

# WATERDROPS

Nature

## Teacher's Guide

Welcome to the nature issue of WaterDrops! As part of the Splash! Water Resources Education program, the Southwest Florida Water Management District (SWFWMD) offers this water resources newsletter for elementary students. The newsletter is correlated to grades 3–5 of the Sunshine State 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 Comprehensive Assessment Test (FCAT).

This issue focuses on a visit to a nature center. The SWFWMD is charged with preserving and protecting west-central Florida's water resources and the natural systems that sustain them. Nature centers and parks play a valuable role in educating children and their families about the importance of protecting natural areas. Trips to nature centers also allow children to see firsthand the close relationship of water resources with plants, animals and insects.

Many other free materials are available from the SWFWMD and can be ordered online at [WaterMatters.org/publications/](http://WaterMatters.org/publications/). We also offer water resources workshops for teachers. Please contact us if you have any questions or suggestions about our water resources education programs.

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Hello Readers!

Exploring nature can provide students with valuable learning experiences. Ask students to describe any experiences they have had at a nature park or nature center. Emphasize to your students that water plays an important role in sustaining all aspects of our natural environment.

*Sunshine State Standards: LA.A.2.2.1*

Page 1

Water Drips & Drops

It's fun to learn interesting facts about water. Trees are an important part of the hydrologic cycle, commonly called the water cycle. Transpiration is a process in which vapor is created when plants and trees give off moisture. Other parts of the hydrologic cycle include solar energy, evaporation, condensation, precipitation and percolation. If you need additional information, please contact the SWFWMD.

*Sunshine State Standards: SC.B.1.2.1*

Pages 2 & 3

Feature Story

Before reading the story, ask students if they have ever visited a nature center. Allow time for students to share their personal experiences. Then read the story together. Ask students to predict what it may be like to visit a nature center they have never been to before. Ask them to tell about various living and nonliving things they would expect to see there. Discuss the similarities of visiting a nature center and taking a journey. Then ask students to complete the writing activity.

*Sunshine State Standards: LA.A.2.2.5, LA.B.2.2.3, LA.B.2.2.5, SC.G.1.2.1, SC.G.1.2.2, SC.G.2.2.1*

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Take It Home

Discuss the important role water plays in keeping living things alive and healthy. Ask students what it means to be a nature observer. Provide examples such as watching a turtle cross a path, noticing the types of plants in different areas, seeing tracks made by an animal, etc. Using the chart, explain the different categories of living things and how they depend on water to stay alive and remain healthy. Explain the different sections of the chart and ask students to take it home and complete it. Have students compare their observations with other classmates. For an additional activity, combine all observations on a large poster and display in the classroom.

*Sunshine State Standards: LA.A.2.2.1, LA.B.2.2.3, SC.G.1.2.2*

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Ask Water Cycle Wanda

Select two students to play the roles of Darrell and Water Cycle Wanda. Ask the students to read their parts. Have students name places where they may find additional information about trees and the process of transpiration. Their answers may include the Internet, radio, TV, library, media center, etc. Try the experiment with your class and discuss the results.

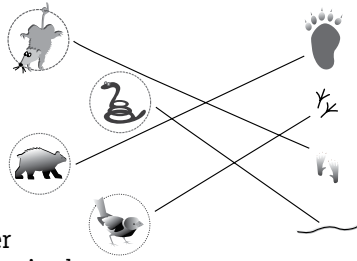
*Sunshine State Standards: LA.A.2.2.5, SC.G.1.2.3*

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(See page 3 of this Teacher's Guide)

Before reading the background information about tracking animals, ask students if they have ever identified animal tracks outdoors. Let them share their personal experiences. Read the background information together and ask students to match each animal with its footprint. Help students to explain how they matched the animals with their tracks. Ask students why rainfall could affect animal markings.



Sunshine State Standards: LA.A.2.2.5, LA.B.2.2.3, LA.B.2.2.6

**Number 1: Nature Celebration Month**

You may want to select the same month for the entire class to celebrate.

**Number 2: My Day as a Mosquito!**

Discuss possible adventures a mosquito might have in the course of a day.

**Number 3: What Am I?**

Emphasize the importance of details when students are developing their clues.

**Number 4: My Mini Field Guide**

Make copies of student pages and place them in a large classroom field guide.

Before reading the article, ask students what it means to be a welcome visitor. Discuss the differences between being a welcome visitor and one who still needs to learn the right way to behave. Then read the article together and ask students to complete the sentences at the bottom of the page.

**Fill-in-the-Blank Answer Key: pick (remove), paths (trails), noisy**

Sunshine State Standards: LA.A.2.2.1, LA.A.2.2.5, SS.C.2.2.2

**WATERDROPS** Challenge

(See page 7 of this Teacher's Guide)

Items included in the Challenge are similar to those presented on the Florida Comprehensive Assessment Test (FCAT). Make copies of the Challenge and distribute them to students. Emphasize that taking the Challenge will provide good practice for preparing for the FCAT. Students should be allowed to use the *WaterDrops* issue, if necessary.

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

**Answers to extended-response items:**

**Question 1.** Responses will vary. Students should be able to demonstrate a basic understanding of how to be a welcome visitor at a nature park.

**Score 2 points if. . .** The response indicates the student has a basic understanding of how to be a welcome visitor at a nature park. The student has provided a response that is accurate and complete.

**Score 1 point if. . .** The response indicates the student has a partial understanding of how to be a welcome visitor at a nature park. 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 and/or irrelevant.

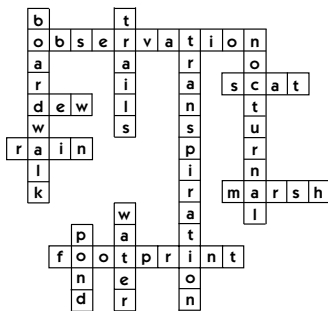
**Question 2.** Responses will vary. Students should be able to demonstrate a basic understanding of transpiration.

**Score 2 points if. . .** The response indicates the student has a basic understanding of transpiration. The student has provided a response that is accurate and complete.

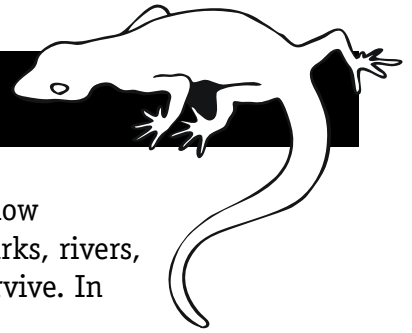
**Score 1 point if. . .** The response indicates the student has a partial understanding of transpiration. The student has provided a response that includes information that is essentially correct, but the information is too general or too simplistic.

**Score 0 points if. . .** The response is inaccurate, confused and/or irrelevant.

Sunshine State Standards: LA.A.2.2.5, LA.B.2.2.3, LA.B.2.2.6, SC.D.1.2.3, SC.G.1.2.3, SC.H.2.2.1



### Nature Celebration Month



We often take the natural beauty of our environment for granted. Think about how wonderful it is to be surrounded by so many natural features, such as wildlife parks, rivers, lakes and ponds. All living things in these natural places depend on water to survive. In this activity, you will show the important link between water and living things.

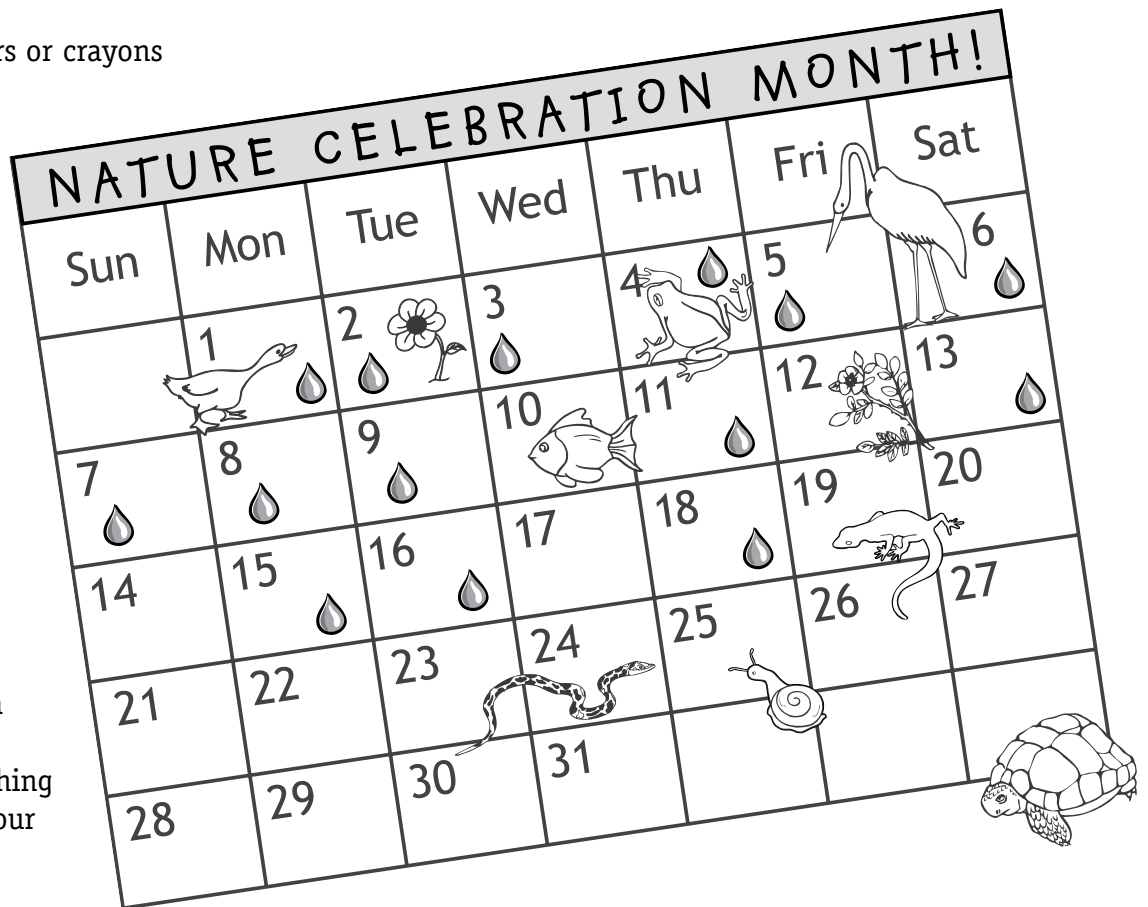
Celebrate nature by creating a special calendar. It's easy and fun to do!

**Materials:**

- monthly calendar
- colored pens, markers or crayons
- paper
- ruler

**Directions:**

1. Use a calendar and select one month. This will be your celebration month.
2. On a sheet of paper make your own calendar for that particular month and label it "Nature Celebration Month!"
3. On each day, draw a small picture of a raindrop and something that could live in your special ecosystem.
4. By the end of the month, you should have quite a collection of pictures of living things and water droplets.



**Think About It**

Describe how the health and well-being of your environment might change over time.



# WATERDROPS Extended Activity Number 3

## What Am I?

It's important to use your senses when you take a nature hike. What you see, hear, smell and feel can help you discover what things are living in an area. Try to imagine how you would describe a living thing so other people could guess what it is. You may be surprised at some of their guesses!

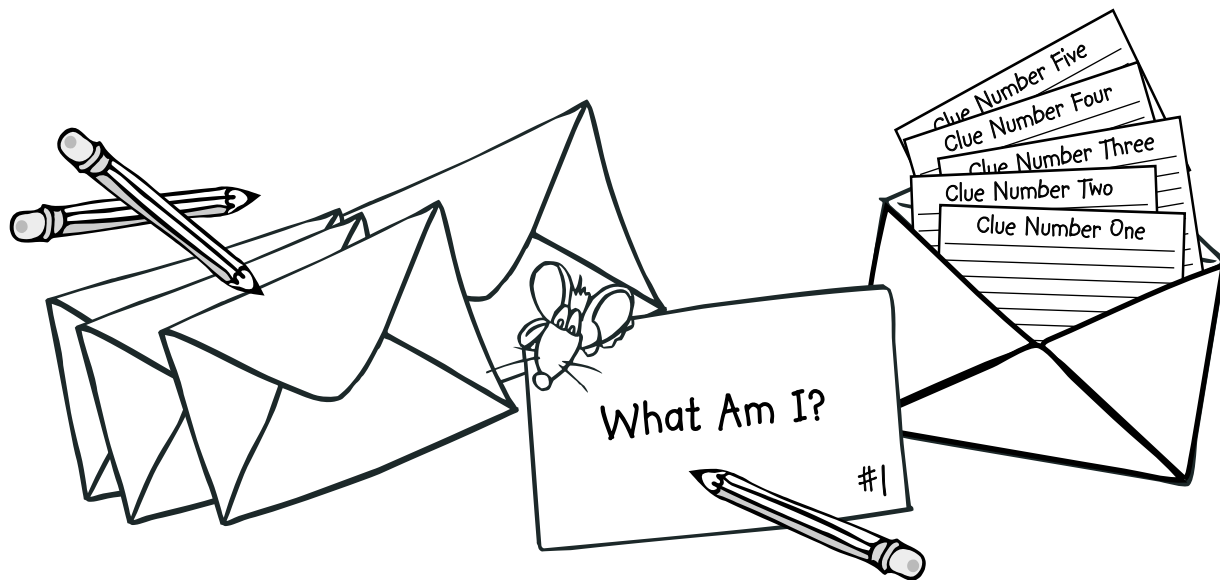
For this activity you will create a set of envelopes that contain clues about something found in nature.

### Materials:

- several envelopes
- 3" x 5" index cards
- pen or pencil

### Directions:

1. Think about some living thing that you would find in a natural setting.
2. Develop five clues about that thing. Write each clue on a separate card.
3. Place the clues inside one of the envelopes.
4. Label the outside of the envelope "What Am I?" and write a number on it.
5. Repeat steps 1-4 as many times as you like.
6. Develop an answer key card that has the correct names of the living things described in your envelopes.
7. Have a friend use the clues in the envelope to guess the name of the living thing.



### Extra Challenge




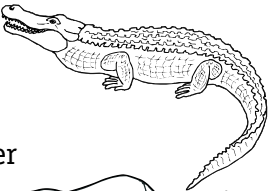
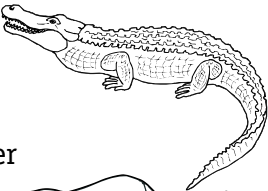

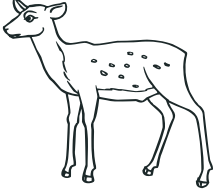
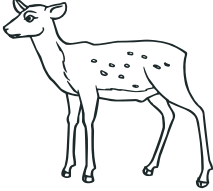
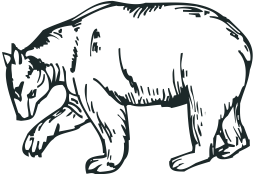
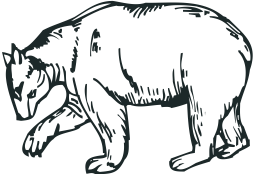
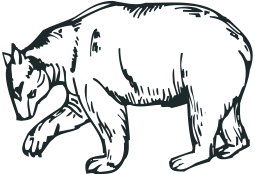
Create an activity center in your classroom by collecting all your classmates' envelopes and placing them in a big box. Decorate the "nature" box and place the answer keys in a separate envelope.

# WATERDROPS Extended Activity Number 4













## My Mini Field Guide

Our nature parks are filled with a variety of wildlife for us to enjoy. In this activity you will create your own mini field guide of creatures living in natural areas. Gather information about your favorite creatures from other field guides, books, magazines and Internet sites. Include some of the animals, birds and bugs listed below. Use one sheet of paper for each creature. Then place your pages in your mini field guide. Share your field guide with others to help them learn about Florida's interesting creatures!








### Animals of Florida


- coral snake 
- armadillo 
- manatee 
- fox squirrel 
- alligator 
- Florida panther 
- opossum 
- deer 
- bobcat 
- black bear 
- raccoon, etc. 

### Bugs of Florida

- love bug 
- bumblebee 
- ant 
- butterfly 
- ladybug 
- termite 
- fruit fly 
- roach 
- widow spider 
- fire ant 
- flea 
- tick, etc. 

### Birds of Florida

- Florida jay 
- roseate spoonbill 
- egret 
- sandhill crane 
- heron 
- wood duck 
- pelican, etc. 



Name of creature: \_\_\_\_\_

What it looks like: \_\_\_\_\_

Where it lives: \_\_\_\_\_

What it eats and drinks: \_\_\_\_\_

### Extra Challenge

Include a picture or photo of each creature in your guide.

# **WATERDROPS** Challenge

**Directions:**

Let's see how much you have learned about becoming a nature observer. Do your best and meet the challenge!

*Choose the best answer.*

1. Which of the following could you observe on a nature walk?
  - a. native plants
  - b. mammals, birds and reptiles
  - c. trees
  - d. all of the above
2. Many creatures found in nature are nocturnal. What does this mean?
  - a. The creatures live near the water.
  - b. The creatures are active at night.
  - c. The creatures live in trees.
  - d. The creatures live under the ground.
3. The leaves of plants and trees give off water, which goes into the air. What is this process called?
  - a. weeping
  - b. transpiration
  - c. percolation
  - d. precipitation
4. Which of the following clues do animal trackers use to identify the animals living in a natural park?
  - a. footprint patterns, scat and other markings
  - b. the hours that the park is open to the public
  - c. the list of park rules
  - d. the number of visitors and picnic areas

