STEM ACTIVITY OF THE WEEK

Bird Anatomy: Rocking Bird

Theme: Hudson River Wildlife; Form and Function
Ages: 5-8
Prep Time: 5 minutes
Activity Time: 20-30 minutes

Activity Summary:

This lesson teaches students to identify the physical features that define birds. By discussing the function of each feature, students explore the significance of each part. This lesson breaks down basic bird anatomy while also teaching how bird beak features influence feeding habits. This lesson allows students to create a craft representation of a Hudson River Park animal considering shapes and colors of the actual animals.

Objectives:

- Students will learn the basic anatomy of a bird and the function of each part through an interactive craft
- Students will learn about the behavior and habitat of Hudson River Park animals

Materials:

- Bird Anatomy Diagram
- Scotch tape or glue
- Paper Plate
- Markers/Paint
- Construction paper
- Feathers (optional)
- Googly eyes (optional)

Introduction:

Identifying different types of birds can come pretty easy when you know what to look for, and the best place to start is learning the anatomy of a bird. Birds share all the same basic body parts, but they will look different for different species. These differences will also change how a bird acts. Just take a look at the images below:

American Kestrel

Yellow-bellied sapsucker

Common tern

It's clear that these photos are all of birds, but why? Can you think of three features that let you know these are birds? (Hint: Think about body parts that humans don't have.)

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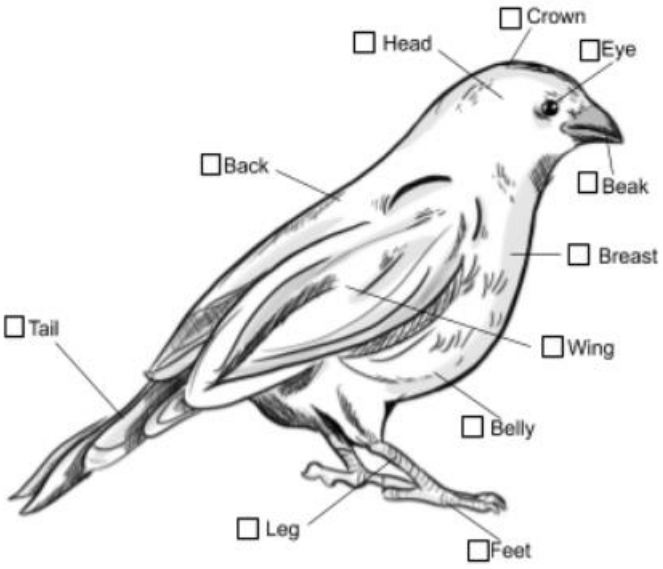
Lesson Procedure:

Things like feathers, wings, and beaks make it very clear that these are birds and not, say, dogs or people! Review the diagram below that shows all the basic parts of a bird, and then follow the instructions to create a bird of your own, using a paper plate, markers, construction paper, and whatever other materials you would like to use.



Instructions

1. Fold your paper plate in half to create the body of your bird.
2. Use markers, crayons, feathers, bits of construction paper, glue, tape and whatever else you would like to add the different body parts of a bird (shown above) to your plate. You can draw legs and feet directly on your plate, or attach other materials to create them.
3. Check off the boxes next to each body part in the diagram above to make sure you haven't forgotten any important parts. Bonus: Label the different parts of your bird.
4. Let any glue or wet ink dry.
5. Slightly unfold your plate, so your bird can stand up. If you've attached legs, it may be a little tricky to balance. If you've drawn legs, you can rock your bird back and forth along the round edge to mimic pecking!

Scarlet tanager, photographed by Park Naturalist, Keith Michael

6. Name your bird. Many birds are named for the parts of their body that set them apart from other species, like the yellow-bellied sapsucker or the scarlet tanager. What parts of your bird make it unique?

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Here's an example of what a rocking bird craft could look like.

7. **Optional**: review more information about the form and function of birds below:

   - **Eyes:** Just like in humans and other animals, eyes help birds to see. They can find food, shelter, and know when to fly away from predators with use of their eyes. Birds' eyes can be large or small depending on the species. Large eyes often are found in birds that hunt at night, because they are able to absorb more light.
   - **Crown:** The crown is the very top part of a bird's head. It is usually referred to when talking about notable feathers or colors in the area that can help identify the bird. Some birds, like the northern cardinal, have a crest in this area as if it is wearing a funky hat. This is an adaptation that helps certain birds seem attractive to potential mates.

Northern cardinal

   - **Head:** You can often see birds moving their heads at strange angles and bobbing them around, some birds can even turn their heads almost all the way around to face backwards. This is because birds' eyes are far apart from each other. Quick and seemingly awkward head movements help birds get a better view of their surroundings.
   - **Beak:** Bird beaks are strong and come in many different shapes and sizes. These differences correspond to what they eat. The northern cardinal has a short thick beak to help it eat lots of fruits and seeds. American kestrels have sharp hooked beaks to help them eat insects and small animals like mice.
   - **Back:** The back of a bird is less often discussed. There are super strong muscles in the back of birds that are important to help them stay in the air and soar once they've taken flight.
   - **Breast:** This area is often colorful and held proud by birds as a display when they are ready to mate. It is a very strong area because these muscles help birds flap their wings and take flight, that takes a lot of power!

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- **Wings:** Wings enable birds to fly. Birds like the albatross have extra long wings to help them soar long distances, whereas penguins have paddle-like wings that are better for swimming.

Northern royal albatross

- **Belly:** Bird bellies are often covered in smaller, slightly fluffier feathers that help keep birds warm. They can be colorful to help them stand out to potential mates, or subdued to help them blend in with their surroundings.
- **Legs:** While most birds fly when traveling longer distances, birds' legs are still important for helping them walk, hop, and run toward food or away from predators. Some birds, like the great egret, have long legs that help them stand at the water's edge while they hunt for fish to eat.

Emperor penguin

- **Feet:** Birds' feet allow them to walk and run, some, like the American kestrel, have strong talons (or claws) to help them grab prey when they are hunting. Others, like mallard ducks, have webbed feet to help them paddle through water and swim.
- **Tail:** The tail is used in flight to help birds stay balanced and control the height of their soaring. This area is sometimes covered by decorative feathers attached to the birds lower back to help them attract a mate.

Great egret

Mallard ducks, photographed by Park Naturalist, Keith Michael