



Written by Mya Thompson
Illustrated by Claudia Dávila

EDUCATOR'S GUIDE K-12 Education

ABOUT THE BOOK

Nature is everywhere...even in a city! On a visit to Central Park with a neighbor, Ruby's imagination is sparked by a migrating bird singing from the trees. She uses her new observation skills to spot the bird when she leads her family to the park the following week.

- Realistic fiction focused on connecting with nature
- First-person storytelling from a 7-year old female protagonist
- Search and find 14 common city birds hidden in the illustrations
- Four pages of non-fiction science content on bird ID, behavior and habitat

USING THIS GUIDE

This guide features activities that target national education standards in a variety of subjects.

Each activity lists which standards it meets:

Science

(SCI; Next Generation Science Standards)

English Language Arts

(ELA; Common Core State Standards)

Mathematics

(MATH; Common Core State Standards)

Art

(ART; National Core Art Standards)



GUIDED
READING
LEVEL | K

GRADE LEVEL
EQUIVALENT | 2

INTEREST
LEVEL | GRADES
K-5

RRL | LEXILE
18 | 540L

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978-1-943645-33-6	Fiction	36	527



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DISCUSSION QUESTIONS

BEFORE READING:

Share the book cover and title and ask:

- What do you think this book might be about?
- What kinds of birds do you think Ruby might see where she lives?
- What is migration? Do you think all birds migrate?

AFTER READING, ASK:

- What nearby parks or places could we find birds?
- Why do you think birds would like that area?
- Which of the birds pictured in the book have you seen in your neighborhood?
- What can you do to see more birds? (e.g., being quiet when bird watching, using ears and eyes, going to locations where birds are)
- The Golden-winged Warbler migrates between habitats in Central America and the United States and Canada. Can you name any other kinds of animals that migrate? (monarch butterflies, whales, caribou, etc.)



ACTIVITIES

1. RAINBOW WALK (SCI)

Going outside and exploring nature can be one of the best ways to learn more about it and become a better observer. Take children on a “rainbow” nature walk around the neighborhood and have them match objects they find with each color of the rainbow. If you’d like, you can use paint chips from the paint store to match and have students rename the colors (Blue Jay blue, leaf green, bark brown).

Encourage children to ask questions about what they find and remind them that this is part of the scientific process. Why is a Blue Jay blue? Why do trees turn red, orange, and yellow in the fall? Why is the grass green?



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2. SOUND MAP (ART,SCI)

Inspire your students to tune in to the sounds around them. Organize a short outdoor observation session and give children a blank piece of paper so they can create a "sound map." First, discuss together how they can make up symbols to illustrate different sounds they notice. For example, they might use thin curly lines for the wind, a messy scribble for the loud rumbling of a truck, short lines to represent the sounds of a cricket. Go outside and have children spread out as far apart as is practical. Challenge them to remain very quiet, listening to all the sounds they hear. Every time there's a sound, draw a symbol or picture to represent it and the direction it came from.

After a few minutes, discuss what the sound maps mean, asking:

- Which noises stood out the most?
- Could you tell how far away the sounds were? If so, how?
- Were any sounds inviting? Alarming? Surprising?
- How do the sound maps look different for different locations?
- Did you hear a sound that others didn't?
- Were there any unknown sounds?
- Were there sounds heard from every direction? Why or why not?
- How many of you heard a bird? If you heard a bird, could you identify it?



3. MIGRATION GAME (SCI)

Migration is an impressive natural phenomenon that students can learn to appreciate through this active game. Ask students if they know where some birds go in the winter. Explain that some stay put, while others travel between places to raise young in the summer and places to stay warm and fed in the winter. In this game, there will be both hazards and triumphs. Tell your students that everyone in the class is a bird migrating south to spend the winter. Have everyone start at the "north" end of the room and progress "south" for a successful migration. Choose a characteristic of the students (e.g., wearing sneakers) and choose an event (suggestions below) that makes students step forward, step back, or sit down. For example, anyone wearing a watch ran into a window, is injured, and takes a step back. Once a student sits down, he or she fails to safely migrate. End the game when about half the children are still standing and emphasize how challenging migration is for real birds to successfully migrate.



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STEP FORWARD:

- Had helpful tailwinds
- Ate plenty of insects before they left
- Could find plenty of water during the journey
- Found good habitat to stop in for food
- Was strong enough to leave early

STEP BACK:

- Got stopped during a heavy storm
- Faced a strong headwind
- Got sick along the way
- Hit a window and was stunned and injured

SIT DOWN:

- Blew into the ocean and drowned during a hurricane
- Got eaten by a cat
- Ran into a cell phone tower and died

At the end of the game, ask students what they thought of the migration trip with these follow-up questions:

- What were some of the negative things that happened?
- What were some of the positive or lucky things that happened to some birds?
- How can humans help?

4. MIGRATION MYTHS (ELA, MATH, SCI)

Involve children in an interactive game to dispel common misconceptions about migration. Establish opposite sides of a large outdoor space or gym/

classroom as "true" and "false." Read the statements below and ask children to move to the side corresponding to what they think is the correct answer. After all children have moved, read the answers to the group and discuss.





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- **Birds need to sleep through the winter.** **False:** Birds migrate to warmer areas in the winter where there is more food available.
- **If all birds stayed in the north, there wouldn't be enough food during cold winter months.** **True:** Even though some birds stay put, other birds can't find enough food (like insects) during cold winters.
- **Young birds migrate south and stay there for the rest of their lives.** **False:** Migrating birds, young and old, move south for the winter and return to their summer grounds every year.
- **Birds navigate during migration using clues from the natural world.** **True:** The sun, stars, and the Earth's magnetic field all play important roles in the navigation of migrating birds.. The location of mountains, rivers, and lakes is also useful.
- **Some birds can use smell to navigate.** **True:** Homing pigeons use their sense of smell to help them find their way home.
- **Birds decide to migrate when they sense that the season is changing.** **True:** Changes in day length, temperature, and food supply are all important factors that affect the timing of migration.
- **Birds start to migrate on the same day each year.** **False:** Birds migrate at different times, depending on many things, such as what species they are, the weather, or their age.
- **All birds fly the same distance when they migrate.** **False:** Individual birds may return to the same place year after year, but all birds do not migrate to the same place. Some birds fly from the U.S. to Central or South America, some fly from Canada to the southern U.S., some fly all the way from Canada to South America.
- **Hummingbirds are too small to migrate. They can't fly that far.** **False:** Even though they are very small, some hummingbirds migrate by crossing the Gulf of Mexico without stopping. That's nearly 500 miles!



You may choose to tally the number of correct answers for each question and use the results to create a bar graph. Then review some of the statements that proved to be the trickiest.



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5. MIGRATION MAP (ART,ELA,SCI)

Explore the diversity of bird migration behaviors and map them. For this activity, have children choose a migratory bird and research its seasonal range and migration. Print out copies of the migration map worksheet (available on the online resource page) and have kids use different colors to fill in the regions on the map where each bird spends its summers and winters. Include stopover points and migration routes, if possible.

If you have access to a larger map, have children draw pictures of their bird and place it on the map. Then, with colored string or ribbons, connect each bird between (1) their summer grounds, (2) a stopover point, and (3) their wintering grounds. You'll have an entire network of bird migration routes in no time! Once your map is complete, see if there are any big-picture patterns of bird migration.

6. TAKE WING (SCI)

Some types of flying use less energy. Once they get up in the air, big birds like Turkey Vultures and eagles use their wings to soar. This helps them save energy in flight. This activity shows how big birds save energy while flying.

Begin by having children stand in place and practice flapping their "wings" (arms) for 20 seconds. When time is up, talk about how that felt. (Probably like hard exercise!)

Ask: If you had to flap your wings all the way home, could you do it? (Probably not!)

Next, have children hold their "wings" out for 20 seconds, rocking gently side to side like a soaring eagle.

Afterwards, ask them:

- How did it feel this time?
- Was soaring easier or more work than flapping?
- Would you prefer to fly to school by flapping your wings or soaring?





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7. WHOSE WINGS ARE THESE? (ART,SCI)

Each wing type is adapted for a different type of flight. This activity explores common bird wing shapes using diagrams of four typical wing shapes. Examples of each type are [available](#) on the online resource page. For older groups, download our *Bird Wing Types Handout* to scaffold learning.

Then, have students make their own “bird” paper airplanes (reference the resource page for links to airplane/ bird folding instructions). Encourage children to try making different wing types. After making the birds, launch your “flock” outside or in a large room. Observe variations in flight: how far each bird flies, its flight pattern, how long it stays up, etc. If you have time, have the children modify their bird (cutting slits in wings, trimming wing length, adding weight) and notice whether these changes impact the bird’s flight.

8. LOCAL EXPERTS (ART,ELA,SCI)

Help your students connect to their local birds. Reference the back pages of the book to see the species of birds Ruby missed on her way to the park and inside the park, too. Reflect as a group about which species you see in your school’s neighborhood. Have children find all the birds in the back of the book that are sprinkled throughout the story. Then have them choose a local bird, either from the list in the book or through online research, and become experts on that species by creating a poster about it.

Try to include:

- A picture or drawing of the bird
- Where it lives
- What it eats
- If/where it migrates, as well as a map of summer and wintering grounds
- The kind of wing it has (see Activity 7)



Afterwards, have students share their bird posters with the rest of the group, display their posters around the classroom, publish their ideas on the school website, or share them at a local nature center or store.



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9. OUTDOOR ADVENTURE (ART,ELA,SCI)

Bring it together! Use everything you've learned and head out to look for birds like Ruby. Before you go, reflect again on skills for observing birds and nature that will increase your chances of seeing things. While you're out, notice birds' wing shapes, their size and various colors, and predict whether the birds you see migrate. If possible, do the walk in two or more seasons to see how bird sightings change. Brainstorm ways to make positive changes to your local habitat (add a bird feeder or bath, or some bird friendly plants for example) and *get started!*

