



## SONG & HABITAT 7 - 8

This unit combines two essential aspects of bird biology: songs and habitats. Students will learn how bird songs are evolutionary tools for communication and how habitats provide the resources for survival and reproduction.

### Curriculum relevancy

**Grade 7:** Evolution by natural selection provides an explanation for the diversity and survival of living things.

**Grade 8:** The theory of evolution explains the diversity of living things.

**Learning Competencies:** Analyze and interpret adaptations (songs and calls) in the context of environmental factors, understand biodiversity and ecological relationships, and apply knowledge of conservation principles.

### Unit Objectives:

By the end of this unit, students will:

1. Identify and describe bird vocalizations, including their purposes and functions.
2. Explore how habitats shape the diversity and support bird life.
3. Investigate how habitat loss and environmental changes impact bird behavior and survival.

#### 4. Apply knowledge of bird habitats to conservation strategies.

### Unit Content

#### **Introduction to Bird Song:**

- **Begin by discussing how communication is important.**

*Just like we talk to our friends and family, birds have their own way of talking to each other. It's like a secret language of chirps, whistles, and melodies. Imagine if you could talk to your friends by singing a song instead of using words! We're going to listen to some of these bird songs, and it's going to be like a bird concert. But before we do that, let's think about how important it is to be able to talk to each other.*

#### **Slide 2**

*Songs are shaped by millions of years of evolution, helping birds secure mates and territories, while calls aid survival and flock communication.*

#### **Functions of Bird Songs:**

- **Explore the purposes and functions of bird songs and sounds, such as attracting mates, defending territory, and communicating with other birds.**

*Why do you think it's important for birds to be able to communicate?*

#### **Slide 3**

*Birds only sing during the day in the spring & summer (breeding season) to attract a mate and let other birds know that this is their territory.*

*The rest of the year they use calls instead of songs. You see, these songs & calls are like bird messages. Birds use them to do all sorts of things, like telling other birds, "This is my home, stay away!" or saying, "I'm ready to find a partner!"*

- *They use Alarm Calls to send an alarm message if danger is nearby*
- *And Contact Calls – normally short chip notes - to let their family know where they*
- *Young birds use Begging Calls to ask their parents for food.*
- *They even call to each other when they are flying.*

*So, one type (species) of bird can have many different sounds.*

#### **Slide 3**

*Woodpeckers use drumming on trees in the same way.*

### **Identifying Local Bird Species:**

- Introduce the idea that different birds make different sounds.
- Introduce common local bird species and their distinctive songs or calls.
- Play recordings of these species and challenge students to identify and match the sound to the corresponding bird species.

*Different birds use different kinds of sounds and we can tell which bird is which by the sound they make.*

#### **Slide 5**

*Different sounds travel better in different environments. High-pitched sounds have shorter wavelengths and are easily blocked by solid objects like trees and plants. In contrast, low-pitched, explosive sounds have longer wavelengths that can bounce around or pass through obstacles, making them better suited for dense environments like forests.*

#### **Slides 6-16**

*First, let's listen to some different types of sounds – how would you describe them? (there is no right or wrong answers – it is just to get the children to realize there are different types of calls/songs)*

#### **Slides 17-22**

*To remember the different sounds that different species make, sometimes we can add words to help us. (called Mnemonics). What do you think some of these birds are saying? (Again, no right or wrong answers).*

Learn to draw bird song or create mnemonics.

#### **Slide 23**

### **Introduction to Habitats:**

- Engage students by asking them to share their knowledge and observations of different habitats where birds can be found.

Birds live in all sorts of places, just like people do. The area that a bird lives is called its' habitat. Each habitat has important things like specific plant communities, which offer different food, different nesting opportunities and different amounts of water.

Some birds are ground-dwellers, scratching through leaves and pecking at seeds below, while others are high-flyers, perched in treetops, keeping a sharp eye out for prey. Then there are birds in the middle, feasting around berry bushes, and insect eating birds fly out into open areas to catch bugs flying through the air.

Each group of birds use the habitat that meets their particular needs.

### **Types of Habitats:**

- Introduce various bird habitats, such as forests, wetlands, grasslands, and deserts.
- Discuss how different habitats offer different resources for bird species.
- Highlight examples of bird species that are well-adapted to each habitat and rely on specific resources for survival.

### **Slide 24**

*What are some of the habitats you can think of?*

*We'll review 6 that we find in BC.*

*Habitat Description:* Forests are densely wooded areas with tall trees and plenty of shade. Forests have different types of trees – some are Deciduous Forests – which have very leafy trees that normally fall off in the fall. Others are Coniferous Forests – which are mainly fir trees with needles instead of leaves.

### **Slide 25-26**

#### **Coniferous Forests:**

*What They Offer Birds:*

Birds in forests have access to cover from weather and predators,

Nesting sites in the trees and tree trunks.

They can find insects and seeds in pine cones, and berries in the undergrowth to eat.

Water from lakes & streams

These forests get a lot of rain and snow. The temperature in forests is usually colder because of the shade from all of the trees.

### Slide 27

These are some of the birds we find in Coniferous Forests – have you seen any of them?

What are some of the things we have already learned about some of these?

### Slide 28-29

#### **Deciduous Forests:**

While they are similar to Coniferous forests, because the trees are different, so are the insects and the fruits, so different species live here.

#### *What They Offer Birds:*

Like other forests, Deciduous Forests also provide cover from weather and predators,

Nesting sites in the trees and tree trunks.

They can find insects, seeds and berries in the undergrowth to eat.

Water from Streams

### Slide 30

These are some of the birds we find in Deciduous Forests – have you seen any of them?

What are some of the things we have already learned about some of these?

### Slide 31-32

#### **Wetlands:**

*Habitat Description:* Wetlands include areas like swamps, marshes, and ponds. They often have mudflats and tall grasses and reeds.

#### *What They Offer Birds:*

Wetlands provide a ton of aquatic insects

Frogs and other amphibians

Small fish, and aquatic plants.

Wetlands get a lot of rain so there is an abundance of food.

### Slide 33

These are some of the birds we find in Wetlands – have you seen any of them?  
What are some of the things we have already learned about some of these?

### Slide 34-35

#### **Grasslands:**

*Habitat Description:* Grasslands consist of open areas covered in grasses and wildflowers with few to no trees.

*What They Offer Birds:* Birds in grasslands have lots of space to hunt insects, seeds, and small mammals. You'll find species like sparrows and hawks enjoying these wide-open spaces.

### Slide 36

These are some of the birds we find in Grasslands – have you seen any of them?  
What are some of the things we have already learned about some of these?

### Slide 37-38

#### **Deserts:**

*Habitat Description:* Deserts are dry areas with very little water and often extreme temperatures. They can be sandy or rocky. They have some plants, like Sagebrush

*What They Offer Birds:*

Birds in deserts are specially adapted to save water in their bodies.

They find nourishment in the form of insects, seeds, and sometimes nectar from desert flowers.

### Slide 39

These are some of the birds we find in Deserts – have you seen any of them?  
What are some of the things we have already learned about some of these?

### Slide 40-41

#### **Coastal Areas (Ocean):**

*Habitat Description:* Coastal areas include shores of the ocean and even further out. These areas can be especially cold and wet during the winter months.

### *What They Offer Birds:*

Coastal areas provide fish, crabs, clams, and snails for birds like seagulls and pelicans. These habitats are also important resting places for migratory birds.

### Slide 42

These are some of the birds we find in Coastal areas – have you seen any of them? What are some of the things we have already learned about some of these?

### **Habitat Loss and Conservation:**

- Discuss the consequences of habitat loss, including the disruption of migration patterns, decline in nesting sites, and reduced food availability.
- Encourage students to consider how they can contribute to habitat preservation efforts in their local communities.

### Slide 43

Changes to habitat affects not only our feathered friends but also us.

Imagine if someone took away your home or your favorite place to eat at. You'd be pretty upset, right? Well, the same thing happens to birds when their homes, their feeding spots, and their safe places disappear.

Birds might lose their way when they are flying somewhere for the winter, find it hard to build nests, or struggle to find food. And guess what? This affects us too because birds help keep our world in balance.

Birds have lots of important jobs that help us to survive like: pollinating crops and plants for us to eat, eating bugs that kill those plants, adding nutrients into lakes, rivers, and oceans, spreading seeds from plants like wild berry bushes, eating seeds from weeds, building new homes for animals in trees by drilling holes, eating dead animals, and bringing things like fish from the water to land to feed other animals and make the soil healthier.

What are some of the things you could do to help birds?

- We can plant trees,

- put out water,
- make safe spaces for birds to nest like bird houses,
- put feeders in our gardens.
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There are lots of people working together all over the world to keep bird habitats safe. We're like one big team working together to save birds. We call this 'conservation,' and it's all about looking after the planet and the creatures that share it with us

### Activity

It can also be a good way to remember song (and a fun exercise) by drawing it so this is a Listening and Drawing Activity:

- Play recordings of different bird songs and calls.
- Instruct students to listen carefully
- Provide drawing materials, and have students draw and sound out bird songs

### Craft

Bird Habitat Poster

### Wordsearch

- Attached word search may be done in class or provided as a handout to take home.

### Quiz

- The attached quiz may be done as a class or individually.

### **Reflection Questions:**

Why is communication important for birds?

What happens to bird species in a specific habitat as that habitat is lost? Can you think of an example?