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3A

SCIENCE

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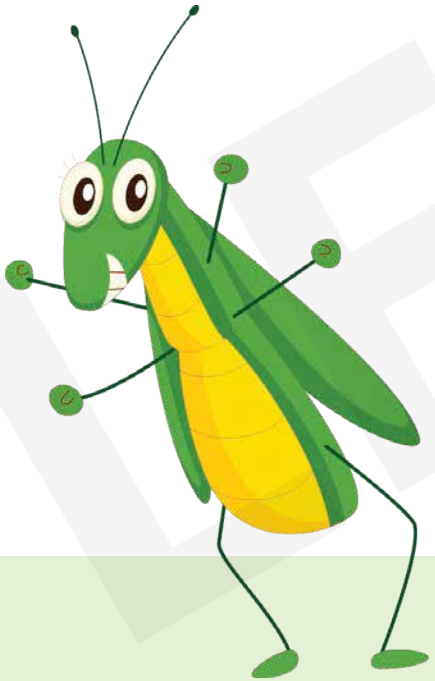

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Lesson 13

Birds

By the end of this lesson, you will be able to:

- list common features of birds
- name ways people can identify birds
- identify birds that live in your part of the world

Lesson Review

If you need to review warm-blooded animals, please go to the lesson titled "Identifying Warm-Blooded Animals."

Academic Vocabulary

Read the following vocabulary words and definitions. Look through the lesson. Can you find each vocabulary word? Underline the vocabulary word in your lesson. Write the page number of where you found each word in the blanks.

- **beak:** the part of a bird that is used to eat (page ____)
- **feathers:** the outer covering birds use to stay warm and dry (page ____)
- **field guide:** a book used to identify a type of living thing in nature (page ____)
- **migrate:** to move large distances during parts of the year, usually to avoid very cold weather (page ____)
- **shell:** a hard covering on the outside of bird eggs (page ____)
- **wing:** movable, feathered limbs that allow birds to fly (page ____)

Materials Needed

paper, staples or a hole punch and string, crayons or colored pencils, a chicken egg, a glass or clear plastic cup large enough for an egg to fit inside, two cups of white vinegar

CREATE

Find the names of four or five birds that live in your area of the world. For each bird, research:

- what they look like
- what special features they have
- what they eat
- where else they live in the world

After you find information about each of the birds, create a booklet of birds in your area. Make a page for each bird and include the information you found. Draw a picture of each bird. Bind the pages using staples or a hole punch with string.

When you are finished, you will have a miniature field guide for birds in your area!

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EXPLORE

Do you live in a big city, a small town, or in the country? Regardless of where you live, you share your environment with birds. The types of birds you see can change based on their habitat!

You have already learned a little about birds. Birds are a type of warm-blooded animal. This means they create their own body heat. They maintain a certain body temperature even if it is very hot or cold outside.

Birds have special features that set them apart from mammals—the other type of warm-blooded animals. We will look more at those features in this lesson.

Write down all the special features about birds you remember that make them different from mammals.

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Birds are warm-blooded vertebrates with wings, feathers, and other special features. When you look at these birds, what can their appearance tell you about where they live or what they eat? How are they the same and different from each other?

READ

Features of Birds

Birds have many different features that make them different from one another. Birds also share several features. These common characteristics are what make an animal a bird. These characteristics are beaks without teeth, hard-shelled eggs, feathers, wings, and hollow bones.

Birds have **beaks** that they use to eat their food. These beaks do not have any teeth. The shape and size of a beak can be very different. A hummingbird has a long, thin beak. A duck has a wide, flat beak. Birds' beaks are different because of what they eat. Some beaks help birds dig for insects in the ground or pull insects out of trees. Other types of beaks help birds crack and eat seeds or get nectar from deep inside flowers

Birds also lay hard-shelled eggs. As you learned, amphibians and reptiles also lay eggs. Bird eggs are different because they have a hard covering called a **shell**. Birds incubate their eggs by sitting on them to keep them at the right temperature. This is different from amphibians or reptiles who abandon their eggs immediately after laying them!

Birds have **feathers**, which are the outer covering of a bird that helps it to stay warm and dry. Birds also have **wings**—the limbs birds have instead of arms. Most birds use their wings to fly, but not all birds can fly.

One very special characteristic of birds is their hollow bones. Most animals with bones have solid bones that do not have any air space. However, birds have bones with lots of air space inside. This makes birds much lighter than other animals of the same size.

Some birds **migrate**, which means they move large distances during parts of the year. Migration helps because food resources, like insects or seeds, may become scarce in wintertime when shorter days, cold weather, and snow arrive. Many birds can live in cold temperatures, but for some, escaping the cold is another factor leading them to migrate.

Birds use their beaks to eat.

Bird eggs have a hard outside shell.

Birds use their feathers to stay warm and dry.

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READ

Identifying Birds

One of the most common ways to identify birds is to look at them and use their appearance to find out what kind of bird you see. Looking at birds is called bird-watching.

Birds can also be identified through sounds. Birds communicate—or talk with each other—through very special sounds called songs or calls. Each type of bird has its own special call, and they can use it to talk to other birds of the same kind.

Learning bird calls takes a long time and a lot of practice. If you want to learn how to identify bird sounds or listen to some examples of bird calls, ask your instructor to help you find some websites with bird sounds on them.

WRITE

What are some ways that you think you could identify specific birds?

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Bird-watching can be a fun family activity.

Many people enjoy bird-watching as a hobby. To identify a bird by their appearance, you need binoculars, paper and pencil to sketch what you see and take notes, and a field guide (a book used to identify a type of living thing in nature). You can also use online field guides on your computer. When you are bird-watching, you must be very still and quiet so you do not scare away the birds. Once you see a bird you want to identify, use your paper and pencil to draw a simple picture of the bird. Label special features, like the color of its feathers, the shape of its beak, and its size. You can use the information you gathered to follow your field guide and identify birds.

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PRACTICE

Draw a line from the description of the bird to the picture that best matches it.

1. Red feathers all over; bright orange beak; black feathers around the beak

2. Long, thin beak; blue/green shiny feathers, bright red feathers around the throat

3. Bright blue feathers on wings and head; brownish-red feathers on chest and neck; white feathers near legs; short, black beak

Eastern Bluebird

Ruby-throated Hummingbird

Northern Cardinal

REVIEW

In this lesson, you learned:

- All birds have beaks, feathers, wings, hollow bones, and hard-shelled eggs.
- You can identify birds based on their appearance, their call, and their eggs.
- Field guides are books you can use to look up birds you might see in your part of the world.

Think About It

You learned that all birds have beaks, but those beaks can look very different. Why do you think that birds might have so many differences in the size and shapes of their beaks?

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SHOW WHAT YOU KNOW

Circle the correct answer for each question.

1. Why do birds have hollow bones?

A. to make them heavier

B. to make it easier to fly

C. to make laying eggs easier

D. to make feathers

2. True or False Birds lay soft eggs.

3. True or False Birds have feathers.

Write the answers to each question.

4. What are the five characteristics of birds?

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5. If you cannot see a bird, what could you use to identify it?

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6. List at least two kinds of birds that live in your part of the world.

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TAKE A CLOSER LOOK

In this investigation, you will take off the hard-shell coating on a chicken egg so you can see inside the egg without cracking it open!

1. Place the chicken egg in the clear cup.
2. Pour vinegar over the egg until it is completely covered.
3. Leave the egg in a safe place for one to two days.
4. Carefully take out the egg from the vinegar and rinse it off with warm water.
5. Investigate the egg. What does it look like? How does it feel? What do you think is the purpose of the hard shell on the outside? Discuss your findings with your instructor.

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