



***Dedicated
to Reducing
Pesticides***

Unit 5 Section 1 Lesson 3: If You Can't Run, Hide

Focus Areas: Pest Control: Biological; Science, Math

Focus Skills: observing, predicting, recording scientific data, drawing conclusions

Objectives

- To understand the predator/prey relationship
- To recognize that coloration and size can help prey to avoid capture

Essential Question

How do some prey avoid capture from natural enemies?

Essential Understanding

Prey can avoid capture in a variety of ways. Some use speed to escape their predators. Others smell or taste bad, and still others use camouflage to hide in plain sight!

Background

In the natural world, there is no such thing as a free lunch! Animals that are predators in one situation are prey in another. This predator/prey relationship comprises nature's food chain. In their continual dual goal of finding lunch while at the same time avoiding becoming lunch, animals, from insects to mammals and plants, too use natural instincts and adaptations to successfully find their next meal. At the same time, they avoid capture by something bigger, stronger, or smarter!

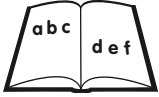


University of
Connecticut
College of Agriculture
and Natural Resources
Cooperative Extension System



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Vocabulary



food chain	a predator/prey relationship in which one organism eats another in order to survive
observe	to study closely using all of one's senses
predator	a living thing that hunts another for survival, usually food
predict	to make an educated guess based on available information
prey	a living thing that is hunted by another for its survival

Logistics



Time: 30 minutes

Group Size: 6 to 30

Space: an outside area with both grass and soil or sand (blacktop is a bonus)

Materials



rope and stakes to mark off the area

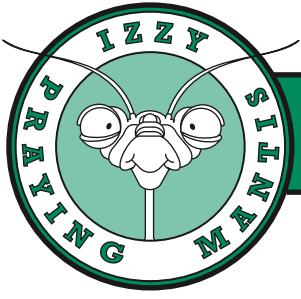
beans, lentils, and other seeds to represent insects

(see Handout 1)

cups to hold the seeds

Handout 1 "Tally of Tasty Treats" *

* single copy provided



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Preparation



1. Locate an area outside that has grass and dirt or sand.
2. Collect varieties of seeds and scatter them in a designated area.
3. Prepare copies of Handout 1, "Tally of Tasty Treats."

Activity



Introduction

1. Review the term "**observe.**" (to study closely using as many of the 5 senses as necessary)
2. Review the 5 senses. (seeing, smelling, hearing, touching, tasting)
3. Introduce the term "**predict.**" (to make an educated guess based on available information)
4. Discuss why this is an important part of critical thinking.
(Thinking about what you know already helps you to know what to expect about things and events you don't know.)
5. Elicit examples from the children of how they predict everyday events in their lives. (Example: predicting the weather based on the season and the weather today to determine what to wear tomorrow)

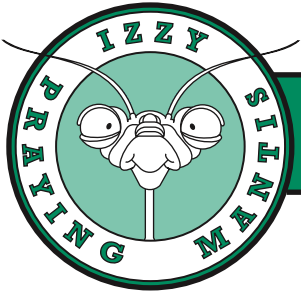
Involvement

1. Distribute Handout 1, "Tally of Tasty Treats."
2. Show samples of the beans and lentils in the order listed on Handout 1, and name each.



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3. Tell the children that these seeds represent insects that are crawling on the ground. Some may be looking for food. Others may be collecting materials to build their homes. Whatever the insect activity, the insects are food for many other creatures, especially birds.
4. Explain that birds eat many thousands of insects every day.
5. Ask, "Do you think birds choose to eat insects because they are their favorite snack, or do they eat them because they can see them? Which do you think? Why do you think so?"
6. Tally the results of the children's answers.
7. Tell the children that birds have very good eyesight. They can see colors, especially bright colors. Poll the children again.
8. Ask the children,
 - a. "If you were an insect crawling on the grass, what color would you want to be to hide from the birds?" (green)
 - b. "If you were an insect in a sandy area, what color would you want to be? (tan)
9. Tell the children that they are going to become birds hunting for insect food. They will have only have three minutes to find food or they will be hungry.
10. Have each child predict how many of each insect (bean) they will find in three minutes and write it on their handout.
11. Give each child a cup to hold their prey.
12. Take the group outside and allow three minutes to "hunt."
13. Allow time for children to complete their "Tally of Tasty Treats."
14. Take a group tally and discuss results:
 - a. Which insect was caught the most? The least? Why? (size, color)
 - b. How do size and color help prey avoid being caught?
 - c. Graph the results.



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Follow Up

Variation of the Predator/Prey Game:

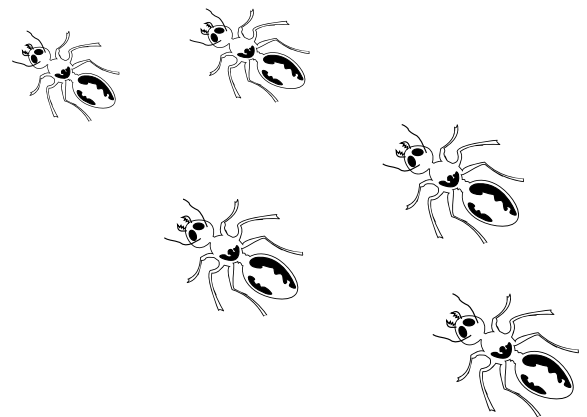
1. Divide the group into thirds and assign the following roles:
 - Group A can eat any insect anywhere.
 - Group B can eat only pinto beans.
 - Group C lives only in the grassy area.
2. Repeat steps #11 through #13 of **Involvement**.
3. Discuss how the restrictions on groups B and C impacted their ability to capture **prey**.
4. Apply this to the problem facing pandas that eat only bamboo, and koalas that eat only eucalyptus leaves.





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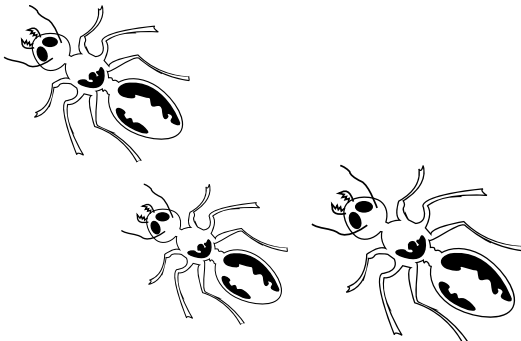
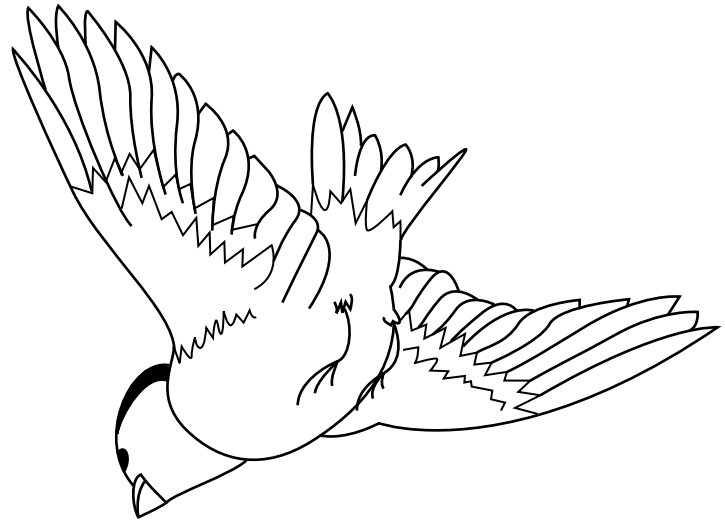
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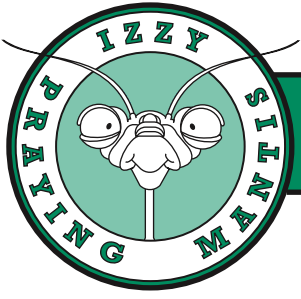




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