

Home Sweet Home

5 BASIC COMPONENTS OF A HABITAT

Respect Rule: Look, Listen, Learn, and Leave Alone (until instructed).

Overview

Fishing, waterskiing, hiking, camping, and boating are wonderful ways to enjoy life. Yet, with these recreational activities comes the threat of human impact on many fragile habitats. It is important to recognize the characteristics, needs, and diversity of living things while recreating in their homes (habitats). Through education stewardship, begins the responsibility to protect living things and conserve the resources on which they depend.

Background

Plants and animals live together and rely on each other in the world's biomes. Biomes are large areas or environments that share the same general climate of temperature and rainfall. Different biomes support different types of plants and animals. For example, animals eat plants and each other to get the food and nutrients that keep life going. The study of how plants and animals live together and interact with each other in their natural surroundings is called ecology.

The natural home where a plant or animal finds the food, water, air (gases), shelter, and space it needs to survive is called a habitat. A habitat for an eagle might be several square miles and include a variety of biomes. A habitat for a pill bug might be the area under a small rock. Many animals make or use shelter for a place to sleep, have their young, be protected from weather, or hide from predators. Examples of shelters for animals are: a lodge used by a beaver, a rock crevice used by a lizard, a hollow log used by a skunk, or a hole in a tree used by an owl. But a habitat is much more than an organism's nest or immediate area where it lives. The habitat of an animal or a plant includes the area where it acquires food, water and air. It includes all parts of its environment that supply it with the things it needs to survive.

A person's habitat is made up of many components, such as his or her house and neighbor-

hood, school or place of work, grocery store, and recreation areas. People make homes for domesticated animals, for example dogs, cats, horses, cows, chickens. Other living things share people's habitats and affect the way people live in that region. People have learned how to meet their needs almost anywhere on earth, often by changing their environment to make more suitable habitats for themselves. However, the alteration of environments, which include habitats, is the leading cause of species extinction.

The group of different plants and animals that live in a habitat is a community. The word ecosystem is used to describe how the plants and animals within a habitat interact with each other and with the nonliving parts of their environment.

Before-the-Field-Trip Activities

Activity 1: Imaginary Trip to a Habitat

Time: 45 minutes

Materials: Chart paper, nature journals, five prepared jars (any size) in the following way to represent what living things need in order to survive: Jar 1—empty, to represent air (gases); Jar 2—water; Jar 3—a piece of a plant and/or a picture of an animal that is often eaten by other animals, to represent nutrients (food); Jar 4—yellow circle or sphere, such as a Ping-Pong ball, to represent the sun; Jar 5—something that can represent living space, for example soil

1. Guide students on an imaginary trip to a habitat. Do this by first asking students to get comfortable and relax. They might want to close their eyes, lie on the floor, put head down on desk, etc. Then ask them to imagine what is being described. Narrate the following slowly: Think of a plant or animal that you like. Picture this living thing in your mind. See its colors, its size, and its shape. If it moves, how does it



Objectives

The students will identify and describe a habitat as having five essential components: food (sunlight), water, air (gases), shelter, and space (can include soil).

Grade Levels

2-5

Adult/Student Ratio

1/20

Where

School grounds

Skills

Observing

Key Words

Biomes
Ecology
Habitat
Community
Ecosystem

“If people are to develop a love and concern for the earth, they need to have these direct experiences; otherwise, their knowing remains remote and theoretical and never touches them deeply.”

—Joseph Cornell,
*Sharing Nature
with Children I*

move? What does this living thing need to survive? Where does the water it needs to survive come from? How does it get its nutrients or food? What does the area where it lives look like? Picture in your mind this area. Does it look like a field? A forest? An ocean? A desert? What other living things might be found there? Picture these other living things. When you are ready open your eyes.

2. Have students draw and/or list what the imaginary living thing needed to survive and where it got those things.
3. Allow students to share their nature journal entries in pairs or in their cooperative groups. Then discuss with students where living things get what they need to survive. List student ideas on chart paper.
4. Display the five jars.
5. Explain to the students that all living things have some of the same basic needs for survival and that these jars contain examples of these needs. Hold up each of the five jars and have students determine what each jar represents. The basic needs of living things that must be in their habitat to survive are: air (gases, such as oxygen and carbon dioxide), water, nutrients (food), living space (including soil for land organisms and water for aquatic organisms), and the sun's energy.

Activity 2: Listening and Analyzing a Story

Time: 45 minutes

Materials: *The Salamander Room* by Anne Mazer, transparency of “An Oak Tree,” chart paper

1. Ask students what is a salamander. Accept all answers.
2. Read *The Salamander Room* by Anne Mazer to the class.
3. Encourage students to describe a salamander and its needs, as identified in Anne Mazer's book.
4. Discuss: Was a bed enough for the salamander to feel at home? What else did the boy provide for the salamander? Use the word habitat several times as the students discuss how the boy made a home for the salamander.
5. Encourage students to define habitat. A habitat is the area or home where a plant or animal lives. This area supplies the things

that a plant or animal needs to survive. Therefore, a habitat of an animal is more than just the animal's house, like a nest. It includes the area where it feeds, drinks and so forth.

6. Discuss with students what did the boy include to make a good habitat for the salamander. List the students' responses on chart paper.
7. Show the transparency “Oak Tree.” Discuss how an oak tree itself is a habitat. Ask students to identify the habitat of the oak tree itself: The habitat includes the air, soil, and water in the place where the oak tree is growing. Also, a plant's habitat includes the surrounding area from which water runs off, and it also includes the area where other plants might shelter it from wind or block its sunlight.

Field Trip Activities

Activity 1: Exploring Habitats

Time: 45 minutes

Materials: Class set of 6-inch paper tubes from paper towels, toilet paper or wrapping paper

1. Inform students that they will be going outside to study habitats on the school grounds. Review the rules on the board:
 - Respect living things: Look, Listen, Learn, and Leave Alone (until instructed).
 - Stay with your partner.
 - Stay within the designated boundaries.
 - Follow directions.
2. Students will first practice searching for living things and their habitats.
 - Distribute a paper tube to each student.
 - Instruct students to use paper tubes to focus on living things and their homes and to share these with other students. Lead the class outside. Point out boundaries.
 - Explain to the students that they are special nature detectives, and that their mission is to discover what living things exist in this area. They should then observe the habitats of these living things. Stress that no one else is to find out that nature detectives were

here, so nothing should be disturbed. When they leave this area, it should be left in the same condition it was before they conducted their investigations.

3. After returning to the classroom, discuss the behavior of students and the observations they have made:

Did everyone follow the rules?

What observations were made?

What animals were seen?

What were the characteristics of these animals' habitats?

What plants were seen?

What were the characteristics of these plants' habitats?

Activity 2: Deepening Habitat Understanding

Time: 45 minutes

Materials: Journals, pencils

1. Students will conduct more focused observations. Pairs of students will locate and observe a specific area and determine which living thing or things might live there. With the class make a list of possible areas to investigate: areas under rocks; cracks in the pavement; areas along the fence line; places in and under trees, bushes, and grass; areas along buildings and rooftops; and rain gutters. Give an example by drawing a picture of a spider's living space, a web, where the web is connected, the sun, a fly on the web (food and water) and air. Have students draw a habitat of an animal or a plant they see.
2. Take students on a study trip outside the classroom, and ask the students to bring their journals and pencils with them. Group the students in pairs.
3. Instruct students to locate one area where at least one living thing lives and to describe or sketch its habitat in their journals. Set a time limit of approximately ten minutes. Students can elaborate on their sketches after they return to the classroom.

After-the-Field-Trip Activity

Activity: Know the Habitat

Time: 45 minutes

Materials: Journals, pencils

1. When the students are back into the classroom have pairs of students share their descriptions and/or drawings of one area or habitat they observed.
2. In journals have students elaborate on their chosen habitat. Draw and list the needs that the habitat supplies to the plant or animal.
3. Ask students to compare their journal entries at the beginning of the lesson to the one they just completed. What have they learned?

Extensions:

1. Challenge students to draw pictures of some parts of their own habitats. Compare how their habitats are similar to and different from the habitat of a plant or a wild animal.
2. Have students "adopt a tree" and study it from the perspective of a habitat.
3. Make models of wildlife habitats.
4. Play a game from *Project Wild*:
 - Oh Deer!
 - Shrinking Habitat
 - Habitat Lap Sit
 - What's That Habitat?
 - Habitracks
 - Habitat Rummy

Source

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An Oak Tree

Transparency

