

# Feathered Friends



# Acknowledgements

## **Principal Investigator**

Judy A. Brown, Ed.D.  
Senior Vice President, Education  
Phillip and Patricia Frost Museum of Science

## **Project Director**

Cheryl Lani Juárez

## **Project Coordinator**

Krista Kaiser

## **Development Team**

Judy Brown, Cheryl Caldwell, Raquel Diaz, Fran Gordon,  
Cheryl Lani Juárez, Krista Kaiser, Isabel Leeder, Ted Myers, Romina  
Pastorelli

## **Miami-Dade County Community Action and Human Services Head Start/Early Head Start**

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# Feathered Friends

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# Feathered Friends

## Overview

**Overall Goal: Children discover that different types of birds have different types of beaks, feet and feathers to help them live in different habitats.**

Lesson	Objectives	Vocabulary	Key Concepts	Tools
#1: Bird Basics	Children will learn that all birds have special features: feathers, two wings, two legs and a beak.	beak bird feathers legs wings	<ul style="list-style-type: none"> <li>All birds have two wings.</li> <li>All birds have feathers on the outside of their body.</li> <li>All birds have two legs.</li> <li>All birds have a beak.</li> </ul>	
#2: Bird Beaks	Children will learn how birds use their beaks to eat.	duck habitat pigeon	<ul style="list-style-type: none"> <li>A habitat is a natural environment or place where each type of animal lives.</li> <li>Different types of birds have different types of beaks. Birds have beak adaptations that help them eat specific food.</li> <li>Ducks are water birds that use their beaks like sieves to strain food from water.</li> <li>Pigeons have small beaks to help them eat small seeds, berries, insects and leaves.</li> </ul>	tweezers strainer
#3: Swim, Walk, Hop	Children will learn that birds use their feathered wings to fly and their feet to help them swim, walk and hop.	hop paddle robin webbed	<ul style="list-style-type: none"> <li>Different types of birds have different types of feet. Birds have feet adaptations that help them move in their habitat.</li> <li>Some birds swim, walk and hop.</li> <li>Ducks are water birds that have webbed feet to help them paddle in water.</li> <li>Pigeons use their feet to walk just like people do, one foot in front of the other.</li> <li>Robins use their feet to hop.</li> </ul>	
#4: Birds of a Feather	Children will learn that feathers can help birds fly and hide.	binoculars birdwatchers camouflage fast/slow heavy/light	<ul style="list-style-type: none"> <li>A bird's body is covered with feathers.</li> <li>Feathers keep birds warm and dry.</li> <li>Feathers feel light.</li> <li>A bird needs two feathered wings to fly, but not all birds fly.</li> <li>Some birds have feathers to help them hide or blend into their environment. This is called camouflage.</li> </ul>	binoculars

## Science Process Skills

Science Process Skills	Lesson #1	Lesson #2	Lesson #3	Lesson #4
<b>Observing</b>				
Identifies object properties	●	●	●	
Uses senses to observe concrete, familiar objects	●	●	●	●
Differentiates between models and the real thing	●	●	●	●
Uses measurement tools to record observations				
Uses tools to observe objects or events				●
<b>Describing</b>				
Describes key attributes of objects	●	●		●
Creates drawings or models depicting objects		●		
Describes changes in objects				
Discusses changes in variables that affect an investigation				
<b>Categorizing</b>				
Notices similarities and differences	●	●	●	●
Sorts objects into groups using one attribute at a time	●			
Establishes own sorting criteria				
Sorts objects using multiple attributes				
Provides reasoning for grouping objects	●			
<b>Predicting</b>				
Verbalizes thinking	●	●	●	●
Recognizes and extends patterns				
Makes simple predictions		●	●	
Makes predictions based on observations				
Uses estimation to make quantitative predictions				
<b>Experimenting</b>				
Investigates models of objects/phenomena			●	
Manipulates materials		●		●
Identifies factors that might affect the outcome of an experiment				
Participates in collecting data				
Interprets data using symbols or graphs				
Performs trial-and-error investigations				
<b>Drawing Conclusions</b>				
Makes verbal interpretations of observations	●			●
Finds patterns from data collected				
Connects findings from an investigation				

## Feathered Friends

### Lessons at a Glance

In ***Birds Basics***, children learn simple facts about birds. A bird puppet is used to assist children in identifying the special parts of a bird's body. Children feel real feathers and examine pictures of parts of an animal's body to determine whether the animal is a *bird* or is *not a bird*.

In ***Bird Beaks***, children learn how birds use their beaks to eat, and discover the amazing variation among bird beaks. Children explore how different types of birds have different types of beaks to help them eat in the habitat in which they live. Children use tools, resembling bird beaks, to pick up and drop food the way a real bird would, and notice the difference between two types of beaks. They learn that a pigeon's beak works like tweezers to pick up food and a duck's beak works like a sieve to strain food.

Most birds fly, but they also move in other ways. In ***Swim, Walk, Hop***, children discover the wide variation in bird feet and how they use their feet to move in the habitat in which they live. Children pretend to be birds in search of food to eat. Children paddle through the water like a duck, walk on the ground like a pigeon or hop on the grass like a robin as they gather pretend food from their habitats.

In ***Birds of a Feather***, children learn that all birds have feathers. Feathers are light and shaped to help birds fly. Children also discover how feathers help birds to hide from predators. Some birds have feather patterns that match patterns in their habitat. Children become birdwatchers and use binoculars to search high and low to find pretend camouflaged birds hidden throughout the classroom.



### Key Concepts

Birds hold a special fascination for children, and they are a great way to inspire children to start observing living things. The special characteristics of birds—feathers, wings, legs, and a beak—are relatively easy to spot, and serve as an accessible introduction to classifying animals. As children take a closer look, they will also notice differences among birds that are adapted for different habitats. **Feathered Friends** introduces these life science concepts using models of birds, bird parts, and habitats.

- Birds are a type of animal. They have two legs, two wings, feathers and a beak.
- A habitat is the environment in which an animal lives, finds food and shelter, and raises its young. Wings, beaks and feet are a bird's special tools adapted specifically for their individual habitat.
- Although birds use their beaks to gather materials to build nests, and defend themselves against other animals, the primary purpose of a bird's beak is to get food.
- Different types of birds have different types of beaks for feeding. Bird beaks are similar to kitchen tools people use. Beaks can spear like a fork, sift like a sieve, pick up tiny things like tweezers, sip like a straw, or crack like a nutcracker.
- Different types of birds have different types of feet, adapted to run, walk, hop, climb or paddle in water. For example, a duck has webbed feet to help it move in wetland habitats.
- A bird needs two feathered wings to be able to fly. Some birds, such as penguins, have two wings, but cannot fly. They use their wings like paddles to help them swim.
- Some birds have feather patterns that match the patterns in their habitats. Their feathers blend into their environment, so they are camouflaged, or hidden and protected from predators.

# Lesson Guide

### TEACHER TALK

Teacher talk is indicated by **bold letters that appear in large print**. When you first start teaching ECHOS, you may need to rely heavily on this text to ensure that you are presenting the science concepts accurately. As you become familiar with the text, use it as a guide or refer to it only as needed. You should always read the entire script prior to delivering the lesson.

### TEXT IN ALL CAPS

Text IN ALL CAPS appears throughout the script to emphasize a step or instructions given to children.

### VOCABULARY WORDS

Vocabulary words are introduced during the lesson and reinforced in the Outcomes section.

They appear in *red italic letters* the first time they are introduced.

### MATERIALS IN BLUE LETTERS

Materials listed in *blue letters* in the *Material Preparation* page, indicate materials that are non-consumable. Once acquired, these materials do not need to be replaced.

### SCIENCE AREA

The last page of each lesson contains suggested materials that could be added to your science area. Before adding any materials for children's independent use, evaluate whether the item is safe to be explored with limited supervision. The science area should be a place that children use freely to explore and conduct their own trial and error experiments, rather than a display area.