

Create a Habitat

Next Generation Science Standards:

- 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.
- 2-LS2-2 Develop a simple model that mimics the functions of an animal in dispersing seeds or pollinating plants.

Hawai'i Content and Performance Standards III:

- SC.2.5.1 Identify distinct environments and the different kinds of organisms each environment supports.

Description:

Students will choose a habitat found in Haleakalā National Park and create a model of that habitat inside of a shoebox. The diorama projects will be shared with the class the following day.

Duration: 45 minutes and a take home project

Objectives: At the end of this lesson, the students will be able to:

- Demonstrate an understanding that a habitat is a home, and native habitats are the best and only home for native species.
- Recognize that some plants and animals have specific needs and live in special homes that give them what they need.

Background:

There are many plants and animals that will share the same habitat. The animals and plants that live together in a habitat form a community. There are many different habitats in Haleakalā National Park. Some of the habitats are: alpine desert, subalpine shrub land, cloud forest, tropical rain forest, freshwater, and coastal. Because resources like food and water may be limited, plant and animal species often compete with each other for these resources. The only way that they can all live together is if they each occupy slightly different niches or hold different "jobs" in the habitat. No two species can occupy exactly the same niches. Often the species jobs are helpful to other species in the same habitat. Every habitat contains a variety of different elements that together help meet the survival needs of its residents.

Vocabulary:

Habitat: A home where an animal or plant finds food, water, shelter and space to survive.

Niche: A species' job.

Materials Needed:

Parent Letter: Shoebox Habitat Diorama (included)

Shoebox

Construction paper

Various supplies based on your habitat (For example: Play dough in various colors, sand, some leaves from the yard, cotton balls to use as snow or clouds etc.)

Procedure:

Step 1: Review habitats

- Ask the students to tell you about the different habitats they have learned about.
- Remind them of the many habitats found in Haleakalā National Park like the alpine desert, subalpine shrub land, cloud forest, tropical rain forest, freshwater streams, and coastal habitats.
- What sorts of things might we find in a habitat? = sources of food, water, shelter, space, and other creatures.

Step 2: Select a habitat

- Ask the children to select a habitat found in Haleakalā National Park for them to model.
- On a piece of paper, brainstorm with the children what the scenery might look like in their habitat (trees, mountains, streams).
- What types of plants and animals live in that particular habitat?
- What do they use for food, shelter, and where might they find water?
- They can draw a sketch of what they want their habitat to look like to use as a guide.

Step 3: Assign diorama homework project

- Tell the students that they will work at home with their parents to create a habitat inside a shoebox.
- This is called a diorama and it is a miniature model of a real habitat.
- Pass out the Create a Habitat Diorama parent letter.
- They will bring the completed diorama habitat back to school to present to their classmates.

Create a Habitat Diorama

Dear Parents,

We've been studying the habitats (homes) found in Haleakalā National Park. Now it's time to have some fun with what your child has learned! A habitat is the natural environment (or home) in which an animal usually lives (fish in the ocean, birds in the forest, etc.). Your child has chosen a habitat found in Haleakalā National Park. They will be creating a diorama which is a miniature model made from a cardboard box with no lid (shoeboxes work great). To create a diorama, you turn the box on its long side and cover the background (bottom of the box) with painted or colored scenery. Then, you place figures and objects in front of the background like characters and props on a stage. This diorama should include some images or models of the plants, animals, and geography of that habitat.

What you need:

- Cardboard box (or shoebox)
- Glue
- Scissors
- Suggestions for decoration: A variety of art and craft supplies, including paint, colored pencils, markers, crayons, colored crepe paper, colored construction paper, colored modeling clay, pipe cleaners, and cotton balls...

What to do:

1. First, add background scenery to the bottom of the box. Then, stand the diorama up on its side before adding the figures and objects. You may use cut-out pictures of animal figures and objects, or build them from clay and other materials. Be creative, using any materials available to craft your habitat. Glue the objects to the box so they won't fall when the diorama is carried.
2. Have your child identify the habitat they created by writing the name of the habitat on the front of the diorama.
3. Students should write 5 sentences about their habitat and tape them to the back of the shoebox.
4. Your child will discuss and present their diorama to the class.

Examples of dioramas:

