

Exploring Habitats – Lesson Ideas and Vocabulary

The UC Marin Master Gardener Exploring Habitat (EH) videos can enrich your curriculum in several ways. If you bring your classes to the Exploring Habitats field trip at Marin Art and Garden Center, the videos and lessons can augment pre and post field trip learning. For students who are home schooled, or whose schools cannot access the field trip, these videos and lesson may provide a learning experience akin to the field trip. In addition, second language learners and their parents can watch the videos as often as they want to gain deeper understanding of the habitats.

Our intention with the videos, vocabulary, and lesson ideas is to supplement and enrich teachers' coverage of the California Science Standards for grade two and to teach foundational UC Marin Master Gardener Earth Friendly Gardening concepts. The EH teacher materials are designed to be engaging and accessible for all students. We are acutely aware of the many children in our schools who are second language learners, and believe our materials include ways to address ELA/Literacy. Of course, we fully expect that classroom teachers using these materials will adapt them as needed.

The vocabulary words are listed in alphabetical order in each category, and some are listed more than once because they fall into more than one category. We encourage teachers who use this curriculum to give us feedback so that we can issue updates to make this a better tool.

The following teacher resource materials ideas address the following California state science standards for second grade:

“Make observations (firsthand or from media) to collect data which can be used to make comparisons.” (2-LS4-1) Science and Engineering Practices

“There are many different kinds of living things in any area, and they exist in different places on land and in water.” (2-LS4-1). Disciplinary Core Concepts

Vocabulary

General Vocabulary

Adaptation - The way a plant or animal looks or behaves that helps it to survive.

Bacteria - microscopic living organisms.

Camouflage - An adaptation that allows plants or animals to blend in with their surroundings so that their chances of survival are increased.

Carnivore - Meat eater.

Fungi - Parasites that feed on living organisms or dead organic material.

Habitat - A place where plants and animals can find the things they need to live.

Herbivore - Plant eater

Microscopic - Something that is so small you need a microscope to be able to see it.

Microorganisms - Organisms that are too small to be seen with our eyes and can only be seen through a microscope. Ex. bacteria, fungi.

Omnivore - Eats plants and animals.

Organism - Any individual living thing that can react to stimuli, reproduce, and grow. It can be a virus, bacterium, protist, fungus, plant or an animal.

Pollinator - Animals such as bees and some birds that move pollen from one plant to another

Predator - Animals that hunt other animals for food.

Prey - Animals that are hunted and become food for other animals.

Scavenger - An animal that eats dead animals. Ex. turkey vulture.

Garden Habitat Vocabulary

Decompose – To cause something (such as dead plants and the bodies of dead animals) to be slowly destroyed and broken down by natural processes, chemicals, etc.

Photosynthesis - The process in which green plants use sunlight to make their own food.

Herbivore – Plant eater

Carnivore- Meat eater

Omnivore - Eats plants and animals.

Pollination – The transfer of pollen grains from one flower to another. Many insects move pollen between flowers. Pollination is important because it leads to the production of much of the food we and other animals eat and seeds that will create more plants.

Pesticide: A poison that kills insects.

Pond Habitat – Vocabulary Words

Decompose - To cause something (such as dead plants and the bodies of dead animals) to be slowly destroyed and broken down by natural processes, chemicals, etc.

Herbivore - An animal that only eats plants.

Invertebrate -A type of animal that does not have a backbone.

Larvae - A very young form of an insect that looks like a worm.

Migration (of a bird or animal) - To move from one area to another at different times of the year.

Molt - To lose a covering of hair, feathers, etc., and replace it with new growth in the same place.

Nymph - A young insect that has almost the same form as the adult.

Omnivore - Eats plants and animals.

Photosynthesis - The process by which a green plant turns water and carbon dioxide into food when the plant is exposed to light.

Predator - An animal that hunts other animals for food.

Woodland Understory - Vocabulary Words

Canopy - Trees that create an overhead covering for the plants and animals the live beneath it.

Carnivore –Meat eater

Deciduous – Trees that lose their leaves every year.

Food Chain – Food chains normally begin with a green plant eaten by a bug, the bug gets eaten by a bigger bug, and so on. Ex. Leaf - aphid - ladybug - bird - kestrel.

Non-deciduous - Trees that do not lose their leaves yearly.

Herbivore - Plant eater

Nocturnal - A plant or animal that is awake at night and sleeps during the day.

Omnivore - Eats plants and animals

Organism - Any individual living thing that can react to stimuli, reproduce and grow. It can be a virus, bacterium, fungus, plant or animal.

Predator – An animal that hunts other animals for food.

Prey - Animals that are hunted and become food for other animals.

Understory - The vegetation layer between the canopy and the ground. It also includes animals that live under the canopy.

Woodland Habitat - A shaded area with trees and plants.

Soil/Compost Habitat – Vocabulary Words

Bacteria - Microscopic living organisms.

Compost - A mixture of organic matter, as from leaves and manure, that has decayed or has been digested by organisms, used to improve soil structure and provide nutrients.

Crustaceans - Animals that usually have a hard covering, or exoskeleton, and two pairs of antennas, or feelers. Insects and spiders are crustaceans. People eat many types of crustacean—for example, crabs, lobsters, shrimps (or prawns), and crayfish.

Decaying – To be decomposing.

Decompose - To cause something (such as dead plants and the bodies of dead animals) to be slowly destroyed and broken down by natural processes, chemicals, etc.

Fungi - Parasites that feed on living organisms or dead organic material.

Nutrients – A substance that is needed for healthy growth, development and functioning.

Omnivore - An animal that eats both plants and other animals.

Organic Matter – Matter that has come from a recently living organism, especially decayed matter in soil.

Predator - An animal that hunts other animals for food.

Prey - Animals that are hunted and become food for other animals.

Scavengers - An animal that eats dead animals. Ex. turkey vulture

Soil – A mixture of minerals and organic matter that covers much of Earth's surface.

Worm Casting – Worm manure, used as organic fertilizer to improve soil and plant health.

Activities for further investigation

Habitats Journal

Download the Habitat Journal (link) template and assemble enough copies to make an 8 page Habitats Journal for each child (2 pages per habitat).

After viewing each video, students will complete each of the sections:

- Name the habitat
- Describe the characteristics of the habitat
- List of some plants and animals that live there
- Choose at least one plant, animal, or microorganism and tell how it meets its needs for food, shelter, air and water.
- Draw a picture of your chosen plant, animal, or microorganism.
- Explain why this plant or animal could or could not survive in another habitat.

After students have viewed all four Exploring Habitat videos, have them decorate the cover of their Habitat Journal with a drawing of their personal favorite habitat, and ask them to tell the class why they picked it.

Acorn Tic-Tac-Toe or Bingo Game

After viewing the Woodland video, use this game to help children remember who depends on oak trees and their acorns for food.

- Have students call out the animals that live in the woodlands and make a list on the board.
Hint: Possible woodland animals that eat acorns - acorn woodpecker, raccoon, deer, squirrel, wild turkey, bobcat, scrub jay, rabbit, mice, rat, coyote, owl, fox, skunk, opossum, Ca. quail, crow, raven, hawk.
- Have the children sketch and or print the name of any nine of the animals on 3X3 squares of paper.
- Have the children arrange the animal squares on a larger sheet of paper to make a 3 rows of three. Have them glue the squares onto the paper in whatever order each child wants. At the top print '*Who Eats Acorns?*'.
- Have each child collect at least nine acorns. Have some extras for those who don't find any.
- Write acorn, woodpecker, raccoon, deer, squirrel, wild turkey, scrub jay, rabbit mice, California quail, skunk and opossum on slips of paper to place in a hat. Have a student draw out one at a time and call out the name.
- As names are called, students place an acorn on each animal that they have on their tic tac toe board. Who can get three in a row or get all nine squares?

Discuss the woodland animals that were not covered by an acorn. Some of them such as a fox, coyote, owl, etc. do not eat acorns themselves but they eat animals such as mice and skunks that do eat acorns.

Other Lesson Ideas

1. Discuss with a partner which habitat would be right for you and why, if you were: a snail, a bobcat, a springtail, a dragonfly, etc. Could lead into a whole class discussion.
2. Explore school grounds for micro-habitats such as under a log or a bush. Discuss and record these habitats.
3. Divide class into habitat groups to collaborate in making a group poster of the plants and animals in their habitat. Include shelter, food, and water for the chosen plants and animals.
4. Find evidence of the presence of creatures in an environment. (Bits of fur, scat-poop, carcasses, nibbles out of leaves, etc.).
5. Take a piece of fruit and ask how many creatures could use it for food. (ex. Bees, ants, bacteria, animals, people). What other foods found in nature can feed different creatures in habitats?

OTHER RESOURCES:

<https://aroundthekampfire.com/2020/01/hands-on-habitats-activities-for-second-grade-scientists.html>

<https://kidsgardening.org/lesson-plan-pollinator-lesson-plans/>

Note: The links to Other Resources is provided for teacher's convenience only. UC Marin Master Gardeners neither endorses the resources nor verifies the information contained therein.