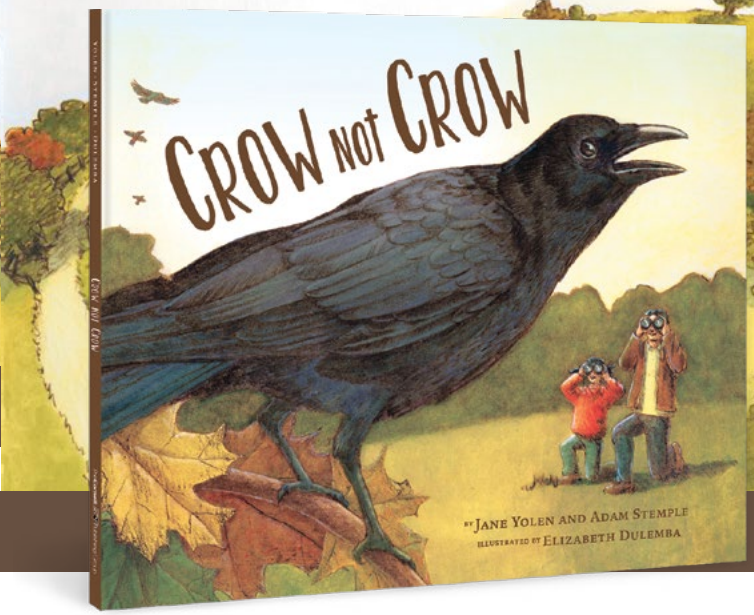


CROW NOT CROW

By Jane Yolen and Adam Stemple

Illustrated by Elizabeth Dulemba

EDUCATOR'S GUIDE

K-12 Education

ABOUT THE BOOK

Follow a father and his daughter on their first birding adventure. The girl discovers that birds are not all the same by learning to differentiate between crows and "not crows." She gets better at recognizing the characteristic traits of a crow—their all-black feathers, finger-like wings, and distinctive size, and compares those traits to other birds. In these activities, children are encouraged to explore and identify the types of birds they can see in their own neighborhoods.

USING THIS EDUCATIONAL GUIDE

This guide features activities that target national education standards for a variety of subjects for grades K-3. Each activity lists which standards it addresses:

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)

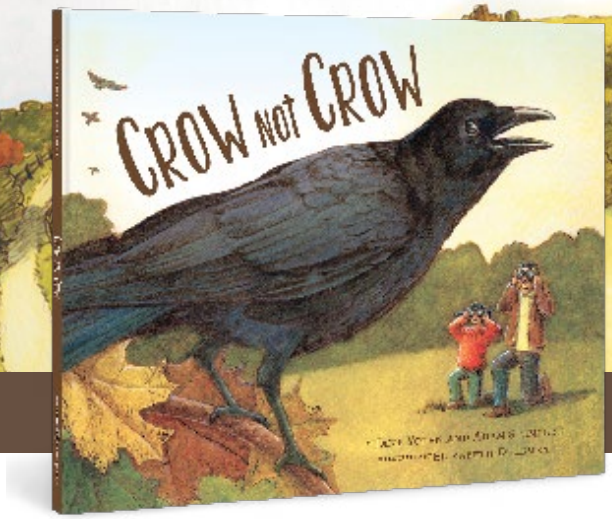
GUIDED READING LEVEL	N

GRADE LEVEL EQUIVALENT	3

INTEREST LEVEL	GRADES
	K-5

RRL	LEXILE
N/A	500L

ISBN	Book Category	Page Count	Word Count
978-1-943645-31-2	Fiction	36	1,046



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DISCUSSION QUESTIONS

BEFORE READING

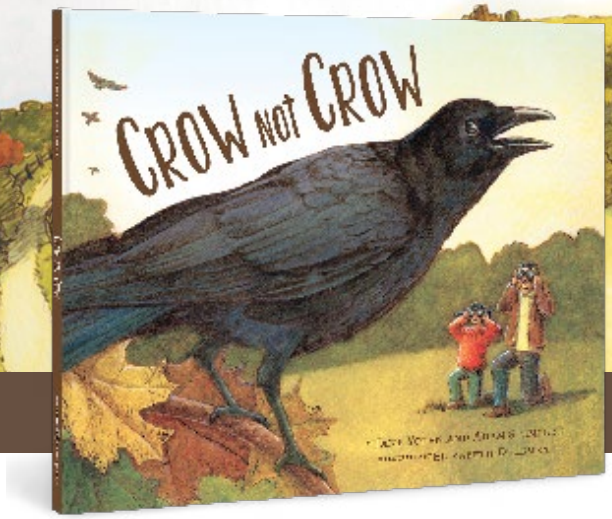
Show the book cover and title, and ask:

- What do you think this book is about?
  (Brainstorm some ideas, then find out if they match up to what happens.)
- What do you notice about the bird on the cover?
  (Describe its physical features and make a list of the observations.)
- What kinds of birds do you know? (Make a list to post.)

AFTER READING

After reading, ask:

- How did your observations of the crow on the cover match up to the girl's observations of the crow in the book?
- Did any of the birds we mentioned earlier appear in the story? What other birds do you remember from the book? (See list in the back of the book. Add species to the list started earlier.)
- Which features does the girl notice while watching birds? (Colors, size, shape, sounds.)
- Why do you think that the girl and her father use binoculars to observe the birds? (It brings the birds closer.) Do you think you have to use binoculars to see birds? (No! Many birds, especially in cities and neighborhoods, can be observed from a relatively close distance.)



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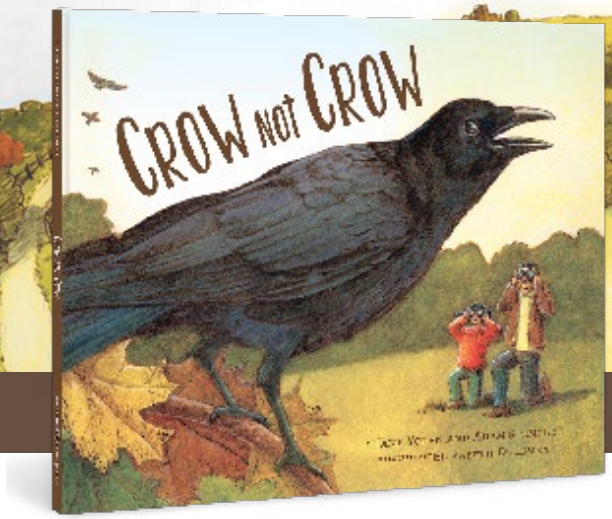
ACTIVITIES

1. WHAT MAKES A CROW A CROW? (SCI,ELA,MATH)- Encourage students to continue to brainstorm a running list of all the birds they are familiar with. Select two of the species on the list and show images or videos of the birds. Listen to their calls if possible. Discuss the similarities and differences between the two birds in color, size, and shape. Organize observations in a Venn diagram. You may wish to go further by discussing why these differences occur.

- Why do you think different species of birds have different coloring? (Camouflage, to attract a mate, and in a few cases, diet influences color.)
- Why might they have different beak shapes or sizes? (Beaks are adapted for the type of food they eat.)

2. "CAW," NOT "CHUCK" (SCI)- On her birding adventure, the girl uses the sounds that birds make, in addition to their physical appearance, to identify their species. Play recordings of common birds (robin, chickadee, blackbird, and dove) found on the resource website, without telling students which call belongs to which bird. You may want to have students mimic the sounds by singing, saying, or whistling what they hear. Ask:

- Do these calls sound similar to any that you have heard outside?
- Do you know which bird makes this sound?
- How are the sounds different?



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3. FLYING FINGERS (SCI, ART)- The girl in the story observes that the crow's wing tips "spread out like long black fingers." Encourage each student to make a crow using their own fingers by having someone trace their hand prints, creating a pair of "wings." Then use black paint, markers, or pencils to draw the other parts of a crow. See the resource website for samples.

Questions to discuss:

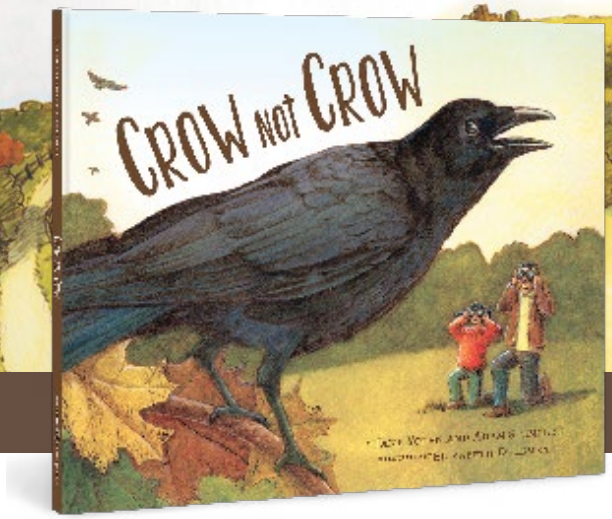
- How do bird wings differ? What are some different wing shapes and sizes? Why do you think bird wings differ? (Wings are adaptations for flight. Some birds have long, sustained flight, others soar or glide, some species fly quickly or more slowly, some migrate long distances and others do not.)
- What objects around the classroom could you trace to look like the wings of a other bird species? Encourage students to replicate bird wings they've observed in field guides, on a walk, or in their imagination by tracing their hands, feet, and common objects.

4. BUILD A BIRD FEEDER (SCI)- In the book, there is a bird feeder outside the family's house. Bird feeders are an excellent way to attract and observe birds. Collect recycled and natural materials (plastic containers, paper rolls, cardboard, clips, rubber bands, etc.). In small groups or individually, challenge students to build a functional bird feeder that can hold a set amount of bird seed. Once all the bird feeders are constructed, discuss the various designs you have created:

- Why did you choose the materials you used?
- Why did you choose the design that you built?
- What was the hardest part of building the bird feeder?
- Is your feeder designed to feed a certain type of bird? (big, small, long beak, short beak, etc.)?

After each student has justified their design, try hanging the bird feeders near a window. Have students monitor their feeder for several weeks.

- Which feeders lasted the longest?
- Which feeders had the most visitors?
- Why do you think birds preferred to feed from certain feeders?
- If you were to build the feeder again, how might you improve your design?



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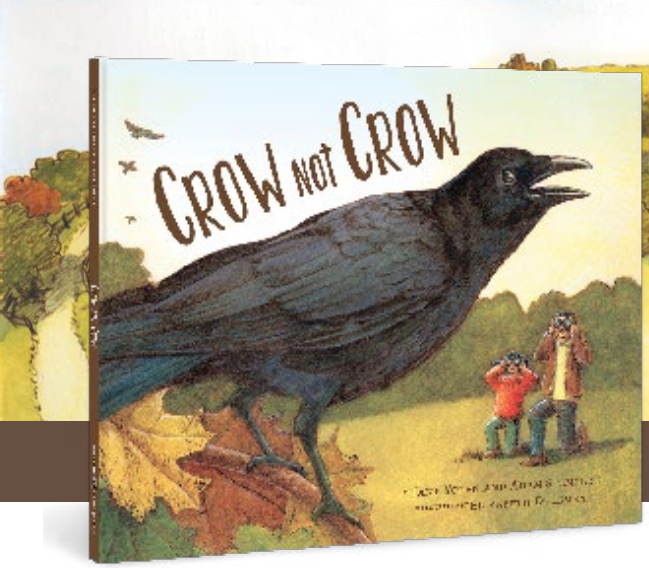
5. BIRD EXPERT (SCI,MATH)- As the girl in the book learned, each bird species has unique features but also share similarities. Establish opposite sides of a large outdoor space or room as "true" and "false." Read the statements below and ask children to run or walk to "true" or "false" side depending on what they think the answer is. After all kids have moved, read the answers to the group and discuss. Keep track of how many students are correct for each statement and be sure to note any common misconceptions.

- **All birds fly.** (False; some, like penguins and ostriches, don't fly.)
- **All birds have feathers.** (True)
- **The types of birds you observe outside may change depending on the time of year.** (True; some birds migrate depending on food supply and seasonal weather in certain locations.)
- **The male and female of a species always look different.** (False; while males are sometimes brighter than the females, this is not always the case.)
- **All birds have two wings.** (True)
- **All birds have the same calls.** (False; different species of birds have different calls so that they can communicate with members of their own species.)
- **Birds have the same set of feathers their whole life.** (False, birds lose and grow a new set of feathers – a process known as moulting – at least once a year.)
- **Some birds change appearance depending on the time of year.** (True; some birds will have different feathers, often brighter in color, to attract mates during mating season.)
- **All birds hatch from hard-shelled eggs.** (True)

Tally the number of correct answers for each question to create a bar graph to show which statements were the easiest and which were the most challenging.



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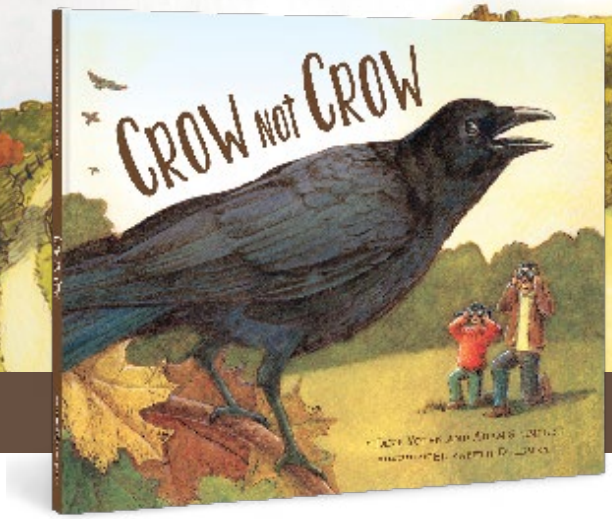
6. NOT JUST NOISE (SCI)- At the beginning of the story, the girl comments on how noisy the birds are. Different species of birds make different sounds to communicate with one another. They might call to each other to summon or attract a mate, defend their territory, or signal an alarm. The pitch, volume, length, and frequency vary across different species and can help you identify the bird behind the noise.

Take a walk outside and find a place where students can spread out and sit. Instruct students to create a "sound map" on a piece of paper of everything they hear. They can make up any symbols they want to illustrate the different sounds they notice: curly lines for the wind, a messy scribble for the sound of a truck rumbling by, a dog for barking, letters spelling out bird calls—whatever makes sense to them. Encourage students to try to determine the direction and distance of each sound from their location, which they should mark "X" on their maps.

Back in the classroom, have students share their maps and discuss:

- Do you think this area is quiet or noisy? Why?
- Which noises surprised you?
- Which noises were human-made?
- Which are made by other animals?
- What other nature sounds did you hear?
- Did anyone hear any birds? If so, what did they sound like or could you identify the species?



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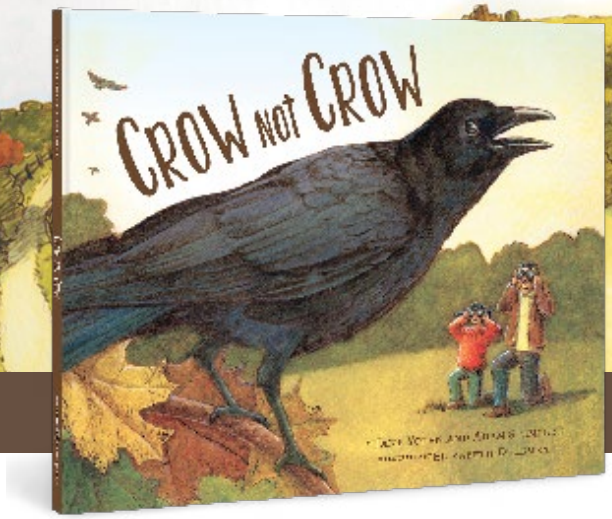
7. BIRD SEARCH (SCI)- Learning to categorize birds can make it easier to identify individual species. Give students some background on the general categories of birds in North America. Some of the major categories that most kids recognize include:

- Woodpeckers
- Owls
- Birds of prey/raptors
- Ducks
- Geese
- Shorebirds
- Songbirds

Diagrams can be found on the resource website. Print a copy of the Bird Search worksheet for each student. Outside, have students practice their observation skills by identifying birds and their behaviors that fit into the different categories on the worksheet. Students may also draw pictures or write observations of the birds they notice.

8. COMPARING CREATURES (ART,SCI) - Revisit pictures of the birds in the book or show images of birds that are common in your area. Hand out a variety of materials (i.e. feathers, tissue paper, ribbon, yarn, cotton balls, paper plates, paper, fabric) and invite children to create a craft bird, either imaginary or based on a real species. Compare and contrast the creations to one another and to the pictures of real birds. List similarities and differences between color, shape, beaks, wings, and size.



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9. NEIGHBORHOOD BIRD WALK (SCI,MATH)- Go on a bird walk to practice "crow, not crow" and tallying bird species. Sketch or describe any "not crow" birds to identify later using field guides or the free Merlin® bird ID app. Make a bar graph of the birds that you count.

Keep in mind that even if you or a student can't quite identify a bird to species, narrowing your identification down from "bird" to "songbird" or "raptor" is an important step. If possible, incorporate a weekly or monthly bird walk into your plans and see how the numbers and kinds of birds change based on the weather, seasons, or other factors.