Biscayne Explorer

Seagrasses: The Seagrass Connection

- **Location:** Varies
- **Booklet Page:** *No Booklet for this station*
- **Time Needed:** 20 min
- **Materials:**
-Fixed Specimens
-ONE sheet of butcher paper
-Markers

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.

Exploration:

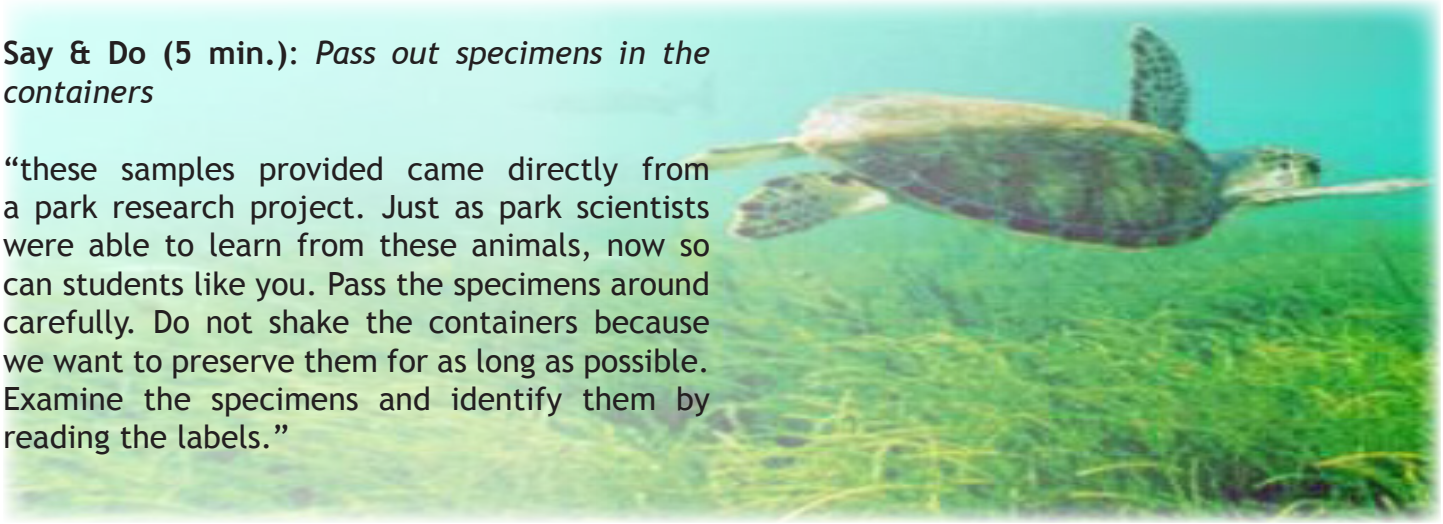
Read (2 min.): "Look across Biscayne Bay. Can you see different colors across the water? The darker patches are seagrass beds. Now look into the water, can you see the seagrasses? A lot of time we call these seagrasses seaweed, but they are actually flowering plants. Just like plants provide a place 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 catch 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."

Say & Do (5 min.): *Pass out specimens in the containers*

"these 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. 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 that show the relationship between plants and animals and the flow of energy in an ecosystem.

Do (8 min.): We are going to create a food web. Spread out one piece of 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, depending upon what species are consumed. Some species might be eaten by many animals. The lines mark the flow of energy from source to source. REMEMBER: the sun is the first source of energy! 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! Afterwards, try removing some animals to see how the rest are affected.

See the example photo for ideas.

Conclusion Read (2 min.):

Many of these organisms we have learned about use camouflage in order to stay hidden of in the seagrasses of Biscayne Bay. however, just 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. This is seen in the connections found in our foodweb. These small, hiding organisms are some of the same animals that form a big part of this and other ecosystems, like the reef or even some of our lives.

Were you able to find an animal that didn't have any predators, one that seemed to eat a lot of everything else? If you did you found a lionfish. Lionfish are a non-native species that don't have any natural predators. They eat many of the species in web, all of which have no defense against the Lionfish. If one new animal comes into an ecosystem, what type of effect will this have on a fragile foodweb?