

Educator Activity Outline

Biscayne Explorer: Wildlife Inventory and Nature Study

Activity Number: 2

Title: Bird and Fish Count

Location: Boardwalk

Objectives:

(Students will)

- know that a successful method to explore the natural world is to observe and record, and then analyze and communicate results.
- know that all living things are different but share similar structures.
- know that to compare and contrast observations and results is an essential skill in science.

Summary:

Students will take an inventory of the bird and fish life while walking on the boardwalk along the bay as a measure of the health of the area. They will use bird and fish identification cards to identify the wildlife.

Time Needed: 20 Minutes

Materials:

Fish identification cards

Bird identification cards

Binoculars

Explorer Booklets

Exploration:

Read (3 min.): Darwin, Einstein and Galileo all started their studies in the same way: by exploring and looking at nature. You can learn a lot by observing nature. Scientists here at Biscayne have to keep track of the health of the park. Just like a doctor checks your heartbeat, lungs, tonsils and temperature, park scientists check for certain things in the water, coral reef and animals. One of the ways park scientists check the health of the park is by inventorying, or counting, how many of one type of animal there are. They actually don't count most of the animals one by one. Instead, they use a scale of "single," "few," "many" and "abundant" as written in your *Explorer Booklet*.

Do (1 min.): Flip to the Fish and Bird Count page. How many does "single," "few," "many" and "abundant" represent?

What is most important is not only how many of one animal there are, but actually how many different types of animals there are. This is called species richness or biodiversity. Think about it: A bay full of nothing but dolphins would be very beautiful, but would it be healthy and balanced? Not really. What would the dolphins eat and what would eat the dolphins? An ecosystem needs producers, consumers and decomposers to keep it healthy.

Read (1 min.): We are going to take an inventory, or see how many fish and birds are in this area of the park. We also are going to identify the different types of fish and birds using identification

cards, or IDs. Then we are going to determine whether this area has a lot or a little biodiversity. Counting animals is not as easy as it sounds. Some are hard to identify while others move very quickly and still others are very good at hiding. Keep in mind that the fish in the bay are juveniles and camouflage into their surroundings, so a good eye is necessary. Also, the birds in this area of the park could be in the sky, in the mangrove trees or in the water. Be sure notice the colors of the animal you are looking at, the body shape and any special markings.

Do (13 min.): Pass out the binoculars. Inventory the area. Keep track of your findings in your *Explorer Booklet*.

Conclusion: (2 min.): Decide as a group if the area you inventoried is high or low in biodiversity. Why? Did you know that over 500 species of fish and close to 200 species of birds have been identified in Biscayne National Park? Does this change your answer to the question above? (Is the area you inventoried high or low on biodiversity?)