students use the information on the Birds and Caterpillars chart to create bar graphs. Challenge them to write a paragraph or two explaining the results in terms of camouflage.
- Have the students create a poster or display using the items they listed on the Daily Defenders page. They can print or draw pictures of the insects (or other animals). They should add descriptions of the defense mechanisms and explain how they are used.
- Challenge the students to create a new insect or animal for a particular habitat. They can make a model or draw a diagram and label the insect to show which defense mechanisms are used.

# Birds and Caterpillars

Race	Tan	Orange	Green
<b>1</b>			
<b>2</b>			
<b>3</b>			
<b>4</b>			
Leftover Caterpillars			



# Adopt-An-Insect

# Daily Defenders

Name(s) \_\_\_\_\_

Use the chart below to record your observations of defense mechanisms used by insects.

<b>Insect</b>	<b>Defense Mechanism (Identify and explain)</b>