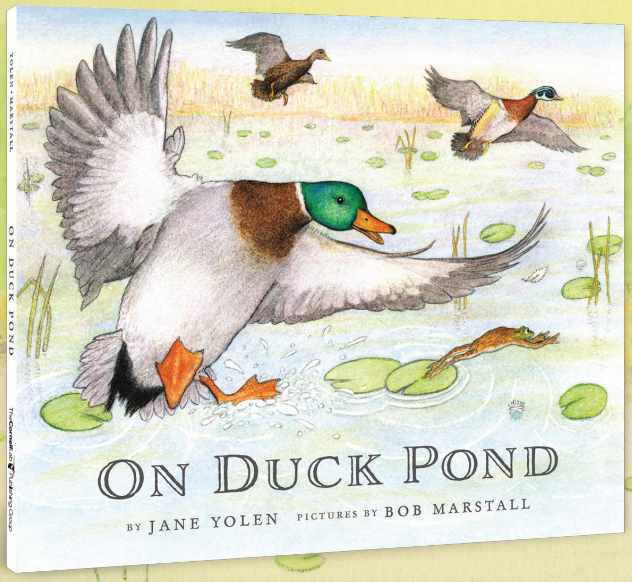

On Duck Pond

WRITTEN BY JANE YOLEN
ILLUSTRATED BY BOB MARSTALL

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ABOUT THE BOOK

A boy and his dog take a walk around old Duck Pond and observe the frogs, fish, herons, turtles, and other animals that call the pond "home." Suddenly, a raucous group of ducks flies in, disturbing the quiet. The boy watches the scene unfold as the creatures react to the havoc caused by the ducks.

USING THIS EDUCATOR'S GUIDE

This guide features activities that target national education standards for a variety of subjects for grades K-2. Each activity lists which content areas it covers.

- **Science** (SCI)
- **Math** (MATH)
- **English Language Arts** (ELA)
- **Art** (ART)

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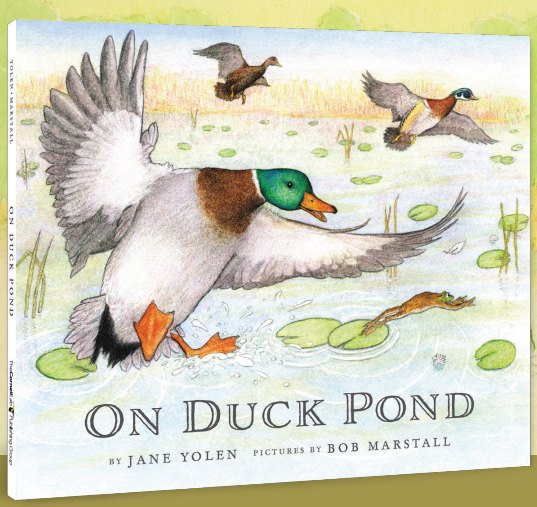

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DISCUSSION QUESTIONS

Discussion before reading…

Show the book cover, read the title, and ask:

- What is a pond habitat like? What do you think you might find on a walk around a pond like this?
- What do you think the duck in the picture is doing? Do you think that this is a quiet or busy place?
- Why do you say so?
- What other animals might live near or in a pond?
- What season do you predict this story takes place in? Why do you think so? What could we look for to give us clues about the season? (For example: whether the plants are green, blooming, or turning fall colors; what animals are there and whether there are young; how people are dressed.)

During reading

Encourage kids to notice the species in/around/and within the pond. Consider making a list of the animals encountered within the book.

Discussion after reading…

- In which season do you think this story takes place? What clues did you use to make that conclusion?
- Why do you think ducks are often found near ponds? (to look for food, to build nests)

Tips for individual reading

- Pay special attention to the animals under the water. You never know what you might find!
- Ponds are filled with many different creatures. Can you find and count them all? See how many ducks, dragonflies, frogs, turtles, or other creatures you can find!

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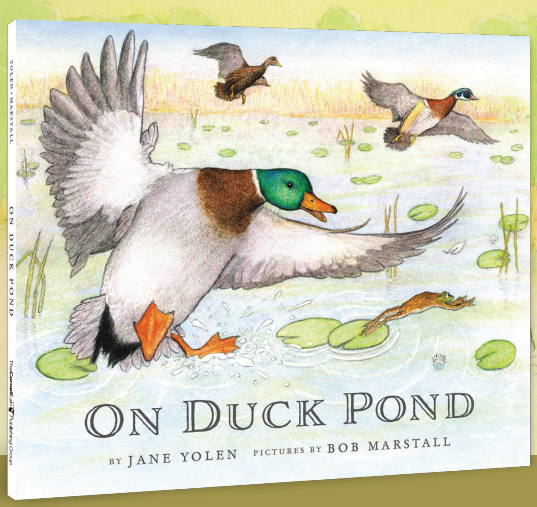

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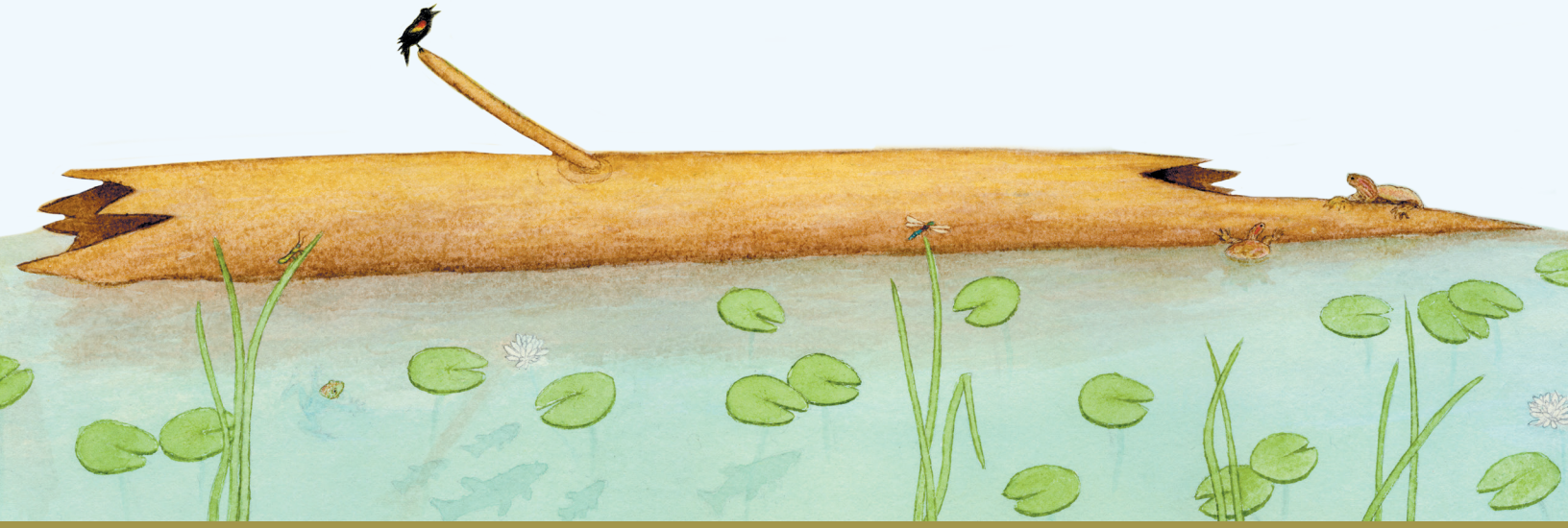
ACTIVITIES

1 **Marsh Mural (SCI, ART)** Ponds are diverse habitats. The main components of habitats are food, water, cover, and space; the things every animal needs to survive. Refer to the *On Duck Pond* habitat scene with the long log, and have students point out the animals that they see. If possible, visit a local pond to compare to this scene. Provide small groups of students with a large poster board or sheet of butcher paper and invite them paint or sketch a mural of a pond (or other) habitat. Encourage deeper thinking and more complete murals by asking students questions such as:

- What types of animals will you include in your mural? Have you included animals that live on land and those that live in water?
- What types of foods are available to these animals? (plants, insects, other animals, etc.)
- Where might the animals find cover within this habitat? (Are there places to hide, to nest, to rest, etc.?)
- Hang the murals up on a wall or bulletin board and transform the room into a pond habitat.



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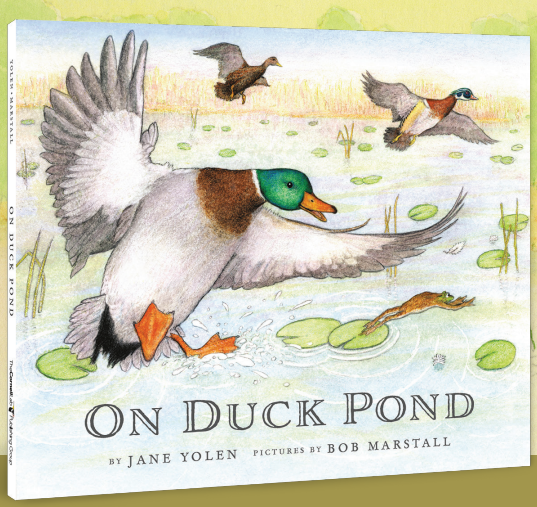

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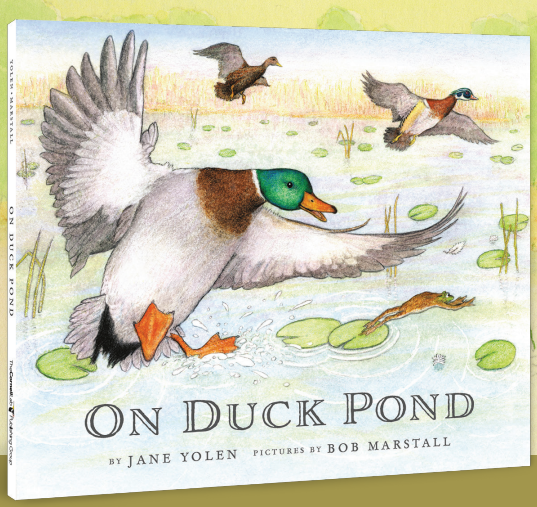
2 **Shifting Seasons (SCI, ART)** What do ponds look like year-round? Encourage students to imagine the setting of *On Duck Pond* in different seasons. Provide each child with a piece of paper split into four sections with a different season written in each corner. Invite them to recreate a pond scene, keeping in mind:

- What would the weather be like during each of the seasons?
- How do the plants change throughout the seasons? (For example, blooming in spring and summer, losing leaves or dying in winter.)
- Would the animals found during each season change? (For example, insects are abundant in summer but uncommon or missing in winter; baby birds might be present in the summer but not in the fall or winter; some species migrate or hide in the winter.)

3 **Just Ducky Math (MATH)** Practice math skills by counting the number of ducks found in the book using tally marks. You may also wish to discuss even or odd (are there even or odd numbers of birds or other animals on a certain page?), ordinal numbers (who flew in first, last?), ordering (order animals according to size), or practice skip counting. Use information to make bar graphs or pie charts, for example: the kinds and numbers of birds in the book, the number of males versus females in the book, or class voting on the favorite bird/animal within the book.



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4 **The Life of a Duck (SCI, ART, ELA)** Create a storyboard about the life cycle of a duck. Either individually or as a group, have students write or draw each life stage, from egg to duckling to duck. Encourage kids to include important events and actions, asking:

- What might a duckling look like when it hatches? (Think small and fluffy!)
- How does it change as it grows? (Ducklings get bigger and also start to lose their fluffy down when they are a few weeks old. They begin to grow feathers and look more and more like adults.)
- What types of things does a duckling learn to do as it grows? (E.g., walk, fly, swim.)
- Sequence the storyboard, and invite students to act out each stage: pretending to hatch, grow, waddle, swim, and fly like ducks!

Bird Comparison (SCI, ART) Refer to the bird field guide in the back of the book, showing your group the different species of birds that can be found near a pond. Ask:

5
- What do you notice that's the same about each of these birds? What differences do you see?
- Which birds have the longest legs? Are they the largest birds? Why might long legs be useful? (For example, the long legs of the heron allow it to wade into the pond to catch fish and frogs without getting its body or feathers wet.)
- Which birds have webbed feet? Why might webbed feet be useful? (Webbed feet are like flippers and make it efficient to swim on a pond.)
- What are the different colors and patterns you see? What is the purpose of the different colors and patterns? (Students might mention camouflage and brightly-colored males for attracting a mate.)
- Afterwards, print out pictures of both a male and female of each species (visit the website for images). Spread the pictures out on a table and ask students to match the male to the female duck. (Hint: males are generally much more colorful than females but are similar in size and shape.) Encourage students to look at characteristics like shape of the body and beak, size, and color pattern.

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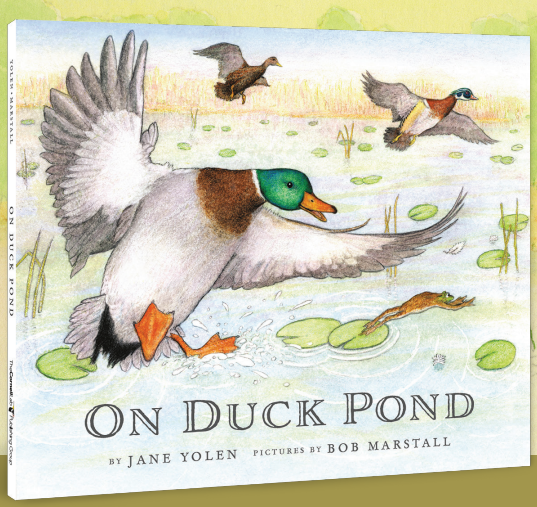

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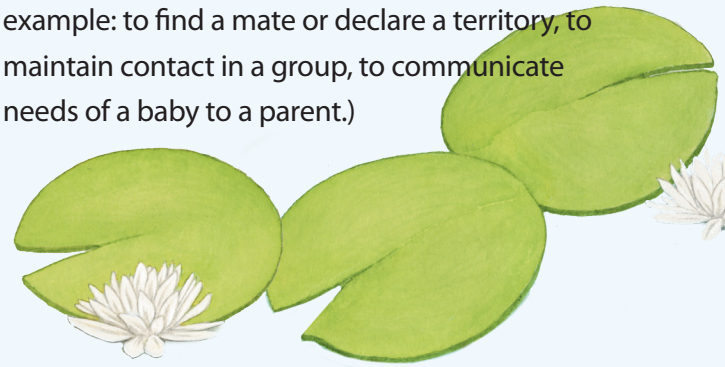
6 **Waddle and Wade (SCI)** What makes duck feet so special? Prepare two shallow bins or containers, filling one with water and the other with sand or soil. Find a set of small plastic rakes and shovels to represent "bird feet." Invite students to take turns experimenting with the rakes (perching/walking/wading feet) and shovels (swimming/webbed feet) to discover which of the two types works best on which surface. Share pictures of birds' feet and/or videos of bird feet in action. If possible, bring in kids' swimming flippers and have a child demonstrate walking with flippers versus bare feet. Ask:

- What type of foot is best for swimming? (Hint: drag both the rake and the shovel through the water. Which does the better job at pushing water?)
- Which foot type is most useful for walking on land? (Use the shovel and rake to imitate a "walking" motion on the sand container. Which tool seems to hold onto the "ground" better?)
- Based on what you know, why do you think ducks waddle when they walk? (Their flippers are ideal for swimming. They don't have sharp claws and pointed toes to stabilize them when they walk. Their legs are relatively far back on their body. These characteristics result in a funny waddle.)

7 **Quacking Concerts (ART, SCI)** Revisit the image of the startled frog in the book. Ask students why they think the frog was surprised and mad; what changes caused this reaction? (The loud and splashing ducks!) Many birds use calls or songs to communicate. Try to recreate the sounds of the duck cacophony by imitating different duck calls. Visit the website for examples of duck calls and practice your best duck impressions to create your very own quacking orchestra! You could even invite a music teacher to join in on the fun.

- Afterwards, pretend the ducks have flown away and the pond is calm once again. What sounds might be heard now? (The ribbiting of frogs, the gentle laps of water on the shore, the buzzing of insects, etc.) Invite students to attempt a quiet pond scene "orchestra."
- Invite students to write about the reasons why animals, including humans, communicate. (For example: to find a mate or declare a territory, to maintain contact in a group, to communicate needs of a baby to a parent.)



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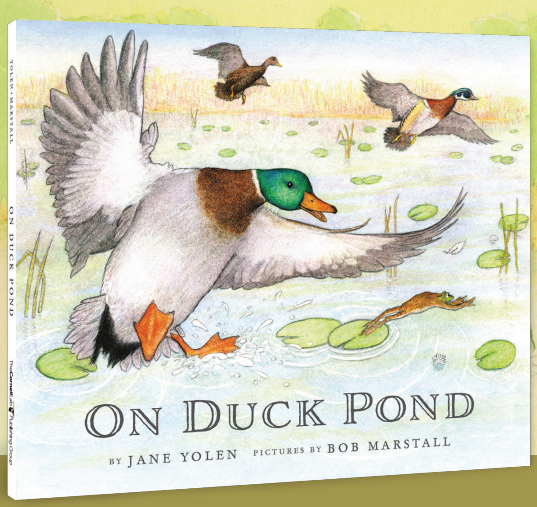

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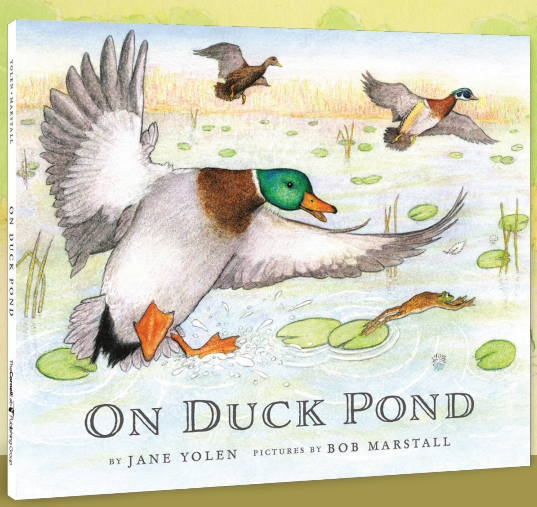
8 **Pond Trivia (SCI, ELA, MATH)** Establish a "fact/true" and "fiction/false" side of a large outdoor space or the gym. Invite students to move to the "fact" or "fiction" side of the space, depending on their answers to these true/false trivia questions. This activity gets children moving and provides a simple way to uncover misconceptions. Count and graph the number of true/false responses for each response, and discuss the answers after the game. Trivia questions:

- Baby ducks are called ducklings. (True.)
- Frogs lay their eggs in water bodies such as ponds. (True.)
- There are three species of ducks. (False - There are more than 140 species of ducks in the world.)
- Great Blue Herons use their sharp beaks to catch animals such as fish and frogs. (True.)
- Feeding bread to ducks is good for them. (False - Bread doesn't have good nutritional value for ducks. It can cause health issues if they eat too much.)
- A male duck is called a drake. (True.)
- A female duck is called a hen. (True.)
- Male and female ducks always look the same. (False; male are usually more brightly colored than females, especially during breeding season.)
- Tadpoles turn into frogs and toads. (True.)
- Ducks can fly as soon as they hatch. (False - Ducklings need to gain their flight feathers and lose their fluffy down before they can fly.)
- Ponds never contain fish. (False - Many ponds have fish in them.)
- The feathers of a duck have a waxy coating to help keep them waterproof. (True.)

9 **Water Skimmers (SCI)** Water skimmers—small insects that seem to glide across or "walk" on the water—often live on ponds or can be found in pools. Demonstrate how this happens through surface tension. Fill a large, clear bin with water and place a sewing needle or paperclip on the surface. Encourage students to look closely for an indentation created in the water by the item. Water skimmers are light enough that they don't sink, only creating little dents in the water, allowing them to travel with ease. Ducks float on the surface and have to use their feet to paddle when they dive.

Provide students with more items to experiment with at the water table. Encourage them to predict which items will sink and which will float before testing each object. Ask:

- Why do some items sink? Why do some float? (Whether an object sinks or floats does not depend on its weight, it depends upon its density. Things that are more dense than water sink, while those with less mass than water float.)
- What objects surprise you? Why?



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10 **Water Cycle Jars (SCI, ART, ELA)** Water is one of the most important elements in a pond ecosystem. All plants and animals need it to survive! To help students better understand the path of water from a pond to clouds to rain and back to the pond again, recreate your very own water cycle in a jar.
What you will need:

- Glass jar with lid
- Small plants
- Small measuring cups
- Rocks
- Soil
- Sand

Fill the bottom of the jar with small rocks, sand, and soil, in that order. Then place your plant in the soil. Pour a small amount of water into the jar using the cup, and put the lid back on the jar. Put the jar in a sunny place. Invite students to write or draw what they predict will happen over time (In 2 hours? Tomorrow? In several days?). Regularly check the jar and compare what happens within the jar to predictions. Ask:

- What happens to the water over time? (It evaporates, condenses on the sides of the jar, and might trickle back into the soil or down to the bottom of the jar… a great demonstration of a water cycle!)
- What do you think would happen if we took the lids off some of the jars? (Make predictions and then find out. The water evaporates into the atmosphere.)
- How does this relate to the water in the pond? (The water cycle happens there, too. Water evaporates, water comes back into the system as precipitation.)

11 **Listen and Look (SCI, MATH)** Birds are best observed outdoors! Go on a mini field trip to the schoolyard or on a walk around the block, or visit a local pond if possible. Keep your eyes and ears peeled for any signs of birds and encourage close observation:

- Do you hear any bird calls? If so, can you tell where they're coming from?
- What types of birds do you see? Tally the numbers of birds, and enter them into the eBird citizen-science database if possible, visit *ebird.org*.

Compare your walk to that of the boy in the story, either through discussion or a writing activity.

To access other free lesson plans, Book Activity Guides, and professional development opportunities, please visit the Cornell Lab's educational program, BirdSleuth, at www.birdsleuth.org.

The Cornell Lab of Ornithology
BirdSleuth K–12