

VIRTUAL SUMMER CAMP: RIVER RANGERS

Bird Beak Buffet

Theme: Birds, Adaptation, Habitat

Ages: 5-8 years old

Prep Time: 5 minutes

Activity Time: 20 minutes

Activity Summary:

Hudson River Park provides important habitat to a range of local and migrating bird species including Canada geese, red tailed hawks, song sparrows and northern flicker woodpeckers, just to name a few. In fact, there are over 100 species of birds that fly through the Park every year!

This lesson teaches students how each bird species has unique adaptations to help them get the food they need to survive with an interactive game we like to call Bird Beak Buffet. Students will discover how specific beak shapes are indicators of where, how and what a bird eats. The diversity of beak shapes within the park allows for so many species to thrive right here in our backyard.

Goals:

- To understand that there are many different bird species in Hudson River Park
- To understand different bird species have different types of beaks to match their diet
- To connect different bird species' diet to their preferred environment
- To practice fine motor skills during an activity that compares tools to bird beak function

Lesson Materials:

- Bird Beak Buffet Lesson Plan
- Bird Beak Buffet Worksheet (printed or screenshot on a smartphone or tablet)
- Paper (optional)
- Pencil
- 2 Small bowls
- Tweezers
- Chopsticks
- Dried beans OR Cereal Or Dry Pet Food Pellets
- Timer

Background:

Hudson River Park is home to over 100 species of birds! Birds are complex creatures that come in all different shapes, sizes and colors. Through time, particular genetic information and **adaptations** have been passed down to offspring shaping each bird species' unique form based on its environment.

Physical traits including **beak shape**, body shape, wing shape, foot shape, and coloring can tell us about a bird's behavior and preferred **habitat** or home. Exploring these features tells scientists a great deal about where and how a bird lives. The beak shape reveals where, how and what a bird eats. The shape of a bird's body, wings, and feet points to how fast the bird flies, glides, and swims. Shape and colors also reveal where a bird predominately lives. Ultimately, this variety amongst birds highlights the great biodiversity that the Hudson River Park's numerous habitats can support.

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Photo by Hudson River Park Naturalist, Keith Michael

Hudson River Park has a vast abundance of birds in the Park during the spring, summer and fall. When the temperature begins to drop however, it is a cue for many species to travel for warmer grounds, a process called **migration**. The term migration is used to describe the movements of populations of birds. Migration patterns differ from species to species in terms of length and distances traveled. Migration can be triggered by a combination of changes in day length, lower temperatures, changes in food supply and genetic predisposition. This phenomenon is the reason why we see different bird species frequenting Hudson River Park during different times of year.

Hudson River Park serves as an especially important bird habitat in New York City with over 500 acres along the waterfront of Manhattan. The Park's Habitat Garden and 400 acres of estuarine sanctuary both contribute to valuable waterfront nesting grounds for over 100 species of birds!

Lesson Procedure:

Follow the prompts on the accompanying worksheet to gather some background knowledge, and complete the hands-on activity.

Responses to questions can be written on a separate sheet of paper, or directly on the worksheet if you are able to print the document.

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Bird Beak Buffet Worksheet

Directions:

Follow the prompts on this worksheet to reflect on what you already know about birds, learn about different bird beak adaptations, and test out how these adaptations function in the real world. Print this worksheet and write answers on the lines provided, or write your answers on a separate sheet of paper.

Part 1: Learning about Birds

1. Name one species of bird you know, that lives in New York City: _____
 - a. Where, specifically, have you seen this bird? _____
 - b. Do you know what this bird eats? If so, what is their food?

One of the most common species of bird that people think of when thinking about New York City is the Pigeon, which is also known as the **rock dove**.



Photo by Hudson River Park Naturalist, Keith Michael

Rock doves' natural diet mostly consists of seeds and small fruits.

2. Pause for a moment and write down what you notice about its beak. What shape is it? How about size? Do you think it is strong or weak?



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If you look closely, you can see that its beak is small and pointy. This makes it easy for these birds to get a hold of small food items. It is small, but it is also tough. In NYC, we often see them pecking away at bread and other food scraps fallen on the ground. Sometimes they even take leftovers out of the trash. This is one reason that rock doves are so successful in urban environments; they are able to survive by eating foods that are outside of their natural diet. If they did not develop this ability to change their food source (a survival adaptation), there might not be so many pigeons in New York City during the cold winter months, when seeds and fruits are harder to find.

Hudson River Park provides habitat to over 100 bird species. Below are some photos of birds found in the Park captured by our wonderful Park Naturalist, Keith Michael.



A- Double-crested cormorant



B- Northern cardinal



C- Red-tailed hawk



D- Common tern



E- American robin



F- Mallard ducks

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3. Describe some differences you notice about the beaks belonging to each species. Write down some observations about where each species is found. The birds' locations also inform what they might eat!



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Part 2: Bird Beak Matching Game

4. Let's try to match the beak shape to the food source! Draw lines on this worksheet, or on the screenshot on your touch screen device, connecting the following bird species, the tool that is most similar to how their beak works, and the food you think they eat based on this information. (Hint: consider their environment captured in the photos)

		
		
		
		
		
		

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Part 3: Bird Beak Buffet

In this demonstration, you will be using different tools to act like different species of birds and test how effective they are for gathering a particular kind of food.

First, gather your materials:

- 1 small bowl full of dried beads, pet food, or cereal to represent bird food
- 1 empty small bowl
- 1 pair of chopsticks to represent the common tern's beak
- 1 set of tweezers to represent the American robin's beak
- 1 timer

Then, set your timer for 20 seconds. Get ready with your chopsticks; press start on your timer and move as many items from one bowl to the other in the given time.

5. Write down how many pieces of food you were able to "eat" with your tern beak (chopsticks): _____

Next, set your timer for another 20 second. Get ready with your tweezers; press start on your timer and move as many items from one bowl to the other in the given time.

6. Write down how many pieces of food you were able to "eat" with your American robin beak (tweezers): _____



The common tern's beak is much like chopsticks, because while it is skinny and can grasp its food, it is much easier to pierce through food like small fish than to pick it up without poking through.



The American robin's beak is similar to tweezers, because it is pointy at the tip and good for grasping onto small food items like worms and insects.

7. Which bird do you think you were acting as in this activity? _____

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Bird Beak Buffet Matching Game Answer Key

