

What's In a Habitat

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

Overview

Every organism needs a place to live that satisfies its basic needs for food, water, shelter, and space. This defines a habitat. In this activity, students will learn where and how the animals live, what they eat and how to identify them through tracks, skins, skulls, scat and plant signs.

Background

Habitat refers to the place where an organism lives and grows. A habitat provides an organism with everything it needs to survive, including its specific needs for food, water, shelter, space and reproduction.

Habitats vary tremendously in terms of size and appearance. For example, a field is home both to many types of grasses and to mice and rabbits that live among the grasses. A tree is the entire habitat for many tiny animals that live in its bark and among its leaves. A crack in the sidewalk is the habitat for dandelions and ants that live there.

Even in the most sterile looking environment, one can usually find some signs of animal life. In an urban school yard, for example, students can find things such as spider webs, ants underneath pieces of cement or rocks or insects buzzing around. Students need to understand that all animals, large and small, require food, water and shelter from their environment to survive. Remind students that people are animals too. Around the school yard they will find plenty of signs indicating the presence of people.

While most students enjoy looking for animals, some may be afraid of certain organisms like spiders or worms. Be prepared for some students to act timid or scared during the activity. A brief summary, before the activity, of the kinds of animals which may be present as well as an assurance that most of the animals will be more scared than they are, may help to reassure the students. Inform the students that it is smart to be cautious and they should not touch

or pick-up any plant or animal unless they are certain it is harmless (*Animal Treasure Hunt* by Carlos R. Burgess, Teaching Kids About the Environment).

Before-the-Field-Trip Activities

Activity 1: Habitat for the Animals and Us

Time: Two 45-minute sessions

Materials: Basic Needs Chart Student Worksheet, books (see list below), student nature journals, pencils

1. Read to the students and discuss.
Backyard by Donald Silver (Learning Triangle Press, 1997)
Crinkleroot's Guide to Knowing Animal Habitats by Jim Arnosky (Simon and Schuster Books for Young Readers, 1997)
Richard Orr's Nature Cross-sections by Moira Butterfield (Dorling Kindersley, 1995)
2. Have the students make a list of vocabulary words, define the words, and write them in their nature journal. Examples include: habitat, environment, animal, mammal, plant, shelter, etc. New words can be added to the list as the class completes the other lessons.
3. Discuss with the students basic human needs for food, water, shelter and space. Use these discussion questions: What do we need to live? Could we live without water? If yes, how? If no, why not? Where do we live and why?
4. Use the Basic Needs Chart and discuss animal basic needs for food, water, shelter, and space. Use these discussion questions: What do animals need to live? What is their shelter like? What do they eat and how to they get it? Could animals live without water? If yes, how? If no, why not?
5. Direct students to draw in journals a picture of where they live, where they find food, water, shelter and space. Ask the



Objectives

Students will:

1. identify their own basic needs for food, water, shelter and space in a suitable arrangement and generalize that animals have similar basic needs;
2. observe with the five senses and record what is in an environment;
3. distinguish between domesticated and animals;
4. identify photos, skins, skulls, scat and tracks and describe where they live, what they eat, and how they interact.

Grade Levels

K-6

Adult/Student Ratio

1 adult to 5 children

Where

Forests, grasslands, riparian habitat such as lakes and streams

Skills

Observing, identifying relationships and patterns, discussing, writing (dictating), sorting

Key Words

Animal Signs, Domesticated, Environment, Habitat, Wild

Teaching children about the natural world should be treated as one of the most important events in their lives.

—Thomas Berry,
In Last Child in the Woods,
by Richard Louv

students to label the parts of their drawing where they find their food, water, shelter and space.

6. Discuss arrangement and habitat.
“...when food, water, shelter and space go together in a special way, so that animals—including people—can live, we call that place a habitat. The food, water, shelter and space are in an arrangement that makes it possible for animals to live.” (*Project Wild*, page 39)
7. Ask students to think of an animal and draw in journals a picture of their animal including food, water, shelter, and space in an arrangement that they think would make it possible for the animal to survive (www.waterfordpress.com is great for line drawings and pictures of animals).
8. Encourage students to share their drawings explaining the habitat components they have included: food, water, shelter, space, arrangement, and habitat.

Activity 2: One Square Yard

Time: 45 minutes

Materials: Individual yardsticks or meter sticks, nature journals, pencils

1. Find an area on the school grounds or a close-by natural area for the students to visit several times during the year.
2. Have each student locate an area where there will be both plants and small creatures to observe. Student marks a square area off with a yardstick or meter stick. Student should have a one squared yard to observe.
3. Have students observe for a set period; a short visit is recommended at first because it takes time for the student to get used to sitting quietly.
4. Explain to students to sit upright, do not move and pretend to be part of nature.
5. Direct students to choose one plant that is growing and get to know it by using all the senses: sight, smell, hearing, touch and taste if appropriate.
6. Have students draw in journals living and non-living things that are present in the square yard.
7. Direct students to lie on their backs and close their eyes and listen to the sounds.
8. Have students dictate or write in journal what they saw, heard, felt and smelled.

9. Back in class, students can share their pictures and describe what they experienced in their small habitats.

Activity 3: Animals: Wild or Domesticated

Time: 45 minutes

Materials: Magazines, scissors, glue, construction paper, and names of animals from area

1. Define wild animals. Wild animal: an animal growing and producing without the aid and care of humans. Define domesticated animals. Domesticated animal: an animal adapted to life in intimate association with humans. On chalkboard or bulletin board, write how wild and domesticated animals are the same and how are they different.
2. Ask students to cut out pictures of animals from magazines. (Teachers could have animal picture collection ready and pass them out to students.)
3. Have students sort the animal pictures into two columns—**Wild** or **Domesticated**—and place on bulletin board.
4. Play animal charades. Each student takes turn picking an animal name out of the hat and dramatizes the chosen animal. Class decides if it is domesticated or wild. (Teacher could take this activity one step further and categorize the living creatures: mammals, insects, birds, reptiles, fish, etc.)

Field Trip Activity

Activity: Animal Tracks and Signs

Time: 2 hours

Materials: Materials for track making are provided by the New Melones Lake Visitor Center or pre-made tracks available from STE Lending Library (classroom use only) or teacher generated supplies: plaster of Paris, water, Oatmeal box, re-sealable sandwich bag, scissors

Divide class into two groups (no more than 20 in a group).

Group 1: Track Making

1. Have students study photos, skins, skulls and scat of mammals that live near the field site that may include mountain lion, bobcat, deer fox, coyote, jack rabbit, cottontail rabbit, skunk, porcupine, raccoon, and black bear.

2. Have students make a plaster track of one of the above-mentioned mammals or follow the directions below:

Make a Track

1. Cut oatmeal box into 1½" rings.
 2. Place a ring over selected animal track.
 3. Mix 1 cup of plaster of Paris in the resealable sandwich bag with 3 oz. of water. Mix quickly by lightly squeezing, and kneading the bag until all the plaster and water is thoroughly mixed.
 4. Cut a small opening across one of the lower corners of the sandwich bag.
 5. Carefully begin squeezing the mixed plaster into the oatmeal ring until all the plaster is used.
 6. Allow the plaster to set until it has sufficiently hardened.
 7. Lift the ring and plaster off the animal track and share the result.
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Group 2: Nature Hike

1. Walk with students on a trail and look for animal tracks, scat and signs.
2. Discuss with the students animal habitat, animal diversity and sign tracking using the following questions:
Where does the animal live?
What does it need to survive?
What shelter does it require?
Where and how does it get its water?
What animals does it prey on?
What animals prey on it?
With what animals does it live?
With what plants does it live?
How does the animal influence its environment?
What are the components of sign tracking: trails, runs, beds, feeding areas, escape routes, scratches, chews and gnawings, rubs, hair, scat and broken vegetation.

After-the-Field-Trip Activities

Activity 1: Match the Tracks and Signs

Time: 45 minutes

Materials: Animal Track and Signs Student Worksheets, *Track Kit* from STE Lending Library

1. Have students complete worksheets.
 2. Have students draw three tracks and three signs in their nature journals.
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Activity 2: Write (Dictate) a Haiku

Time: 45 minutes

Materials: Samples of haikus, pictures of the tracks of the mammals, encyclopedia and other resources for research on mammals, pictures of mammals

1. Haiku is an ancient form of Japanese poetry that follows a particular pattern of syllables in its lines. This kind of poetry is an unrhymed, three-line poem. The first line has five syllables, the second line has seven syllables, and the third line has five syllables. The subject of a haiku is usually something beautiful in nature. Read samples to the students and clap out the syllables.
2. Ask the students to choose one animal they saw at the field trip site and describe it. Have students write their own haiku about a mammal that lives near the field trip site. Encourage them to read about their animal, look at pictures and recall what they saw at the field trip site. Have them make a list of 10 things about their mammal: what it looks like, how does it feel, how does it smell, what noise does it make, what kind of movements: runs, jumps, hops, what does it eat, where does it live. From this list, instruct the students to write their own haiku.
3. Have the students share the list. From this list ask the students to create three lines for a haiku about the animal.
4. Direct students to draw a picture and tracks of their mammal and illustrate their poem.

Activity 3: Create a Habitat Mural

Time: Two 45-minute periods

Materials: Large bulletin board, paper to cover the bulletin board, paint, markers, glue, resource materials about the field trip site

1. Have the class create a grassland/woodland/riparian habitat mural of the site they visited which includes hills, valleys, streams, plants, and a lake. The mural should show important elements like sun, water, soil and atmosphere.
2. When the mural is finished, students place their haikus, pictures and tracks in an appropriate place and have the students explain the reasons for placing the animal in a particular spot.
3. For further discussion:
What did you learn about your animal?
Have you ever seen your animal?
What does your animal need to survive?
What shelter does it require?
Where does it go to get water?
How does the animal influence its environment?

Resources

For the Teacher

Caduto, Michael J., and Joseph Bruchac, *Keepers of the Earth*.

Habitats—Science Works for Kids Series, Evan-Moor Corporation.

Hartley, William, *Loving Nature the Right Way*.

Project Learning Tree Environmental Education Activity Guide, American Forest Foundation.

Jackson, D., *The Wildlife Detectives*.

Storer, Tracy I., and Robert L. Usinger, *Sierra Nevada Natural History*.

Websites

www.waterfordpress.com

www.thinkabout.ca/tatp/html

www.dog-eared.com/bookstore

For the Student

Field, Nancy, and Sally Machlis, *Discovering Endangered Species*.

National Geographic Book of Mammals, ages 9–12.

Sill, Cathryn, *About Mammals*, ages 4–8.

Basic Needs

Student Worksheet

List needs in each column.

Domesticated	Undomesticated	Humans	All Organisms

Animal Tracks 1

Student Worksheet

Match the animal with its track.



House Mouse



Gray Squirrel



Prairie Dog



Jackrabbit



Opossum



Spotted Skunk



Marmot



1



2



3



4



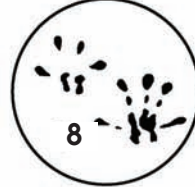
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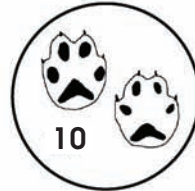
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12



13



14



Raccoon



River Otter



Peccary



Red Fox



Lynx



Mountain Goat













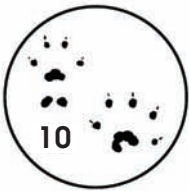







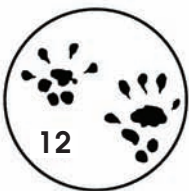









Caribou

- 1. River otter
- 2. Prairie Dog
- 3. Gray squirrel
- 4. Mountain goat
- 5. Marmot
- 6. Jackrabbit
- 7. Opossum
- 8. House mouse
- 9. Raccoon
- 10. Red fox
- 11. Peccary
- 12. Caribou
- 13. Spotted skunk
- 14. Lynx

Animal Tracks 2

Student Worksheet

Draw a line between the mammal and its track.

- | | | | |
|-----------------|-------------------|-----------------|-----------------|
| 1. Cottontail | 7. Moose | 1. Woodrat | 1. Cottontail |
| 2. Bison | 8. Armadillo | 2. Red squirrel | 2. Bison |
| 3. Porcupine | 9. Beaver | 3. Red squirrel | 3. Porcupine |
| 4. Grizzly bear | 10. Cotton rat | 4. Gray fox | 4. Grizzly bear |
| 5. Coyote | 11. Mountain lion | 5. Gray fox | 5. Coyote |
| 6. Kangaroo rat | 12. Woodrat | 6. Kangaroo rat | 6. Kangaroo rat |

Animal Tracks 3

Student Worksheet

Match the animal with its track.



Norway Rat



Meadow Vole



Fox Squirrel



Snowshoe Hare



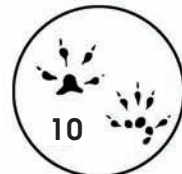
Pika



Badger



Mink



Bobcat



Gray Wolf



Bighorn Sheep



Wild Boar



Mule Deer



Elk



Black Bear

- 13. Mule deer
- 14. Badger

- 10. Meadow vole
- 11. Elk
- 12. Black bear

- 7. Pika
- 8. Wild boar
- 9. Bobcat

- 4. Bighorn sheep
- 5. Fox squirrel
- 6. Mink

- 1. Gray wolf
- 2. Snowshoe hare
- 3. Norway rat

Animal Tracks and Signs

Student Worksheet

Match the animal with its track.



Deer Mouse



Flying Squirrel



Woodchuck



Weasel



Striped Skunk



Muskrat



Pronghorn



Match the animal with its sign.



Mole



Squirrel



Rabbit



Moose



Beaver



Deer



Bear

- 13. Bear scratch
- 14. Beaver lodge

- 10. Rabbit browse
- 11. Deer browse
- 12. Moose

- 7. Striped skunk
- 8. Squirrel nest
- 9. Mole hole

- 4. Muskrat
- 5. Pronghorn
- 6. Weasel

- 1. Woodchuck
- 2. Flying squirrel
- 3. Deer mouse