

WATERDROPS

Ponds

Teacher's Guide

Welcome to the pond issue of the WaterDrops! newsletter for elementary students, offered by the Southwest Water Management District's (SWFWMD). This newsletter is correlated to grades 3-5 of the Florida State Academic Standards and provides an interesting way for students to increase their awareness and respect for water resources and our environment. To better prepare your students for testing, we have included WaterDrops Challenge, which contains items similar to those that may appear on the Florida Statewide Science Assessment.

This issue of WaterDrops focuses on ponds. It includes fiction, nonfiction, writing, problem-solving activities and websites to explore. All information and activities are designed to teach students about the importance of protecting and maintaining our ponds and our water resources. Let WaterDrops make a splash in your classroom today!

Many other free materials are available from the SWFWMD and can be ordered online at WaterMatters.org/Publications. We also offer a variety of water education resources at WaterMatters.org/Education. Please contact us if you have any questions or suggestions about our water resources education programs.

Youth Education
Communications Department
Southwest Florida Water Management District
(352) 796-7211
1-800-423-1476 (FL only)
WaterEducation@WaterMatters.org

Page 1

Hello Readers!

Florida contains many freshwater lakes and ponds. Discuss the features of a pond. Find out how far away the nearest pond is from where each student lives (within one mile, two miles, etc.). Ask students to describe why ponds are important to us.

Page 1

Water Drips & Drops

It's fun to learn facts about ponds. Emphasize that ponds are fascinating places to watch nature. Ask students to give examples of the different kinds of wildlife that may be found near a pond. You may want to make a chart to classify pond animals that includes the following headings: mammals, birds, reptiles, amphibians and fish. Have students place the names of species under the correct headings.

Pages 2 & 3

Feature Story

Before reading the story, ask students to share any experiences they may have had at a pond. Emphasize the productive role that ponds play in our natural environment. Have students describe and compare features of a healthy pond versus an unhealthy pond. Then ask students to complete the writing activity.

Page 4

Take It Home

Prepare your students for the activity they will do at home. You may want to conduct a demonstration of the experiment in the classroom. Discuss the concept of surface tension. Ask students to read the directions for testing surface water and encourage them to try the experiment at home. Have students share their observations and responses to the questions.

Southwest Florida
Water Management District

WATERMATTERS.ORG · 1-800-423-1476

Review the concept of a pond and its importance in our natural environment. Read about the ways in which people can be actively involved in keeping their neighborhood ponds clean and healthy. Then have students take the pond quiz and discuss their responses.

Pond Quiz Answer Key: True, False, True

All of us can play a role in the management of our ponds. Ask students to read about the neighbors who need to change their habits. Then ask students to offer easy suggestions that could help these neighbors make better choices to promote a healthy pond environment. Suggestions will vary but should include the following main points.

Randy should place leaves in a bag and dispose of them properly.

Janet should pick up waste material and encourage neighbors to do the same.

Mr. Sanchez should take his automobile oil to a center where it can be recycled.

Ponds Crossword Puzzle Answers:

Down	Across
1. pollution	2. wet
2. wildlife	4. littoral
3. stormwater	6. filter
5. plants	8. flooding
7. ecosystem	9. pond
12. frog	10. lakes
	11. dry
	12. fresh

Discuss the important role ponds play in our natural environment and ask students to give suggestions of ways to keep ponds healthy and attractive.

WATERDROPS Extended Activities

(See page 3 of this Teacher's Guide)

Number 1: Pond Puzzle

Have students use their puzzles to share information about ponds with another class at school.

Number 2: A Walk on the Wild Side

If possible, take your class on a hike around a pond near your school.

Number 3: Managing Our Ponds

Emphasize the important role everyone plays in keeping our environment clean.

Number 4: Pond Badge

Help your class make a list of things that could be included on the badge.

WATERDROPS Challenge

(See page 7 of this Teacher's Guide)

Items included in the Challenge are similar to those presented on the Florida Statewide Science Assessment (FSSA). Make copies of the Challenge and explain to students that this provides good practice for preparing for the FSSA. Students should be allowed to use the *WaterDrops* issue, if necessary.

Answers to multiple-choice items: 1-d, 2-b, 3-c, 4-a

Answers to extended-response items:

Question 1. Responses will vary. Students should be able to demonstrate a basic understanding of the differences between a healthy pond and an unhealthy pond.

Score 2 Points if... The response indicates that the student has a basic understanding of the differences between healthy and unhealthy ponds. The student has provided a response that is accurate and complete.

Score 1 Point if... The response indicates that the student has a partial understanding of the differences between healthy and unhealthy ponds. The student has provided a response that is essentially correct, but the information is too general or too simplistic.

Score 0 Points if... The response is inaccurate, confused or irrelevant.

Question 2. Responses will vary. Students should be able to demonstrate logical reasoning associated with the importance of protecting ponds for our future.

Score 2 Points if... The response indicates that the student has demonstrated logical reasoning associated with the importance of protecting ponds for our future. The student has provided a response that is accurate and complete.

Score 1 Point if... The response indicates that the student has partially demonstrated logical reasoning associated with the importance of protecting ponds for our future. The student has provided a response that includes information that is essentially correct, but the information is too general or too simplistic.

Score 0 Points if... The response is inaccurate, confused or irrelevant.

WATERDROPS Extended Activity Number 1

Pond Puzzle

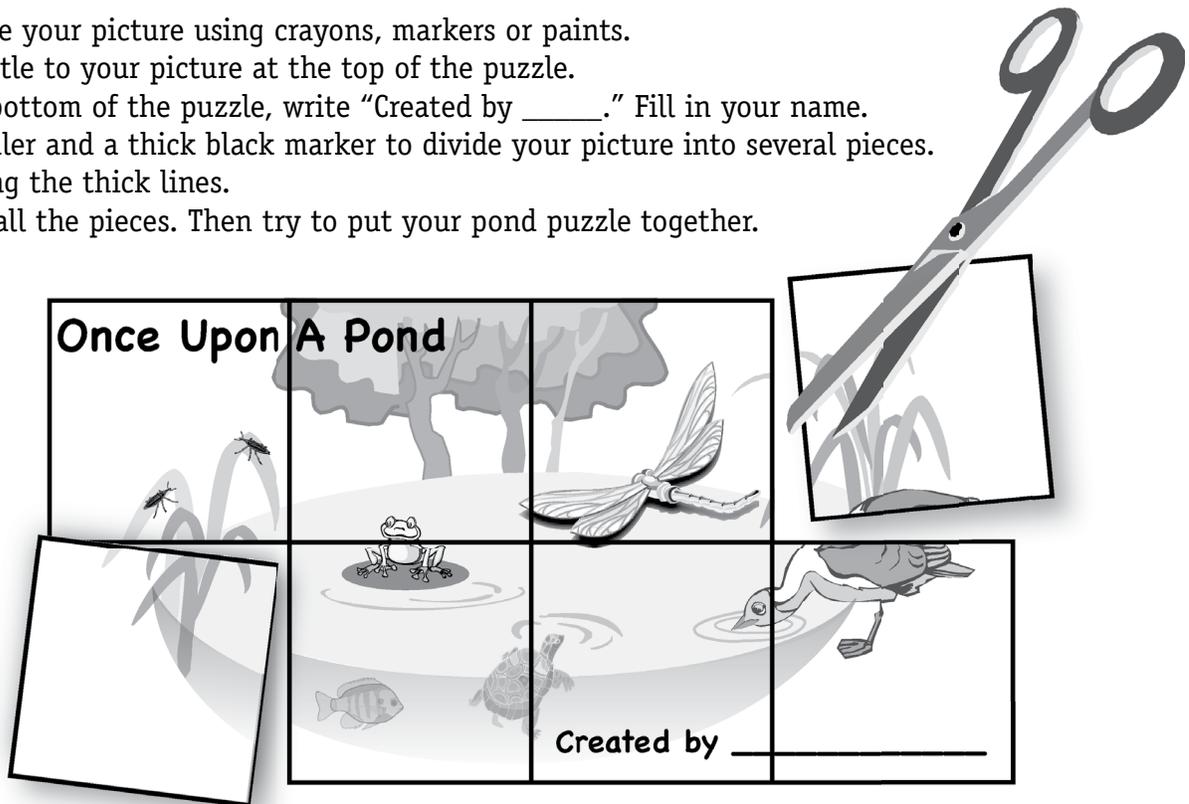
You have learned a lot about ponds. You will use what you learned to create a pond environment. Try to include a variety of trees, plants and creatures in your ecosystem. Begin by reviewing the information and pictures presented in the newsletter. Then piece together your thoughts and make the puzzle!

Materials:

- large sheet of white poster board
- colored markers, crayons or paints
- magazines with nature pictures
- pencil
- eraser
- ruler
- thick black marker
- scissors
- glue

Directions:

1. Use a pencil to sketch a picture of a pond environment on your poster board.
2. Look through several old magazines and cut out pictures of things that could be included on your pond scene.
3. Complete your picture using crayons, markers or paints.
4. Add a title to your picture at the top of the puzzle.
5. At the bottom of the puzzle, write "Created by ____." Fill in your name.
6. Use a ruler and a thick black marker to divide your picture into several pieces.
7. Cut along the thick lines.
8. Mix up all the pieces. Then try to put your pond puzzle together.

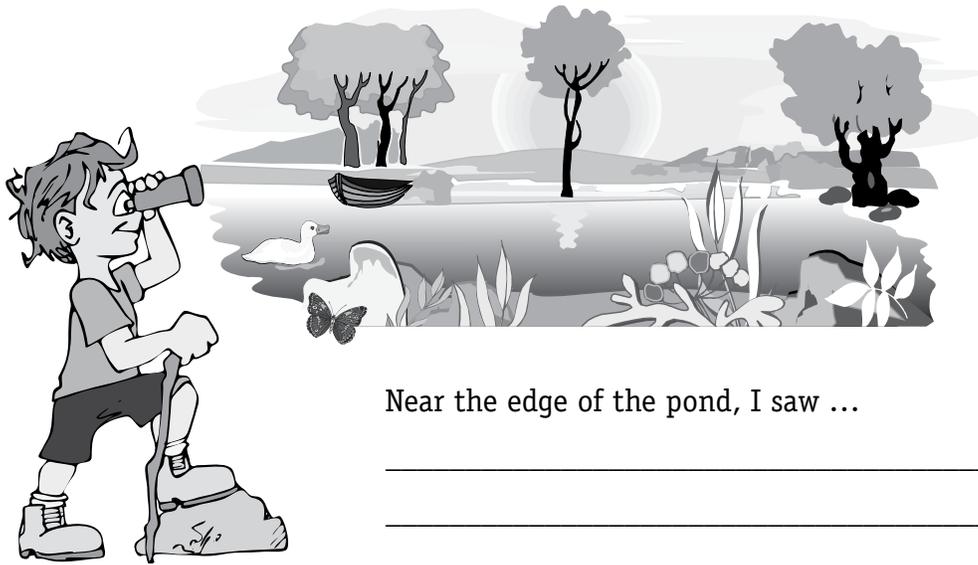


Extra Challenge

Get your whole class to trade puzzles. Have a contest to see who can put each puzzle together the fastest!

A Walk on the Wild Side

You learned that a healthy pond attracts a variety of trees, plants, birds and other wildlife. The pond environment and the living things in it make up a very special ecosystem.



In this activity, take a close look at a nearby pond. Use a pair of binoculars if available. Record your observations below.

Near the edge of the pond, I saw ...

In the sky above the pond, I saw ...

On the surface of the pond water, I saw ...

In the still waters of the pond, I saw ...

Extra Challenge

Describe two interesting things you learned during your walk around the pond.

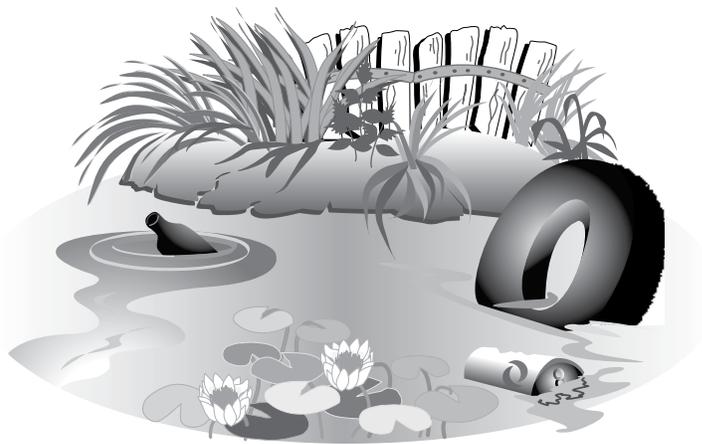
1. _____
2. _____

Managing Our Ponds

You have learned in the newsletter how important it is to keep our ponds clean and healthy. Healthy ponds help improve the quality of the water and prevent areas from flooding.

Pretend you have been asked to manage a pond in your community. You know it is up to all the neighbors to do their parts to make the pond healthy and attractive. Put together a list of 10 tips for everyone to follow. Use the information on page 5 of the newsletter to help you.

Taking Care of Our Pond — *It's Up to Everyone!*



Please do the following:

- ① _____
- ② _____
- ③ _____
- ④ _____
- ⑤ _____

Please avoid:

- ① _____
- ② _____
- ③ _____
- ④ _____
- ⑤ _____

Extra Challenge

Create a colorful brochure that includes your 10 tips for good pond management!

WATERDROPS Extended Activity Number 4

Pond Badge

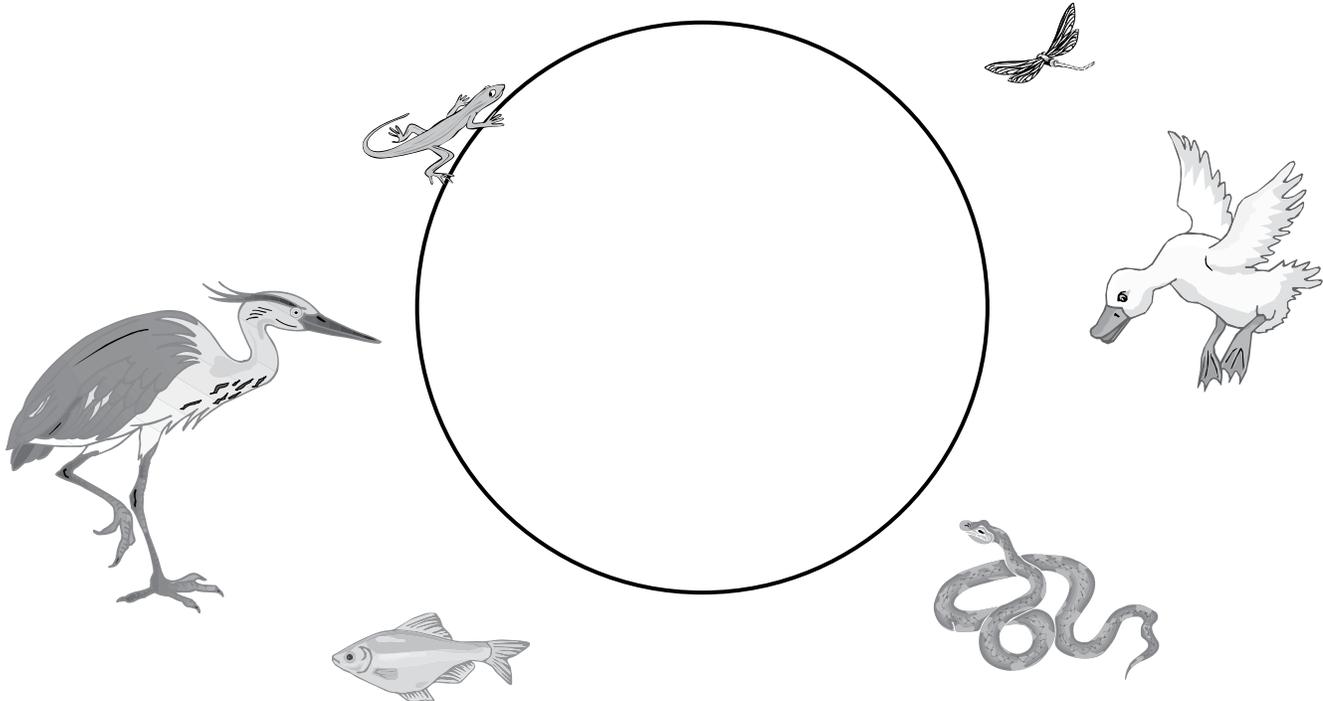
Show how much you care about ponds by making a pond badge. Be creative!

Materials:

- foam board in a variety of colors
- colored markers
- scissors
- paper
- safety pin
- pencil
- glue

Directions:

1. Use the circle below and sketch your design for the badge. Then cut out the circle.
2. Trace the circle on a piece of foam, which will be used as the background of the badge.
3. Cut out other shapes of foam and glue them onto the background.
4. Write a special message on your badge.
5. Glue a safety pin to the back of the badge.
6. Now wear your pond badge and show others that you care about ponds!



Extra Challenge

Create a big display using the badges of all your classmates.

WATERDROPS Challenge

Directions:

Let's see how much you have learned about ponds. Do your best and meet the challenge!

Choose the best answer.

1. Ponds are found throughout Florida. What is a pond?

- a. a layer of water where molecules bond to form a special film
- b. an area of land that contains a mixture of fresh and salty water
- c. a deep body of water partly surrounded by land
- d. a shallow body of water completely surrounded by land

2. What kind of water is usually contained in a pond?

- a. a mixture of salty water and fresh water
- b. fresh water
- c. salty water
- d. citrus-flavored water

3. There are many ways ponds help the quality of our environment. Which one below does NOT belong in the list?

- a. **Plants in the ponds filter pollutants from water.**
- b. **Ponds help prevent areas from flooding.**
- c. **Ponds increase the amount of pollution in an area.**
- d. **Ponds are a water source for plants and wildlife.**

4. What is an important message in this issue of *WaterDrops*?

- a. **People can help make a neighborhood pond healthy and attractive.**
- b. **We should prevent wildlife from living near a pond.**
- c. **We can help the quality of water by using a lot of chemicals on our lawns.**
- d. **Neighbors aren't responsible for protecting a community pond.**

Activities in *Waterdrops Ponds* address the following State Academic Standards for grades 3-5:

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards for English Language Arts

ELA.3.C.1 Communicating Through Writing

ELA.3.C.2 Communicating Orally

ELA.3.C.4 Researching

ELA.3.C.5 Creating and Collaborating

ELA.4.C.1 Communicating Through Writing

ELA.4.C.2 Communicating Orally

ELA.4.C.4 Researching

ELA.4.C.5 Creating and Collaborating

ELA.5.C.1 Communicating Through Writing

ELA.5.C.2 Communicating Orally

ELA.5.C.4 Researching

ELA.5.C.5 Creating and Collaborating

Florida State Academic Standards for Science

SC.3.N.1.1: Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

SC.4.L.17.4 Recognize ways plants and animals, including humans, can impact the environment.

SC.4.N.1.1 Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

SC.5.N.1.1: Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.