

Educator Activity Outline

Biscayne Explorer: Wildlife Inventory and Nature Study

Activity Number: 6

Title: The Seagrass Connection

Location: Beginning of blue boardwalk bridge

Objectives:

(Students will)

- know ways that plants, animals, and protists interact.
- know that animals eat plants or other animals to acquire the energy they need for survival.

Summary:

Students will examine animal specimens collected for seagrass research in the park. After examining the specimens, they will make a food web to illustrate the importance of this nursery ground.

Time Needed: 20 minutes

Materials:

Fixed specimens

Butcher Paper

Markers

There is no activity in the Explorer Booklet for this station

Exploration:

Read (3 min.): Look across Biscayne Bay. Can you see different colors across the water? The darker patches are seagrass beds. Now look into the water, can you see the seagrasses? A lot of time we call these seagrasses seaweed, but they are actually flowering plants. Just like plants provide a place for animals to live above the water, they provide a place for animals to live in the water.

These seagrasses are a home or nursery for baby hermit crabs, lobster, flounder, snapper, seahorses, cowfish, bonefish, and many more. These animals find a great hiding place within the seagrass, but they also provide food for larger predators. When some of these animals get too large to hide between the seagrass blades, they move to the mangroves or even the reef. Seagrasses are also eaten by green sea turtles and manatees.

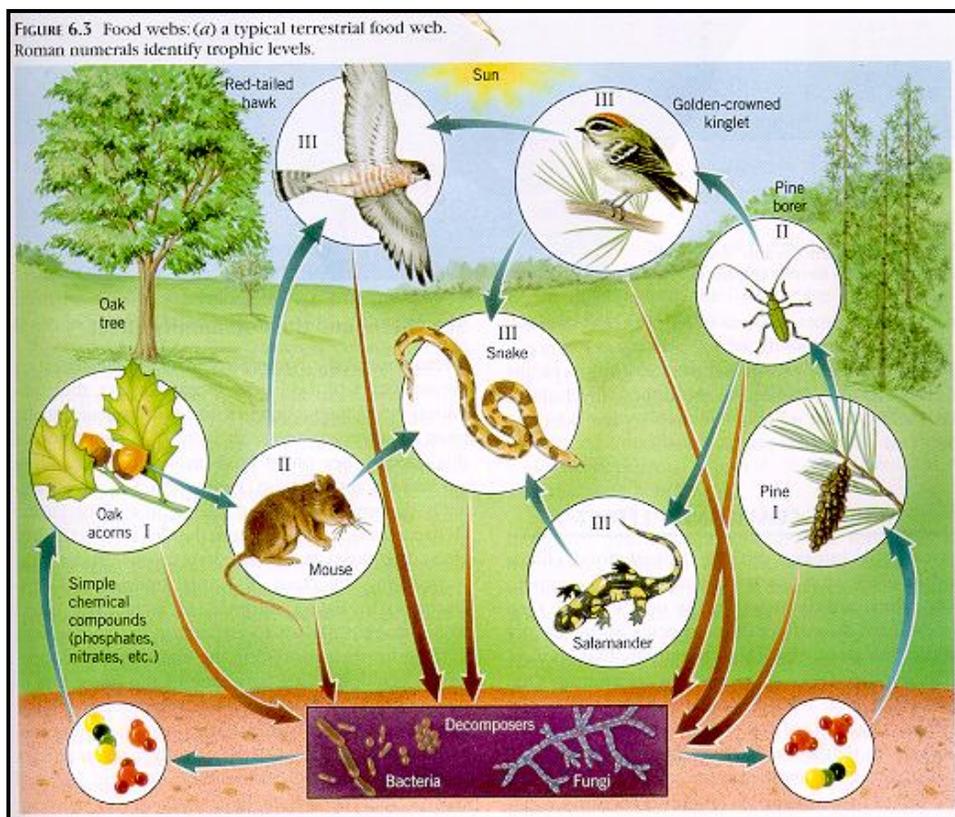
Park scientists collect animal samples from seagrass beds to see if the seagrasses are healthy. From the samples they collect, they can tell if the seagrasses are healthy enough for animals to live in. They can also learn more about what animals use the seagrasses and when. This is important because we don't know where many of the fish we like to fish and eat spend the first few years of their lives. If we know where groupers, snappers, and billfish spend their first few years, we will be better able to protect the habitats they depend on.

Do (5 min.): The samples provided came directly from a park research project. Just as park scientists were able to learn from these animals, now so can students like you. Pass the specimens around carefully. Do not shake the containers because we want to preserve them for as long as possible. Examine the specimens and identify them by reading the labels.

Read (2 min.): These animals, just like the seagrasses they live in, provide other animals with energy. Energy travels from the sun to plants, then to the animals that eat the plants, and then to the animals that eat the animals that eat the plants. Phew! A food chain begins with an initial source of energy, the sun. As energy moves down the food chain, it is lost. It's as if you start out with a full battery to power your electronic device and then pass the battery along to your friend who passes it to one of his or her friends. As the battery, or energy source, is passed along energy, is used and eventually it runs out. Food chains are actually not very long because each link in the chain uses up some of the energy. What *are* pretty complex are food webs. Food webs are a combination of multiple food chains.

Do (8 min.): We are going to create a food web. Spread out the butcher paper provided and then carefully place the specimens on it. Make sure to spread the specimens out. Pass out the markers provided and now connect the various specimens to each other by drawing a line to create a food web. Feel free to draw in seagrasses, the sun and other animals or even yourself to fill in the gaps of your food web. Once you have connected and completed the food web, use the markers again to write the name of each specimen where it was in the jar on the butcher paper. Then, you can take this back to the classroom with you and review Biscayne Bay's food web!

Here is an example of what a food web looks like:



Conclusion (2 min.):

Because you don't see something, it does not mean that it is not there, and just because something is small doesn't mean it isn't important. The organisms that live in Biscayne Bay camouflage into the seagrass beds to stay protected, so it is not always obvious that they are there, but as you can see, some of them are the same animals that form a big part of other ecosystems, like the reef or even some of our lives.