

IT'S ALL ABOUT BIRDS

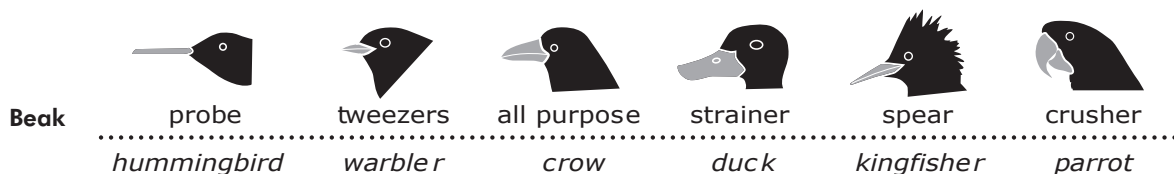
Background Information for Activity Leaders

Overview

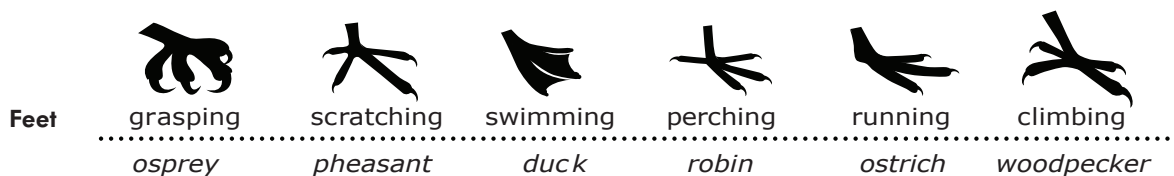
Children will use the various types of bird beaks, body types, feet, and their imaginations to create their own bird species.

Key Concepts

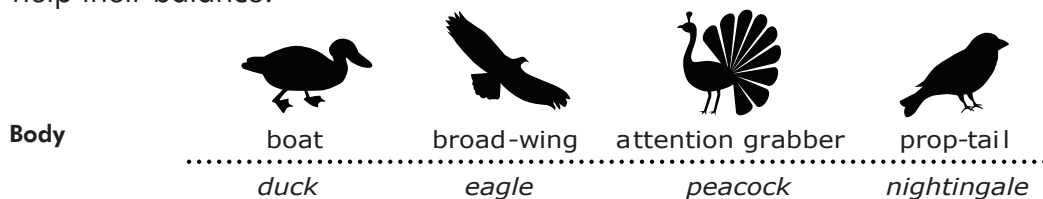
- There are over 10,000 species of birds in the world. Different species of birds have different types of beaks, wings, tails and feet, allowing them to live in different habitats.
- An **adaptation** is a trait that increases an animal's chance of survival. It does not develop overnight, but rather develops over many generations. Physical adaptations are special body parts of an organism that help it to survive in its natural habitat. An organism's skin color, shape and body covering are examples of physical adaptations.
- The structure of a **bird's beak** determines the type of food it is able to eat. Birds live in habitats where they can find the food their beak allows them to eat.



- The structure of **birds' feet** determines their function. Birds' feet have claws that grow continuously and are worn away through daily activity. Claws are usually called talons when referring to birds of prey such as owls, eagles and hawks. Ducks have webs between the front three toes, for paddling water. Woodpeckers cling to the sides of trees and thus need a very powerful grip; their feet are equipped with two toes up front and two in the back. Ground-living birds like pheasants and chickens have well-developed nails that act like rakes, perfect for scratching the ground for food.



- The structure of a **bird's body** determines what type of habitat it is adapted to live in. Different species have certain adaptations to better survive in their habitat, such as bodies that float, large wings that help them fly, colorful plumage that attracts attention, or tails that help their balance.



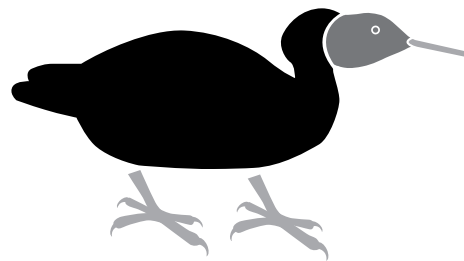
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Background Information for Activity Leaders

What to Expect

- A sample bird created by a child might look like the “Humming Wood Duck” and be described as follows:

“It has the beak of a hummingbird, which helps it drink nectar from flowers. It has a body shaped like a boat so it is great at floating. It has feet that are great at climbing trees. Unfortunately, my ‘Humming Wood Duck’ may not survive because even though it is a great floater, it cannot use its feet to paddle through the water.”



Common Misconception

- Children may think: “An individual animal can choose to ‘adapt’ to its environment.”

An individual animal cannot “adapt” to its environment on purpose. Some adaptations help organisms survive better than others in the species. Imagine an adaptation that produces a hummingbird with a slightly longer beak. This bird can reach nectar farther down in the flowers. It eats more, becomes stronger, and produces more offspring. After many generations all the hummingbirds have the longer beak trait.

Set Up the Expedition

Materials:

For the activity leader:

- (1) bird poster
- (1) large bird feather
- CD Player
- APEX Science CD: Bird Calls

For each group:

- *It's All About Birds* Learning Cards
- (1) bottle of glue
- (1) box of crayons
- strips of construction paper
- various types of art/craft supplies

For each child:

- (1) *It's All About Birds* Data Collection Sheet
- (1) paper plate
- (1) pair of scissors
- (1) sheet of drawing paper

Prepare the demonstration:

1. Prepare the CD player that will be used to play the bird calls found on the APEX Science CD. Be sure to check the sound levels, and be sure the CD works.
2. Place the bird poster where all children can see.
3. Be sure to have the large feather ready to pass around the room.

Prepare the exploration:

1. Place each type of art/craft supply in a box or bin.
2. Place numbered labels on each container of supplies to identify how many of each item children may take.
3. Line up the materials along a supply table.
4. Distribute the glue, crayons, scissors and drawing paper to each group.

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Activity Leader's Guide

Group Size: 4-6 children

Time: 45 minutes

Engage

- 1 Gather the children together. Play the audio recording of birdcalls and songs included on the APEX Science CD.

Ask:

"What did you hear?" Allow children time to contribute their ideas.

Say:

"That's right. The sounds you heard are the sounds birds make."

Ask:

"Birds can make many different sounds. How can we tell that they are all birds even though they sound so different? What do they have in common?" Birds have feathers, beaks, wings, and two legs.

- 2

Say:

"This poster shows different kinds of birds. Similar kinds of birds belong to the same group, or species." Use the bird poster to point to the beak, body, wings and feathers of some of the birds as each part is mentioned by the children.

Ask the following questions:

"Why does a bird need a beak?" Some birds, like the hummingbird, use their beak to drink the nectar from flowers, while birds like the owl use their beak to tear meat.

"Why does a bird need wings?" Penguins use their wings to steer through the water, while other birds use wings to fly.

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Activity Leader's Guide

“Why does a bird need feathers?” Pass around a feather for children to touch. Birds use their feathers to fly. They can also help the bird hide or even to attract the attention of other birds.

“What do birds use their legs for?” Birds that do not fly use their legs for running. Birds of prey use their claws to grab the animals they hunt. Water birds use them for moving through the water.

Explore

- 3 If you are working with more than 4-6 children, divide the children into groups. Distribute the Data Collection Sheets and the Learning Cards.

Say:

“Now that you are familiar with the body parts of a bird, follow the directions on the Learning Card to create your own bird species using the supplies provided.”

- 4 Ask the children to line up at the supply table. Monitor the process to be sure that each child takes only the amount of materials indicated by the label. The paper plate may be used as a tray to carry the supplies back to the work area.
- 5 Allow children enough time to complete the WONDER, EXPLORE, RECORD, and CONCLUDE sections of their Learning Card.

Conclude

- 6 Gather the children together to complete the Learning Card. Ask the following questions:

“What can your bird do?” Children should describe skills the bird has due to the type of beak, body and feet it has.

“What kind of habitat is your bird best suited to live in?” For example, birds with webbed feet are good swimmers, so they spend most of their time paddling through lakes, rivers or oceans.

Expand

- 7 **Ask:**
“Now that you know where your bird lives, how can you tell other people how to help keep your bird from becoming extinct?” Explain that an extinct species no longer exists. They have all died out.

In the EXPAND activity, children will draw posters that inform others how to keep their bird from becoming extinct.

Encourage children to make a short presentation using their poster.

- 8 **Say:**
“Congratulations! You have earned your ‘Ask Me About Birds’ stamp. You are ready to tell people about birds.”

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Expedition Learning Card

? How are bird species different from each other?

W species characteristics
ornithologist

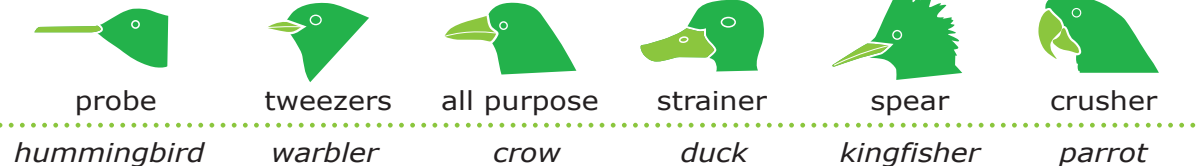
M Explore how birds that appear different share some common characteristics.

1 WONDER What bird species would you like to invent, and what would it be able to do?

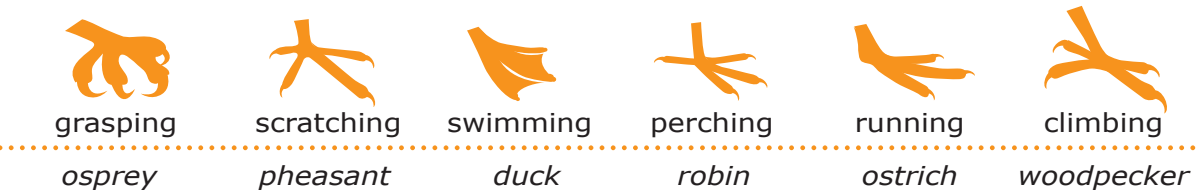
 Record your ideas on your Data Collection Sheet.

2 EXPLORE Make a bird species that has a head with a beak, a body with wings and feathers, and legs with feet. Which characteristics will your bird have?

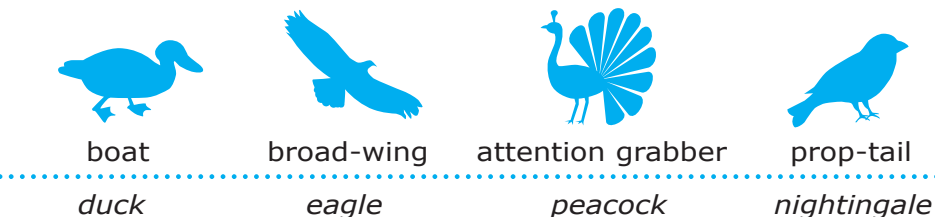
BEAKS



FEET/TALONS



BODY



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Expedition Learning Card

3 RECORD

 Draw a picture of the bird you created on your Data Collection Sheet.

4 CONCLUDE Draw arrows pointing to each part of the bird. Next to each arrow, describe what skills your bird has because of that characteristic.

 What can your bird's beak do?

 What does your bird do with its feet?

 What can your bird do with its body?

5 EXPAND Ornithologists are scientists who classify birds by their characteristics and inform others about birds. Play the role of an ornithologist.

 Draw a poster that informs others about your bird.

Discovery

Why did we do that?

- Birds have bodies covered with feathers.
- Bird species have specialized beaks, bodies and feet.
- Each bird species has its own characteristics.

Congratulations!

You have earned your "Ask Me About Birds" stamp! Now you are ready to tell people about birds.

