

K-2 Habitat Hunt Activity

Overview

Focus Question

What is a habitat?

Activity Synopsis

Students will observe living things around the school to see where they are found and determine what defines a habitat.

Time Frame

60 minutes

Objectives

The learner will be able to:

- Define the word habitat
- Observe living things to determine their habitats

Student Key Terms

- habitat
- living

Teacher Key Terms

- carbohydrate
- chlorophyll
- chloroplasts
- food chain
- glucose
- herbivore
- osmosis
- photosynthesis
- producers
- stomata

Standards

South Carolina College- and Career-Ready Science Standards 2021

Kindergarten: K-LS1-1, K-ESS2-2, K-ESS3-1

1st Grade: 1-LS1-1

2nd Grade: 2-LS2-1, 2-LS4-1, 2-ESS2-2, 2-ESS2-3

* **Bold standards are the main standards addressed in this activity**

2014 Academic Standards and Performance Indicators for Science

Kindergarten: K.P.1A.1, K.P.1A.7, K.P.1A.8, K.L.2A.1, K.L.2A.5, K.L.2A.6

1st Grade: 1.S.1A.1, 1.S.1A.7, 1.S.1A.8, 1.L.5A.1, 1.L.5B.2

2nd Grade: 2.S.1A.1, 2.S.1A.7, 2.S.1A.8, 2.L.5B.1, 2.L.5B.2

* **Bold standards are the main standards addressed in this activity**

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South Carolina College- and Career-Ready Science Standards 2021

Kindergarten Performance Expectations

K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

K-ESS3-1 Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.

First Grade Performance Expectations

1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

Second Grade Performance Expectations

2-LS2-1 Plan and conduct an investigation to determine what plants need to grow.

2-LS4-1 Make observations of plants and animals to compare patterns of diversity within different habitats.

2-ESS2-2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.

2-ESS2-3 Obtain information to identify where water is found on Earth and that it can be solid or liquid.

2014 Academic Standards and Performance Indicators for Science

Kindergarten Performance Indicators

K.P.1A.1 Ask and answer questions about the natural world using explorations, observations, or structured investigations.

K.P.1A.7 Construct scientific arguments to support explanations using evidence from observations or data collected.

K.P.1A.8 Obtain and evaluate informational texts, observations, data collected, or discussions to (1) generate and answer questions about the natural world, (2) understand phenomena, (3) develop models, or (4) support explanations. Communicate observations and explanations using oral and written language.

K.L.2A.1 Obtain information to answer questions about different organisms found in the environment (such as plants, animals, or fungi).

K.L.2A.5 Construct explanations from observations of what animals need to survive and grow (including air, water, nutrients, and shelter).

K.L.2A.6 Obtain and communicate information about the needs of organisms to explain why they live in particular areas.

First Grade Performance Indicators

1.S.1A.1 Ask and answer questions about the natural world using explorations, observations, or structured investigations.

1.S.1A.7 Construct scientific arguments to support claims or explanations using evidence from observations or data collected.

1.S.1A.8 Obtain and evaluate informational texts, observations, data collected, or discussions to (1) generate and answer questions about the natural world, (2) understand phenomena, (3) develop models, or (4) support explanations. Communicate observations and explanations clearly through oral and written language.

1.L.5A.1 Obtain and communicate information to construct explanations for how different plant structures (including roots, stems, leaves, flowers, fruits, and seeds) help plants survive, grow, and produce more plants.

1.L.5B.2 Develop and use models to compare how the different characteristics of plants help them survive in distinct environments (including deserts, forests, and grasslands).

Second Grade Performance Indicators

2.S.1A.1 Ask and answer questions about the natural world using explorations, observations, or structured investigations.

2.S.1A.7 Construct scientific arguments to support claims or explanations using evidence from observations or data collected.

2.S.1A.8 Obtain and evaluate informational texts, observations, data collected, or discussions to (1) generate and answer questions about the natural world, (2) understand phenomena, (3) develop models, or (4) support explanations.

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2.L.5B.1 Obtain and communicate information to describe and compare how animals interact with other animals and plants in the environment.

2.L.5B.2 Develop and use models to exemplify characteristics of animals that help them survive in distinct environments (such as salt and freshwater, deserts, forests, wetlands, or polar lands).

Cross Curricular Standards

South Carolina College and Career Standards for Social Studies

K.H.1, K.G.2, K.G.3, K.E.1, 1.H.1, 1.H.3, 1.G.4, 2.G.2

South Carolina College and Career Standards for ELA

Inquiry (I) – K-1.1, 1-1.1, 2-1.1

Communication (C) – K-1.1, 1-1.1, 2-1.1

Common Core ELA Standards

Writing – K.8, 1.8, 2.8

Speaking/Listening – K.1, K.2, K.6, 1.1, 1.2, 1.6, 2.1, 2.2, 2.6

Background

Key Points

Key Points will give you the main information you need to teach the activity.

- A **habitat** is a place where an organism can get the air, food, water and shelter/space it needs to survive.
- All **living** things need a habitat.
- Any place where air, food, water and shelter/space are available has the potential to be habitat for an organism. If an organism can obtain each of these things, even where they are scarce, it is still a habitat.

Detailed Information

Detailed Information gives more in-depth background to increase your own knowledge, in case you want to expand upon the activity or you are asked detailed questions by students.

The moon would not be a good **habitat** for any **living** thing. Though there is plenty of space to move, there is no food, no water, no shelter from the cold, and no air. Though the chances of any living thing being transported to the moon are fairly slim, it does illustrate a point that a habitat is more than where an organism lives. It is the place where an organism can get all the things it needs to survive.

Organisms need air, food, water and space to survive, and most also need shelter. The Earth has great variability in climate, topography and accessibility of water. Despite this variability, almost every part of the planet is a habitat for some living thing because living things have evolved great variability in body structures and behaviors.

A habitat can be as large as continents (for the birds that migrate from South America to North America) or entire oceans (for migrating fish, sea turtles and whales) or as small as a moist piece of bread (for fungus) or your intestines (for the bacteria that help you digest your food). Put a whale on land or a bird in the ocean, though, and suddenly they are in big trouble. It is not a suitable habitat for them because they are not built to get air, food and water from this type of environment.

Even in environments that are limited in certain crucial needs, organisms evolve methods to find enough of those things to make that environment their habitat. For example there is much more oxygen in the atmosphere than in oceans and yet oceans are teeming with life. This is because animals living in the ocean have adaptations that allow them to pull air out of the water. Another example is deserts with little water in them but still support life. When camels find water, they can drink 20 gallons at a time and store this water in the fat in their humps. They can then go weeks without water, living off their storage hump. Cacti have shallow roots that extend a

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great distance from the plant and allow the cactus to collect a lot of water during the brief rainy periods. The water is stored in the thick stems for dry times.

Because animals are dependent on habitat availability, we know that habitat loss is the main reason animals become extinct. Habitat loss can occur from natural processes such as hurricanes or volcanic eruptions. In recent centuries, though, it is the expansion of humans that has led to cataclysmic habitat loss. Not just urban development, but human activities such as farming, logging and mining take away the space other organisms need to survive. Pollution contaminates water and air which is another loss of habitat for organisms. Organisms with specialized habitat needs, such as wood storks or shortnose sturgeon, begin to die out, while organisms that use urban areas, such as pigeons, squirrels and cockroaches, thrive. The changes we make in the environment drastically reduce the habitat for other species.

All living things need food, water, air and shelter/space, but they all have different methods of obtaining them. For this reason, every place on Earth is potential habitat as long as small amounts of these essential things are available. By preserving habitats, we help preserve other species.

Procedure

Materials

- [Data sheets](#)
- [Pictures of living things and their habitats](#)

Procedure

1. Review with students what living things are. Discuss that living things need a place to live and grow where they can get the things they need to survive. Explain that this place is called a habitat. Have students discuss what their habitat is and how they get the things they need to live and grow in their habitat.
2. Take students to the school yard and explain that they will be looking for living things and their habitats. As a group, identify a living thing on the playground and discuss where it was found. Discuss where it might find air, food, water and shelter in the area. Discuss that this could be the living thing's habitat. Continue doing this with a few more living things until the students understand.
3. Explain to students that they will look for living things on their own and find the living thing's habitat. Give each student a data sheet to record what they saw and where they saw it. Students can either write or draw their observations.
4. Bring the students into the classroom and review what they observed. List the living things the students saw on the board. Then list the habitat it was living in. For example, if students saw ants on the ground, but other students saw ants climbing a tree, both are part of the ant's habitat. If students saw grass in the schoolyard, but not in the woods near the school, explain that an open field is a habitat for grass, but not the woods.
5. Show students pictures of living things they are familiar with, such as fish, bumblebees, bluejays, cactus and people, and then show them pictures of habitats where these living things would be found such as the ocean, a field of flowers, a tree or forest, a desert and a city. Have students determine which living thing best fits into each habitat. This can be done individually, in groups or as a class.

Follow-up Questions

- Do any living things make a person's house their habitat besides people? How do they get the things they need to survive?
- Can an animal live outside of its habitat? Can a fish live on land? Can a cow live in a tree?

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Assessment

Have the students draw 2 different living things and the habitats they live in. The students should also identify each living thing and each habitat. (Have reference books available for students to find out information about their animal or plant).

Scoring rubric out of 100 points

If they complete the drawings	20 points
If they identify one animal/plant	20 points
If they identify one habitat	20 points
If they identify the second animal/plant	20 points
If they identify the second habitat	20 points

Cross-Curricular Extensions

STEM Extension

Provide each student with a bug/butterfly cut out. Explain that this is a model of a new creature that will make its home in our classroom. Challenge students to color the insects and hide them in plain sight throughout the room to avoid predators ([example](#)). Invite another teacher or your principal to come in as a predator and hunt for 1 minute, finding all the bugs he/she can find. Afterward, look for the ones not found and discuss common characteristics. Allow students to change/modify their models based on their observations.

Language Arts Extension

Work together as a class to choose 5 animals that live in South Carolina, and then write 2 line poems about each animal.

For example:

A dolphin is an animal that lives in the sea,
It eats fish and squid but breathes air just like me.

Art Extension

Students could also illustrate the poems they completed in the *Language Arts Extension*.

Math Extension

Have students compare the size of different habitats. For example, which is bigger, the habitat of a tree or the habitat of a squirrel? Or which is bigger, the habitat of a bumblebee, or the habitat of an eagle? Have them discuss why certain organisms may need more space in their habitat.

Social Studies Extension

Have students examine maps of South Carolina and decide what places in the state look like the habitats of people and what places look like the habitats of plants and animals.

[Math Extension: "Habitat Hieroglyphics" Activity](#)

[Science Extension: "Animals and Plants Together" Activity](#)

Resources

Teacher Reference Books

Eyewitness Visual Dictionaries: The Visual Dictionary of Plants, DK Publishing, Inc., New York, 1992.

Using visually striking photographs and illustrations, this book identifies the various parts and structures of a variety of plants.

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The National Audubon Society Field Guide to North American Wildflowers: Eastern Region, Alfred A. Knopf, Inc., New York 1979.

The National Audubon Society Field Guide to North American Trees: Eastern Region, Alfred A. Knopf, Inc., New York 1980.

The National Audubon Society Field Guides not only contain information on identifying specific plants, but also provide information on the habitat, range and life history of the plant. They also contain beautiful photographs.

Porcher, Richard D. *Wildflowers of the Carolina Lowcountry and Lower Pee Dee*, University of South Carolina Press, Columbia, SC, 1995.

Written by a biology professor at the Citadel, this book contains identification information and general information on the ecology and natural history of Lowcountry wildflowers. It contains beautiful photographs.

Raven, Peter H., Ray F. Evert and Susan E. Eichhorn. *Biology of Plants*, W.H. Freeman and Company, New York, 1999.

This college textbook is an excellent resource for understanding more details about the biology of plants.

Teal, John and Mildred. *Life and Death of the Salt Marsh*, Ballantine Books, New York, 1969.

An in-depth look at one of the most important and productive ecosystems in South Carolina, with chapters on spartina grass and other marsh plants and their effect on the surrounding wildlife communities.

Teacher Reference Videos

Attenborough, Sir David. *The Private Lives of Plants* (Video series), Turner Home Entertainment, 1995.

Sir David Attenborough uses advanced camera techniques to show the life processes of plants. Though the entire series may be too advanced for elementary students, it is a wonderful resource for teachers.

Teacher Reference Websites

Botanical Society of America

www.botany.org

Information on the society whose mission is to increase public awareness of botany. Includes links to kids' websites on plants.

Student Reference Books

Eyewitness Books: Plant, Alfred A. Knopf, Inc, New York, 1988.

Eyewitness Books: Tree, Alfred A. Knopf, Inc, New York, 1988.

These books use photographs, illustrations and text to teach readers about plants. They contain everything from photographs that show how a seedling grows to photographs that show how fallen leaves decompose.

Kalman, Bobbie D. *How A Plant Grows*, Crabtree Publishing Company, 1996.

This resource includes information on photosynthesis and the importance of plants to food chains. It also includes experiments and activities.

The National Audubon First Field Guide: Trees, Scholastic, Inc, 1999.

This field guide will help students identify trees and learn about their life history.

The National Audubon First Field Guide: Wildflowers, Scholastic, Inc, 1998

This field guide uses photographs and text to allow students to identify plants and to learn about their natural history. Also handy as references for teachers.

Zim, Herbert and Alexander Martin. *Trees: A Golden Guide*, Golden Press, New York, 1987.

Field guide for identifying trees.

Zim, Herbert and Alexander Martin. *Flowers: A Golden Guide*, Golden Press, New York, 1987.

These field guides use illustrations and text to allow students to identify plants and to learn about their natural history. Though not as attractive as the Audubon guides, they are good references for students and teachers.

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Student Fiction Books

Fleischmann, Paul. *Weslandia*, Candlewick Press, Cambridge, 1999.

This is a picture book, but it is one that can be appreciated by 3rd, 4th and 5th graders. It is the story of an unpopular boy who uses the plants growing in his backyard to create his own civilization. It is an entertaining story and is effective for showing the dependence of humans on plants.

Morrison, Gordon. *Oak Tree*, Houghton Mifflin Company, Boston, 2000.

The story of an oak tree, how it changes through the seasons and how different animals in the community make use of it. Each page contains natural history information on the various organisms mentioned.

Curricula

Hunken, Jorie and the New England Wild Flower Society. *Botany For All Ages: Discovering Nature Through Activities For Children and Adults*, The Globe Pequot Press, Old Saybrook, Connecticut, 1993.

A collection of hands-on activities about plants.

Project WILD

Project WILD is an interdisciplinary curriculum for K-12 teachers on a broad range of environmental and conservation topics. For more information click on: <http://www.projectwild.org/>