# THE GREAT BACKYARD BIRD COUNT
## A four-day bird count held each February

Birds are fascinating creatures. They can sing (even if it's only a simple *chirrp* or *screeeech)* and lay eggs, they have feathers and beaks, and most species can fly! Birds are also the only dinosaurs left on our planet, the sole survivors of the entire dinosaur family tree. **Ornithology** is the scientific study of birds, and scientists who study birds are called **ornithologists**.

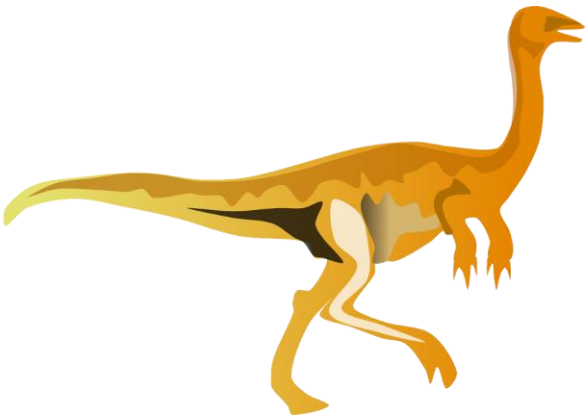
**Hummingbird**

**Chicken**

**Hawk**

**Ostrich**

Scientific research in ornithology and a fossil record of bird-like dinosaurs stretching back 150 million years tell us that birds evolved from a group of meat-eating dinosaurs called **theropods**. Tyrannosaurus rex was a member of that same group of meat eaters, but birds evolved from a much smaller variety within the larger theropod group.



**Gallimimus, a theropod dinosaur**

**Fossil of a bird-like dinosaur**

Every year in spring and fall, many birds travel between their summer and winter homes and then back again. This seasonal movement is called **migration**. Birds migrate from places where food supplies and nesting spots are limited to places where there are more options. Some species don't migrate because they live in areas where there is plenty of food all year long, but for those that do have to travel, they bulk up their body weight by eating lots of food to prepare for the trip.

Some birds migrate a short distance while others fly thousands of miles between their homes. Some fly non-stop while others break up the trip to eat and rest along the way. Some species travel alone and others stick together in large flocks.

It's amazing that these creatures are able to find their way on such long journeys, but they have excellent skills to help them **navigate**, or find their way from place to place. Birds often follow the same migration route each year. Some learn their migration path from their parents, while others use visual landmarks, sound, the position of the sun and stars, or the Earth's magnetic field to navigate between migration spots.

You can watch local birds migrate through your neighborhood and also participate in a science project called the ***Great Backyard Bird Count***, an event that lasts 4 days each February. The project was launched in 1998 by the Cornell Lab of Ornithology and National Audubon Society. In 2009, Birds Canada joined the project to support participation in Canada.

Check the Great Backyard Bird Count website to find out when the count is scheduled to take place this year. People around the world will watch and count as many birds as they can find, then report their numbers back to scientists managing the project. That information will help researchers understand bird populations just before the start of the annual spring migration. It's easy to take part in the project. You can also ask friends and family to join you in counting birds – in your yard, around your neighborhood, in a park, or along a nature trail. All you need to do is watch the birds for 15 minutes or more, at least once over the four days of the count, then tell researchers what you see!

This opportunity to help scientists with their research is called a **citizen science** project. Citizen science means that anyone (including YOU!) can participate in scientific research by observing, collecting and sharing **data** (facts such as numbers, words, measurements, observations, or descriptions) with scientists. You collect and share information, and scientists combine it with data collected by other citizen scientists. That all adds up to lots of valuable data for science!

**ACTIVITY: Join the Great Backyard Bird Count** (NOTE: You simply need to watch and count birds for 15 minutes or more, at least once over the four days of the count, and report what you see.)

To participate, you will need a grownup to help you get set up. If you plan to record your counts and submit them from a computer, then your grownup will need to create a free account with The Cornell Lab, or you can also have your grownup install Cornell Lab's free *Merlin Bird ID* app on a smartphone or tablet for help with identifying bird species and then reporting your sightings to the lab.

Materials

- Access to a computer connected to the internet, a smart phone or tablet
- A free account with The Cornell Lab, if you're using a computer and not a smart phone or tablet
- A way to identify the different bird species that you'll see: Merlin Bird ID app, other bird ID app, or bird ID guide such as *Peterson Field Guide to the Birds of North America*; *National Geographic Field Guide to the Birds of North America*; or *The Sibley Guide to Birds* **or** you can use an online bird ID guide such as this bird guide, found on The Cornell Lab website: https://www.allaboutbirds.org/guide/search#
- Binoculars
- Pencil, pens, or markers
- Tally sheet

- Optional: additional paper for recording notes and/or sketching birds that you see

1. Set up a free account with Cornell Lab: (The Cornell account is shared with Merlin, eBird, Project FeederWatch and other projects at the Cornell Lab of Ornithology. )
2. Download the Merlin bird app for your smart phone or tablet
3. Download a checklist of birds from eBird.

You can start entering bird lists at midnight local time on the first day of the count. Data entry remains open until March 1, but the information you enter should only be from the four days of the Great Backyard Bird Count.

For more about the Great Backyard Bird Count, a citizen science project run by The Cornell Lab of Ornithology, National Audubon Society, and Birds Canada, visit these links:

- ✓ About this project: https://www.audubon.org/conservation/about-great-backyard-bird-count and www.birdcount.org
- ✓ How to participate: https://www.birdcount.org/participate/
- ✓ eBird for recording counts on your computer: https://www.birdcount.org/ebird-on-computer/
- ✓ Merlin bird app for your smart phone or tablet

## Amazing Migratory Feats

(from Audubon Adventures, http://www.audubonadventures.org/migration_kids.htm)

- The Bar-headed Goose regularly flies as much as 5-1/2 miles above sea level, over the highest mountains in the world, while it is migrating.
- The Arctic Tern can fly up to 60,000 miles a year migrating between the Arctic and Antarctica.
- The Great Snipe can fly up to 60 miles per hour!
- The Bar-tailed Godwit can fly nearly 7,000 miles over water for eight days without stopping.

## ADDITIONAL RESOURCES

### Materials from the Washoe County Library System

*Bird* by David Burnie

*Birds* by Kevin Henkes

*Birds : Nature's Magnificent Flying Machines* by Caroline Arnold

*Everything You Need to Know About Birds* by DK Publishing

*Fly With Me : A Celebration of Birds Through Pictures, Poems, and Stories* by Jane Yolen

*Great Migrations [DVD videorecording]* by National Geographic Television

*Look Up!: Bird-watching in Your Own Backyard* by Annette LeBlanc Cate

*Migration* by Gail Gibbons

*Migration Nation : Animals on the Go from Coast to Coast* by Joanne O'Sullivan

*My Book of Birds* by Geraldo Valério

*National Wildlife Federation's World of Birds : A Beginner's Guide* by Kim Kurki

*Two Little Birds* by Mary Newell DePalma

*Wild Birds* by Joanne Ryder

*Winged Migration [DVD videorecording]* by Columbia TriStar Home Entertainment

**Videos**

National Geographic, "Are Birds Modern-Day Dinosaurs?" https://youtu.be/eaWb0UUNc00

Natural History Museum, "Why are Birds the Only Surviving Dinosaurs?" https://youtu.be/9GVvtKK5sFw

PBS, "Science Trek, D4K: Bird Migration Video Short"
https://www.pbs.org/video/d4k-bird-migration-video-short-guaj9g/

PBS Kids, "Ready Jet Go! | Bird Migration" https://youtu.be/Nrkvp3xOCpM

**Websites**

The Cornell Lab, All About Birds, The Basics Of Bird Migration: How, Why, And Where
https://www.allaboutbirds.org/news/the-basics-how-why-and-where-of-bird-migration/

The Cornell Lab, K-12 Education https://www.birds.cornell.edu/k12/

National Audubon Society, Audubon for Kids, Game: Follow a Bird's Migration Story
https://www.audubon.org/news/game-follow-birds-migration-story

National Audubon Society, Birding the States, Birding in Nevada
https://www.audubon.org/news/birding-nevada

The Royal Society for the Protection of Birds, Facts About Birds
https://www.rspb.org.uk/fun-and-learning/for-kids/facts-about-nature/facts-about-birds/