

MAY I TAKE YOUR ORDER?

An Integrated Pest Management Lesson

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Skill Level

- *Beginner, Intermediate*

Learner Outcomes

The learner will be able to:

- *Summarize the basic needs of insect pests*

Tag(s)

4-H Science

Success Indicator

Students are successful if they can:

- *describe what living things need to survive.*
- *read and learn the needs of several common household pests.*
- *apply their knowledge by creating a restaurant that meets the needs of one or several types of pests.*

Time Needed – 60 minutes

Materials Needed

- *needs cards (for each group)*
- *shoe boxes*
- *thick paper (card stock or tag board)*
- *scissors*
- *colored paper*
- *glue*
- *tape*
- *markers*
- *other art supplies (feathers, cotton, toothpicks, pipe cleaners)*

Author(s)

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Introduction to Content

Pests, like all animals, have specific needs for survival. In this activity, students create a restaurant and menu for pests. Fun and creative, this activity challenges students to use their knowledge of needs such as food, water, shelter, air, space, etc., to create the perfect dining experience for pests.

Terms and Concepts

A **habitat** provides a living thing (organism) with everything it needs to survive. Habitats vary tremendously in terms of size and appearance. Regardless of size or location, a habitat needs to include food, water, shelter, protection, light and air. School grounds, even in a city, can provide many small habitats that we can observe and discover. Discovering what is living within a habitat requires careful inspection and observation.

Introduction to Methodology

This activity is a hands-on process for creating a restaurant and menu for pests.

Setting the Stage

Ask the students what animals need to survive. Generate a list on the board or overhead. Review what a habitat is. Ask the students, *“What is needed in a habitat? Food, water, shelter, air, space, protection. Do all living things live in the same habitat?”* Describe different habitats.

Ask students what they need in their own habitat. Now, tell them to pretend they are a specific pest. What would this pest need in their habitat? If that pest could design a restaurant, what would it include?

Experience

Split students into groups of 2-4 students each. Say, *“Today you are restaurant owners starting a new business. Your job is to create a restaurant to serve (one or several types of) pests.”* Assign or decide how many different pests each student or group needs to address. Hand out need cards. Using the need cards ask students to write down ways they can meet all of the needs of their different customers. The more pests, the more complicated the restaurant will need to be.

Ask the students to create a restaurant with the shoe box and art supplies. Remind them that they need to accommodate the needs of all the customers.

Have students write menus. Before they begin, ask the students if the menus would be the same or would they need to have different menus for different customers.

Share/Process

Ask one student per group to describe the restaurant they designed and make sure they tell the class the pest it was designed for. Ask another student per group to describe their menu. Ask, *“What was the hardest part about making a restaurant for pests?”*

Strategies to Increase Student Engagement

- Engage all youth as best you can.
- Walk around the room to help students create their habitat.

Teacher Notes

Generalize

Say, *“A habitat provides food, water, shelter, protection, light and air. You can see that schools, even those in cities, can provide for many animals, some of them pests.”*

Apply

Ask, *“How can so many different pests live in a school? Or even in a house?”*

There are many small habitats within a house. Many different pests can live in the same place if they are not taking away each other’s food, water or space.

References

Jenkins, Erica B. “Exploring Urban Integrated Pest Management: Activities and Resources for Teaching K-6.” October 2001, Michigan State University.

TIPPS *Life Skills*

4th Grade

- Follow instructions. (Heart)

5th Grade

- As part of a group, identify and agree on a common task (set a goal). (Hands)

Needs Card <i>Name:</i> House Mouse <i>Food:</i> grains, nuts, cereal, fruits or vegetables <i>Water:</i> alone or in the food <i>Shelter:</i> warm and next to walls <i>Light:</i> active in the dark <i>Other:</i> nibbles (small portions)		
Needs Card <i>Name:</i> German Cockroach <i>Food:</i> any food, soap, pet food, wallpaper paste <i>Water:</i> moisture, high humidity <i>Shelter:</i> enclosed areas <i>Light:</i> dark <i>Other:</i> prefer pressure on body	Needs Card <i>Name:</i> Mosquito <i>Food:</i> females drink blood from living animal, males drink nectar and plant juices <i>Water:</i> need still water for larvae <i>Light:</i> feed at dusk <i>Shelter:</i> near water and food	Needs Card <i>Name:</i> Dandelion <i>Food:</i> makes its own, needs nutrients from the soil <i>Water:</i> through roots from soil <i>Shelter:</i> anchored in soil outside <i>Light:</i> sunlight <i>Other:</i> needs to be in soil
Needs Card <i>Name:</i> Fruit Fly <i>Food:</i> very ripe or rotting fruit, spilled food or drink that is not cleaned up <i>Water:</i> from fruit/damp area <i>Shelter:</i> near food <i>Other:</i> reproduce very quickly		Needs Card <i>Name:</i> Cat Flea <i>Food:</i> blood of cats, dogs or other mammals, sometimes people <i>Water:</i> moisture, high humidity <i>Shelter:</i> carpet, hair, bedding, furniture, damp soil



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