

Is This My Home?

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.
- K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.
- 2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.

Hawai'i Content and Performance Standards III:

- SC.K.1.2 Ask questions about the world around them.
- SC.1.3.1 Identify the requirements of plants and animals to survive (e.g., food, air, light, water)
- SC.1.5.2 Describe the physical characteristics of living things that enable them to live in their environment.
- SC.2.3.1 Describe how animals depend on plants and animals.
- SC.2.5.1 Identify distinct environments and the different kinds of organisms each environment supports.

Description:

Different plants and animals live in different habitats. This lesson introduces students to some of the native plants and animals that are found in Maui. In this fun activity, students are asked to match the species with their proper habitat. Students will also imagine what would happen if plants and animals were placed in the wrong habitat.

Duration: 45 minutes

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.
- Name three species that are only found within Haleakalā National Park.
- Recognize that some plants and animals have specific needs and live in special homes that give them what they need.

Background:

A habitat is a special home where a plant or animal lives. Just like you have a home or place to live, so do animals and plants. A species needs four things to survive in its habitat: food, water, shelter, and space. Many different kinds of habitats are available to plants and animals in Hawai'i, from coastal beaches to rainforests to the sub-alpine summit of Haleakalā. Each habitat provides just the right environment for the plants and animals that live there.

All plants and animals have specific needs and live in special homes that give them what they need. For example, different types of animals require different amounts of space. Habitats can be big like a forest or they can be much smaller like a burrow. Some animals defend a huge territory or roam over a large area. Other animals need only a small amount of space and can adapt to neighbors that live very close. Just like you have to go to the store to get food, an animal leaves its "shelter" to get the things it needs to live. If their needs aren't being met, it will try to move to a better habitat if it can find one, otherwise it may not be able to survive.

Different types of animals need different types of habitats. A fish, for example, needs clean water in which to live. Grasshoppers need a big space where they can hop and leaves they can eat. Forest birds need undisturbed forests and clean water. Some forest birds need specific species of trees, plants, and flowers in their habitat to be able to survive. Many of Maui's native forest birds are in danger of losing their unique and specialized habitats that allow them to survive. Haleakalā National Park protects some of the only remaining native habitats for many of these birds.

Vocabulary:

Ahupua'a: A Hawaiian land division running from the top of the mountain to the sea containing many different habitats.

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

Native: Plants and animals that got to Hawai'i by themselves, without the help of people.

Species: A plant, animal or insect.

Survival: Meeting the needs of food, water, shelter, and space.

Materials Needed:

Is This My Home? Worksheet 1 & 2 (included)

Is This My Home? Teacher Answer Key (included)

Glue

Scissors

Coloring Supplies

Procedure:

Step 1: Introduce Habitats

- We call the place where we live our home. Scientists call the place where plants and animals live their habitat. A habitat is a home.
- What sorts of things do we need to survive in our habitat? = Food, water, shelter, space
- Ask students if they would ever see a polar bear at the beach.
- Ask students if they have ever seen a monk seal on the school playground.
- Ask students if they have ever seen a fish in a tree?

Step 2: Habitat Song

Teach the class the following song to the tune of “When You’re Happy and You Know It, Clap Your Hands”.

Would a slippery fish be happy in a tree? (No sir-ree!)
Would a forest bird be happy out at sea? (No sir-ree!)
Every plant upon the land,
Every sand crab in the sand,
Needs a home that’s all its own, now don’t you see? (Yes sir-ree!)

There’s an ant and all his friends upon a leaf. (clap clap)
There’s a whale out in the sea beyond the reef. (clap clap)
Every plant upon the land,
Every sand crab in the sand,
Needs a home that’s all its own, now don’t you see? (clap clap)

There are ferns and mosses where it’s damp and cool. (clap clap)
Lots of fishes can be found within a school. (clap clap)
Every plant upon the land,
Every sand crab in the sand,
Needs a home that’s all its own, like you and me! (Yes sir-ree!)

Step 3: Discuss and check for understanding

- We call the place where we live our home.
- What do we call the place where a plant or animal lives? = A habitat.
- What does a forest bird need to find in its habitat? = Food, water, shelter, and space.
- What does a spider need? = Food, water, shelter, and space.
- What do people need? = Food, water, shelter, and space.

Step 4: Describe ahupua’a and ancient Hawaiian habitats

- The native Hawaiian people call the portion of land that they live in an ahupua’a.
- An ahupua’a is a pie shaped slice of land that went from the top of the mountain all the way to the sea. It contained many different habitats.
- Hawaiians could find everything they needed to live within this ahupua’a.
- What things do you think they could find? = Food, water, shelter, and space.
- Ask students for some examples of different things found in each habitat within an ahupua’a:
 - What could they find in the ocean habitat? = Fish, limu (seaweed), and crabs.
 - What could they find in the shoreline habitat? = Coconuts for food, noni fruit for medicine, and hala for weaving mats.

- What could they find in the kula habitat (plains and fields)? = Kalo (Taro) and 'uala (sweet potatoes) for food, Kī (Ti) leaves for sandals and wrapping food.
- What could they find in the mountain or upland habitat? = Seeds and flowers plants for lei, plants for cordage for nets and fishing lines, special wood for spears and tools.

Step 5: Describe animals' physical features that belong with certain habitats?

Describe some of the physical characteristics of animals that enable them to live in their habitat.

- Forest Birds = Beaks for gathering food and nectar from flowers, wings to fly into shelter of a tree, special feet for holding on to tree branches.
- Spiders = legs for crawling around, silk for making webs to catch their food.
- Humpback Whale = Fins for swimming, special lungs for breathing, special mouth for eating krill.

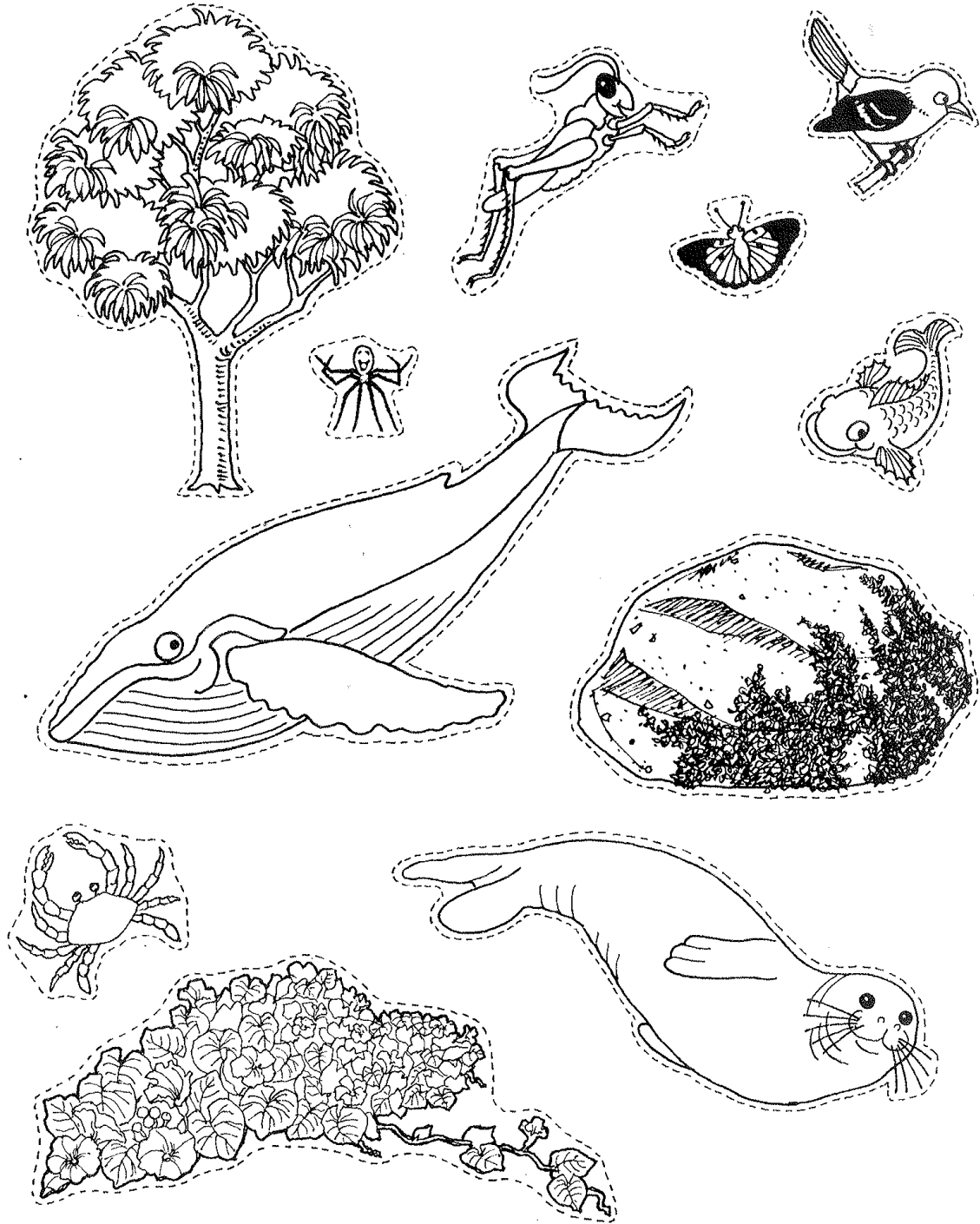
Step 6: Complete Is This My Home? Worksheets 1 & 2

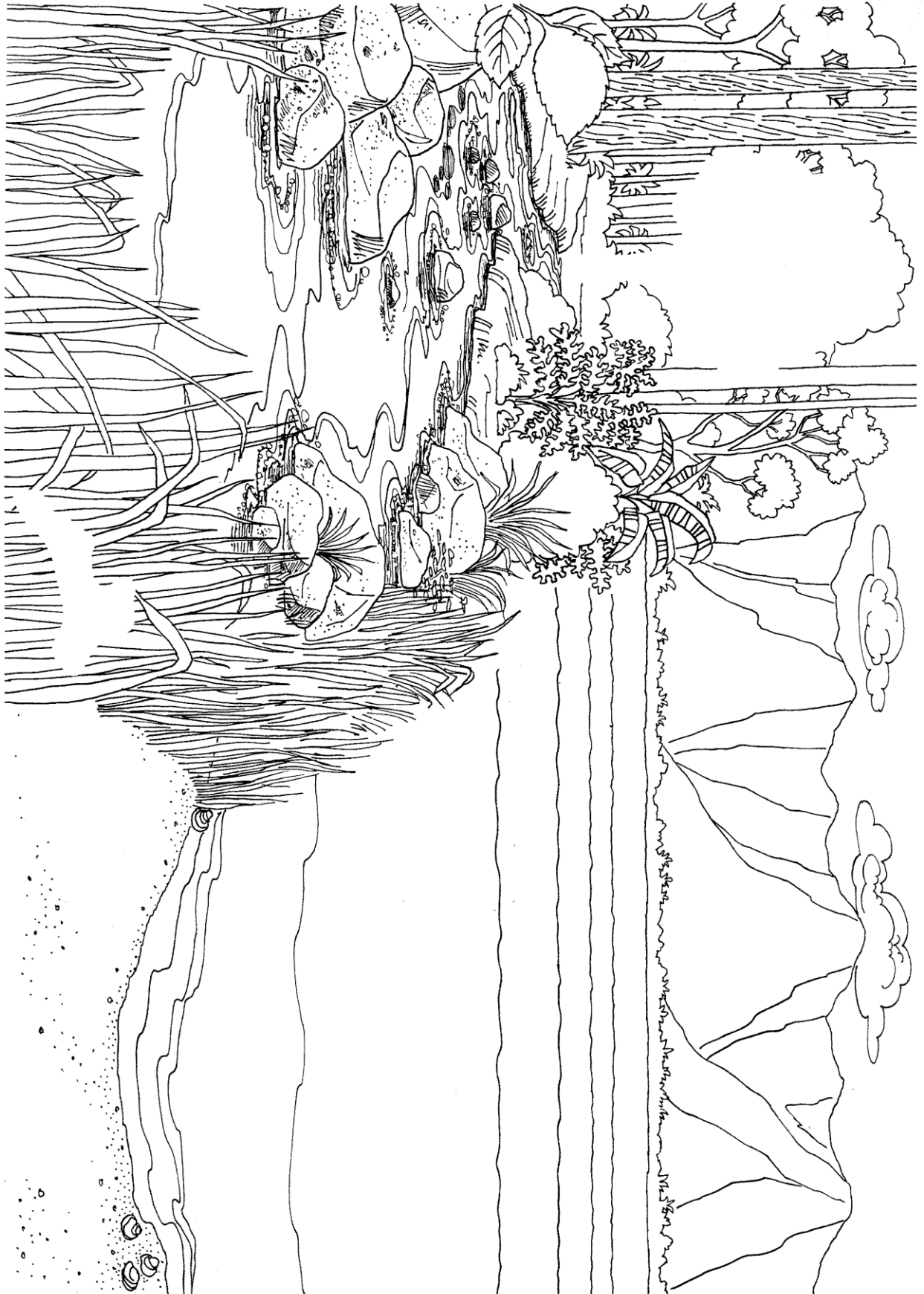
- Distribute the student activity sheets. Have students color the species on Worksheet 1 and the habitats on Worksheet 2.
- While students are coloring, describe the plants and animals found on Worksheet 1. Some are only found here in Hawai'i. Explain that some plants and animals have very special habitats and would not be able to survive in other places.
 - Koa Tree = Dominant tree species in many Hawaiian forests. It is primarily found between 1,500-4,000 feet elevation. Koa is endemic (native and unique) to the Hawaiian Islands.
 - Happy-face spider = A native spider that lives on the undersides of leaves where its color, size, and unusual marking help to hide it from hungry birds. These pale, green semi-translucent spiders are about 1 inch long from toe to toe. The happy-face markings actually appear on the spider's abdomen, and come in a variety of patterns.
 - 'Amakihi = A bird often seen amidst the leafy branches of the koa and other forest trees searching for insects, nectar, and fruit. Adults are yellowish-green with dark, slightly curved beaks.
 - Pulelehua (Kamehameha Butterfly) = It is one of only two butterflies that are native to Hawai'i. The pulelehua is often seen near koa trees, and mamaki. Young caterpillars protect themselves by cutting a flap of leaf, pulling it over themselves, and securing it with silk to make a shelter. It is the official insect of the state of Hawai'i.
 - 'Ilio holo I ka uua (Hawaiian Monk Seal) = The Hawaiian name means "dog that runs in rough water". They are critically endangered.

- Koholā (Humpback whale) = Spends its winters in tropical waters along coasts or near islands in both the Pacific and Atlantic Oceans. Humpbacks are most commonly seen in Hawaiian waters between January and March. They are usually grey to black with occasional streaking or splotching. They are endangered.
- Define Native = Plants and animals that got to Hawai'i by themselves, without the help of people. Explain that many of the plants and animals on Worksheet 1 are native to Hawai'i and some are even found nowhere else in the world!
- Have students cut out the plant and animal illustrations from Worksheet 1 and glue them in the appropriate habitat on Worksheet 2. There is a Teacher Answer Key provided.
- Write the names of the habitats on the board (ocean, beach, and forest). Have students print the name of each habitat on Worksheet 2.
- Ask students to imagine what would happen if plants and animals were placed in the wrong habitat.

Reference: Adapted from 'Ōhi'a Project. (1989). A fish in a tree. *An environmental education guidebook for Hawai'i* (pp. 62-67). Honolulu, HI: Bernice Pauahi Bishop Museum and Moanalua Gardens Foundation.

Is This My Home? Worksheet 1





Is This My Home? Worksheet 2



Is This My Home? Teacher Answer Key