

Field Enhancement 3: Searching for Basic Needs

NUTSHELL

In this lesson – located in an area with a playground or green space – students explore what an imaginary animal needs to survive and decide if it could live on their playground. Then, students look at the needs of real animals that may live in their schoolyard.

ENDURING UNDERSTANDING

- Forests impact air and water quality, prevent soil erosion, and provide habitat for wildlife.

ESSENTIAL QUESTION

- What resources do forests provide to animals to meet their need for habitat?

OBJECTIVES

Upon completion of this lesson, students will be able to:

- Identify the basic needs of animals (food, water, shelter, space, air).
- Recognize that forests must contain all of the basic needs of an animal for it to live there.
- Find evidence of animals and their homes.

SUBJECT AREAS

Language Arts, Science

LESSON/ACTIVITY TIME

Total Lesson Time: 65 minutes

- Introduction.....10 minutes
- Activity 120 minutes
- Activity 225 minutes
- Conclusion.....10 minutes

STANDARDS CONNECTIONS

Standards for this lesson can be viewed online at the LEAF website (www.leafprogram.org).

FIELD ENHANCEMENT CONNECTIONS

This lesson ties closely with **Lesson 5, Animals Need Forests Too.**

BACKGROUND INFORMATION

Would you survive long without food? What about water? All animals, even humans, have the same **basic needs**: food, water, shelter, space, and air. These five needs must be met in order for an animal to survive.

Animals need **food** so they have energy to carry on life activities. No matter what food they eat or how they find it, they won't last long without it. Once they have it, their bodies metabolize the food, which means they turn the food into energy. Without energy from food, animals could not grow, reproduce, or adapt to their environment.

Water is absolutely essential to life. It is the most common element in living tissue. Water helps animals digest their food. As the primary ingredient in blood, it helps transport important nutrients throughout the body. Water keeps skin and other organs moist and lubricated and removes waste products.

Animals need **shelter** to protect them from the weather and to hide them from predators. Shelters take on many different forms in the forest ecosystem. Birds frequently build nests in trees, and so do squirrels. Animals such as raccoons and opossums find shelter in hollow logs. A depression in the ground covered by vegetation is where rabbits find shelter.

Although frequently overlooked, animals also need **space**. Space is where all the other needs are met.

VOCABULARY TERMS

Basic Needs: The minimum conditions that need to be met for something to continue to live. The five basic needs of animals are food, water, shelter, space, and air.

Food: What a living thing eats for energy.

Shelter: The materials that a living thing uses to keep itself safe from weather and other elements.

Space: The area that a living thing needs to grow.

Without space, where would animals go to search for food, water, and shelter? In addition, animals need space to grow, to find a mate, to interact with other animals, and to raise their young.

Animals also need **air**. Oxygen taken in through breathing helps to oxygenate the blood. Air is different from other basic needs in that it is found almost everywhere, so animals do not compete for it.

PROCEDURE

Introduction - Basic Needs List

1. Ask the students what they need in order to survive. (*Answers will vary, but should lead to food, water, shelter, space, and air.*) Discuss with them how each item helps them survive. (*Food gives us the energy to live and grow. Water is necessary for our body to function properly. Shelter keeps us warm and safe. Space is necessary for us to move and play in. Air is needed for breathing.*)
2. Discuss how animals have the same basic needs as humans. Tell the group that they will be learning about the needs of specific animals and trying to determine if those animals can survive on the school grounds (or other teaching site).

MATERIALS LIST

For Each Student

- Paper
- Crayons

For the Teacher

- Copy of Teacher Page 🐻1, *The Friendly Northern Slide Martin*.
- Copy of Teacher Pages 🐻2A-B, *Schoolyard Animals*, additional materials needed.

TEACHER PREPARATION

Visit the teaching site and choose a location for a short walk through the woods or a “greener” part of the site.

SAFETY PRECAUTIONS

Children should walk, not run, at all times and be aware of rough terrain and protruding tree roots. Adult should keep children within sight at all times.

“Listen to the trees as they sway
in the wind. Their leaves are
telling secrets. Their bark sings
songs of olden days as it grows
around the trunks. And their
roots give names to all things.
Their language has been lost.
But not the gestures.”

★ Vera Nazarian ★

Activity 1 - Northern Slide Martin Habitat

1. Take students to a playground.
2. Read the story on Teacher Page 🐞1, **The Friendly Northern Slide Martin**, about an imaginary animal to your students.
3. Briefly review the specific needs of the friendly northern slide martin. (*Bugs that only live near playgrounds, water from puddles, slide to take shelter under, and space on playgrounds to gather food and raise young.*) Tell your students that you are going to give them three minutes to walk around the playground and see if they can find all the things this animal needs.
4. After several minutes, call the group back together and discuss what they found. Ask the following questions: Where does the northern slide martin make its shelter? (*Under the slide.*) Do we have a slide on our playground? (*Probably yes.*) What about food? What does it like to eat? (*Bugs.*) Do we have what the slide martin needs to eat? (*Probably yes.*) All animals need water. Would this animal be able to find water on our playground? (*Probably yes.*) Do you think that there is enough space here for it to gather food and for the little slide martins to play? (*Probably yes.*) Based on what you found, would the northern slide martin be able to survive on our playground? (*Yes, if you answered yes to all the above questions.*)
5. Tell your group that you will take a short walk into the woods or “greener” part of the school grounds. Ask them to be on the lookout for the things that the northern slide martin needs. When your walk is over, ask if the slide martin could live there. (*Probably not since there is no slide for shelter; the bugs it eats only live near playgrounds, and it needs the playground equipment in order to find food.*)

Activity 2 - Animal Habitat

1. Keep your group in the “greener” part of your site. Tell your students that you would like to spend some time discussing real animals now. Choose an animal from the list on Teacher Pages 🐞2A-B, **Schoolyard Animals**, that you see frequently in your schoolyard. Ask the questions listed about the animal’s basic needs. Give your students time to look around and decide if those needs could be met in your schoolyard. After looking at all the needs for that animal, decide if that animal could live in your schoolyard. Also try to find evidence of that animal and/or its home. If there is time, do more than one animal.

Conclusion - Basic Needs Review

1. Return to the classroom. Review by asking your students what basic needs animals have. (*Food, water, shelter, space, and air.*) Discuss how a forest must have all the basic needs of an animal for it to live there.
2. Re-read the description of the northern slide martin. Have students draw a picture of the animal and include its basic needs.

SUMMATIVE ASSESSMENT

Ask students to make up their own imaginary animal and decide how it meets each of its basic needs. Have them draw a picture of the animal, what it eats and drinks, where it lives, and what its space looks like. Hang the drawings on a bulletin board.

SOURCES

The Aviary. World Wide Web: www.aviary.owls.com/index

Whitaker Jr., J. O., & Knopf, A. A. (1996). *National Audubon Society Field Guide to North American Mammals*. New York: Random House.

THE FRIENDLY NORTHERN SLIDE MARTIN

The friendly northern slide martin lives in a community with its family members. It is mostly active at night and spends the dark hours busily attending to its very specific needs.

Although it can be found in all parts of Wisconsin, it only lives on playgrounds. It makes its shelter under slides. With its long, sloping back, it fits perfectly under a slide when it wedges in backwards. Often, several of these thin animals huddle side by side beneath the same slide.

The northern slide martin only eats bugs that live near playgrounds. It uses its extra-strong arms and flexible fingers to climb to the top of playground equipment, where it can see the ground beneath. The northern slide martin has excellent eyesight. This is helpful when it searches for bugs. When a bug is spotted, the northern slide martin leaps down on top of it, quickly snatches it up with its nimble fingers, and eats it before climbing to the top of the playground equipment again.

Of course, the northern slide martin needs to drink water. It usually finds water in puddles on the playground and can often be found drinking from the puddle at the end of the slide.

The northern slide martin also needs space. It needs enough space to find food for itself and its young. In addition, young northern slide martins are very active climbers and need lots of space to play.

SCHOOLYARD ANIMALS

Squirrel

- What do you think a squirrel eats? (*Nuts, acorns, seeds, etc.*)
- Would a squirrel be able to find food here? (*Probably yes.*)
- Where might a squirrel make its home? (*In cavities or nests made of leaves in trees.*)
- Would a squirrel be able to make a home here? (*Probably yes.*)
- What does a squirrel need space for? (*A place to find food and nesting materials, build a nest, and chase mates.*)
- Would a squirrel have enough space here? (*Probably yes.*)
- Would a squirrel be able to live here? (*Yes, if you answered yes to the previous questions.*)

Rabbit

- What do you think a rabbit eats? (*Plants and twigs.*)
- Would a rabbit be able to find food here? (*Probably yes.*)
- Where might a rabbit make its home? (*In a hollow in the ground covered by plants.*)
- Would a rabbit be able to make a home here? (*Probably yes.*)
- What does a rabbit need space for? (*Dancing to impress a mate, finding food and a shelter, and raising its young.*)
- Would a rabbit have enough space here? (*Probably yes.*)
- Would a rabbit be able to live here? (*Yes, if you answered yes to the previous questions.*)

SCHOOLYARD ANIMALS

Crow

- What do you think a crow eats? (*Seeds, garbage, insects, and mice.*)
- Would a crow be able to find food here? (*Probably yes.*)
- Where might a crow make its home? (*In a nest made out of sticks and feathers in a tree.*)
- Would a crow be able to make a home here? (*Probably yes.*)
- What does a crow need space for? (*A place to find food and nesting materials, build a nest, and raise its young.*)
- Would a crow have enough space here? (*Probably yes.*)
- Would a crow be able to live here? (*Yes, if you answered yes to the previous questions.*)

Robin

- What do you think a robin eats? (*Insects, worms, fruits, and seeds.*)
- Would a robin be able to find food here? (*Probably yes.*)
- Where might a robin make its home? (*In a mud-walled, grass-lined nest in a tree or on a building.*)
- Would a robin be able to make a home here? (*Probably yes.*)
- What does a robin need space for? (*A place to find food and nesting materials, build a nest, and raise its young.*)
- Would a robin have enough space here? (*Probably yes.*)
- Would a robin be able to live here? (*Yes, if you answered yes to the previous questions.*)