

There's No Place Like Home

Strand	Living Systems
Topic	Living/nonliving and habitats
Primary SOL	2.5 The student will investigate and understand that living things are part of a system. Key concepts include a) living organisms are interdependent with their living and nonliving surroundings; b) an animal's habitat includes adequate food, water, shelter or cover, and space.
Related SOL	2.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which a) observations and predictions are made and questions are formed; k) observations and data are communicated; l) simple physical models are designed and constructed to clarify explanations and show relationships.

Background Information

Living organisms depend on their *living* and *nonliving* surroundings. Living organisms in an environment include plants and animals. Nonliving elements include soil, oxygen, *nutrients*, water, and sunlight. Animals and plants interact with the living and nonliving components.

In order to survive, an animal needs air, food, water, shelter (or cover) and space; all of which create a *habitat* (for example: the ocean, a forest, a pond, a stream, a river, a desert, and a rainforest). The interactions between animals and the nonliving elements of their environment are referred to as a *system*. An *ecosystem* is made up of a combination of habitats. All the living elements in an ecosystem depend on each other for survival.

Materials

- For each group: large sheets of bulletin board paper, art supplies (crayons, markers, glue sticks, construction paper, pipe cleaners, etc.), and books about different habitats
- For each student: blank booklet (construction paper folded in half as the cover and three sheets of plain paper folded in half as pages), student journals
- For the entire class: pictures of wild animals such as birds, squirrels, deer, mice, raccoon, fish

Vocabulary

living, nonliving, habitat, nutrients, system, ecosystem, interdependence

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

This lesson may take several class periods to complete.

Introduction

1. Begin the lesson by discussing with students elements of the classroom environment that are living (children, plants) and elements that are nonliving (oxygen, water, and light).
2. Ask students to list what animals need to survive. Ask them to offer evidence of the animals they have listed. For instance, squirrel eating an acorn. Lead students to mention: food, water, shelter (or cover), and space. Remind students that animals find the things they need in their habitat.
3. Ask students what plants need (sunlight, nutrients, water, and space) and remind them that plants provide animals with oxygen. Ask them to offer evidence of the plant need they suggest.
4. Show students pictures of a variety of animals, such as birds, squirrels, deer, bears, mice, raccoons, and fish. Have students discuss where these animals might live, or what their habitat might look like. Encourage them to describe the plant life, and name the type of habitat, e.g., forest, pond, river, or desert.

Procedure

1. Take the class outside for a “habitat discovery” walk. Have students note any animals they see (e.g., squirrels, ants, birds, etc.) or any evidence they see of animals having been there (e.g., footprints, partially eaten acorns, feathers, etc.) Have students draw pictures and write sentences about the evidence they see.
2. When you return to the classroom, give students an opportunity to share their discoveries. Remind them that the schoolyard is a habitat for many animals.
3. Divide students into small groups. Assign each group a habitat to depict in a mural. Encourage them to use the provided books as a reference when creating their murals. Tell them to make sure they include all the plants but not any animals.
4. After the murals are complete, have each student choose one animal that lives in their habitat. Distribute the premade booklets and direct students to draw their chosen animal on the first page. On the remaining pages, ask them to draw a picture to show where in the habitat the animal finds each of its needs: food, water, shelter (or cover), and space. Ask them to write a sentence about each need below their picture.
5. Next, provide students with art supplies and ask them to create their animal and add them to the mural.
6. Finally, have each group share their murals with the class. Discuss what would happen if one or more elements in the habitat were eliminated? Talk about what would happen to the habitat during different seasons. Ask students what else might cause changes to the habitats.
7. The group murals can be displayed in the classroom or in the school hallways.

Assessment

- **Questions**
 - What are an animal’s basic needs?
 - What is a habitat?
 - What are some examples of interdependence in a forest habitat? In a desert? In a pond? In an ocean?

- **Journal/writing prompts**
 - Choose a different habitat than the one you created in the mural with your group. Draw a picture and describe how the living and nonliving elements depend on each other.
 - Imagine a forest with no plant life. What would happen to the animals?
- **Other**
 - Collect and grade the student completed booklets.
 - Ask students to list several habitats and all the living and nonliving elements in them.
 - Evaluate each student's role in the presentation of their group habitat.
 - Listen in on conversations as students are creating their habitats. Guide them to use the term *habitat* and to discuss how the *living* and *nonliving* elements are dependent on each other.

Extensions and Connections (for all students)

- Take students outside. Ask them to name living and nonliving elements in the environment.
- Have students create additional murals depicting other habitats.
- Purchase several boxes of animal crackers. Distribute a few to each student. Have them identify each animal, its habitat, and its needs.
- Ask students to create an animal and describe its habitat.

Strategies for Differentiation

- Provide students with booklets prepared with sentence frames on each page (_____ eat _____).
- Provide books at different reading levels for students to use for research.