What's Your Habitat?

Summary

Students explore basic survival needs of humans and wildlife by drawing their own homes and neighborhoods.

Grade Level: K-4; 5-8

Time:
1 class period
(30-45 minutes)

Subjects:
Science, Language Arts, Art

Skills:
Analysis, comparison, application, description, synthesis

Learning Objectives:
Students will be able to:

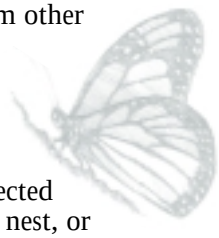
- Name the four basic survival needs of humans
- Recognize that humans share the same basic needs as all other living things
- Create a picture showing how a habitat provides humans with what they need to survive
- Compare human and other animal habitats
- Identify how animals meet basic needs in habitats

Materials:
- Paper
- Crayons/markers
- Pictures of a human house, animal homes, animals in a habitat and examples of different habitats (Start with pictures of forest, desert, grassland and add local habitats students recognize.)

Background

All forms of life, from humans to cows to bears to flowers, need certain things to live. Survival depends on getting enough food, water, cover and places to raise young. Animals, plants, fungi and microbes share these same survival needs, though it is a little more challenging to think about how plants and microbes meet these needs. This activity focuses exclusively on animals. (*Educators may challenge older students to look at the needs of plants and microbes as well.*)

Animals must have a place to live where they can get food, water, cover and places to raise young. Cover may mean protection from sun or other elements as well as protection from other animals (called predators) that may eat the animal. Places to raise young can also mean a protected spot, like a bird's nest, or an area with specific qualities that enable offspring to survive. For example, monarch butterflies lay their eggs on milkweed plants, which provide some cover as well as a food source for growing monarch larvae. Therefore, a monarch habitat must include milkweed plants for the butterfly to raise young.



Do humans have the same requirements as animals? They do. Humans build houses for cover and places to raise young. Other animals may build nests or burrows for protection or cover. Still others take cover where they find it, under trees or in a large herd. But for all animals (including humans), home is much bigger than a house. It's the entire neighborhood where an animal gets the food, water and cover it needs to survive. Scientists call this home or place its habitat. For humans, habitat may mean the neighborhood or city in which they live.

Procedure

1. Ask students, *What do all humans need to survive? Which of these do plants and animals also require?* Focus on the four basic survival needs true for all living things. Guide class to generate a list with these needs: food, water, cover and places to raise young. Write the list on the board. Students may give other answers, which you can put with the four major categories.

2. Ask, *Where do humans get the food, water, cover and places to raise young they need to survive?* Generate a list of student answers. On the board, you may may want to draw a picture of your own home/neighborhood to show where he/she locates food, water, cover and places to raise young.

3. Pass out art materials to students and ask them to draw their home. They can start with a picture of the house or building where they live. Tell them to leave space around the house to add other parts of their neighborhood where they meet their basic survival needs. Have them each pick a color to represent each of the four basic needs and write it on the bottom of the paper.

4. Ask, *Where do people get food?* (Perhaps from a supermarket or garden?) ***Where do they store***

and cook food? Have them add these places labeled with "food" (in the food color) to the drawing. Guide students to think about other needs. ***Where does the water they drink and bathe with come from? Is it from a well in the area or is it piped into their home from a reservoir? Where do they go to escape heat and sun or rain and snow? What other habitat elements do they need to survive?*** To think about places to raise young, they should consider themselves the "young" and think about how their parents met this need. Add pictures of these to their drawings of "home." Use the selected colors to label pictures to show what it provides for them (i.e. water).

5. Upon completion, have each student share his or her picture with the class. On the board, note how many of the habitat elements (food, water, cover and places to raise young) students included on drawings. ***Which needs appear on everyone's drawing?*** Tell students that they have just drawn their own habitat. Habitat is home, the place where humans get all that they need to survive. Like all animals, habitat is where humans satisfy the most basic survival requirements - the food, water, cover and places to raise young. (*For those who didn't include the four habitat elements, have them go back and draw the missing ones in.*) Display drawings.

6. As a wrap-up, compare the students' habitats to pictures of animal habitats in the wild. Use pictures of animals that build a home to live in, such as an ant, a bird or a beaver. Then show pictures of animals that do not alter their environment, but find cover all the same – a snake that lives between rocks, for example. Discuss how the habitats are the same or different. Ask students, How might animals find the food, water, cover and places to raise young in the habitat?

Modifications for Older Students

1. Follow the procedure for younger students, but do not provide as much detail as to the source of their basic habitat elements. Instead, challenge students to identify all the places that help them meet their basic needs within their territory (neighborhood).

2. After students draw their habitat, challenge them to design and draw a Mars colony. (Alternatively, focus on designing a space station or a colony on the moon.) Have them think about the basic needs of living things and how they would meet these on a faraway planet that's very different from Earth. Have them research how the physical environment of Mars (or space or moon) differs from Earth's. They will need to include: a food source, a water source, an oxygen source (air is a critical need for living things, but one taken for granted on Earth), cover from the harsh environment and places to raise young.

3. Once drawings are finished, have students present their ideas to the class and display. Discuss choices that students made.

Ask students if they think that humans depend on the physical environment of Earth to survive?

Extensions

✔ Have the class do a large mural of their combined habitat. Basing the mural on the individual habitat pictures students drew, compile a large drawing as a group, adding in the different features students identified. Perhaps a whole neighborhood habitat will emerge, which can remain on the wall of the classroom and be referred back to in later lessons.

Assessment

✔ Have students keep a journal for a day or a week in which they will write down each time they eat, drink water, sleep in a safe shelter, find cover to escape the heat or cold and where and how they found these things in their habitat. Did they ever leave the habitat they drew during this activity? If so, what were they looking for? Do they think it was a "basic survival need" that should now be added to the drawing? Review their journals for evidence of correct application of habitat ideas to their own lives.

✔ Have students observe an animal at home or on the schoolyard for up to a week. Keep a similar journal to that outlined above for their observations.