

Educator Activity Outline

Biscayne Explorer: Wildlife Inventory and Nature Study

Activity Number: 3

Title: The Keys to Plant Identification

Location: Hammock on southeastern end of parking lot

Objectives:

(Students will)

- know how all animals depend on plants.
- know that to compare and contrast observations and results is an essential skill in science.

Summary:

Students will enter a wooded area representative of the hardwood hammock on the keys within the park. Using a plant identification card they will compare and contrast leaves, leaf arrangements and bark in order to identify tree species.

Time Needed: 20 minutes

Materials:

Hammock plant identification cards

Flagging tape

Laminated numbers

Explorer Booklets

Exploration:

Read (2 min.): The trees around you represent the habitat, the tropical hardwood hammock, found on the islands within the park. The hammock is a shady tropical forest with hardwood trees. It is also a habitat for animals. But what is a habitat? A habitat is an animal or plant's neighborhood; hopefully, all the resources that a plant or animal needs are right there in its neighborhood. Plants and animals need food, water, shelter and space.

Animals eat to get the energy they need to breathe, run, swim, fly, hunt...and to do *everything*. Food in the wild comes in many shapes and sizes. Pretty much anything that you can think of is eaten by one animal or another, even poop! All animals depend on plants, even carnivores; because energy travels from the sun to plants to the animals that eat the plants and then to the animals that eat those animals. This is called a food chain.

Do (3 min.): Let's explore this important part of the food chain and habitat. When you first look at a hardwood hammock, you might think you are looking at a wall of green, *but if you look carefully, you will realize that each plant has a unique leaf shape and size and that the leaves grow in certain patterns depending on the plant.*

Scientists pay close attention to these things when identifying plants. Training your eye to see the differences between different plants can be fun. If you can tell plants apart, you will be able to know which ones to expect butterflies around, which ones are edible and which ones to keep a safe distance from.

Do (10 min.): Hand out the plant identification sheets and turn to this activity's page in your *Explorer Booklet*. Disperse in pairs or small groups and spread out throughout the hammock. Look around to spot the numbered plants. There are eight plants and eight blanks in your Biscayne Explorer Booklet. Use the plant identification cards provided to identify the plants and write their names in your booklets. Make sure to look at the leaf shape, size and color, and then look at how they grow on the branch. Give it a shot; you can touch all of these plants.

Conclusion (5 min.): Did you find plant identification to be easy or hard? Why? Many students are very good at identifying plants. Many have keen eyes, but just like in the animal kingdom, not everyone has the same talent.

Let's revisit these plants to go over the correct answers and learn something interesting about each one!

Answers and Facts: (Read)

#1: Jamaican Dogwood - Native Americans used the root, bark, twigs, and leaves of this plant to temporarily stun fish to catch them; the fruit was also used as a part of arrow poison.

#2: Satin Leaf - Notice how its leaves are thick and waxy, this coating keeps water from evaporating off the leaf's surface, which is important during the dry season.

#3: Sea Grape - This plant belongs by the sea. It is salt and drought tolerant, and notice its large leaves to absorb as much sunlight as possible.

#4: Mahogany - This hardy tree has light, oval-shaped seedpods designed so the wind can carry them and spread them, see if you can find them up in the tree.

#5: Wild Coffee - The shiny leaves and bright red berries this plant produces attracts many butterfly and bird species, including cardinals, mockingbirds, and zebra longwing butterflies.

#6: Gumbo Limbo - Notice the red, flaky, peeling bark on this tree. Not only does it keep lichens and mosses from growing over it, but it can also photosynthesize. If this tree were to lose all its branches in a hurricane, it could still produce the nutrients it needs to survive through its bark!

#7: Pigeon Plum - The threatened white-crowned pigeon is a frequent visitor to this plant for the fruit it produces.

#8: Paradise Tree - Notice the many smaller *leaflets* on the one stem of this tree's leaves. When new leaves grow, they emerge as bright flames of red and gold.