

## Wetlands



Welcome to the wetlands issue of Currents! The Southwest Florida Water Management District (SWFWMD) offers the Currents water resources newsletter for high school students. The newsletter is correlated to grades 9–12 of the Sunshine State Standards and provides an interesting way for students to increase their awareness and respect for Florida's precious water resources.

This issue of Currents focuses on wetlands. It includes an introduction to wetlands, an article about various types of wetlands, reasons why wetlands are important, information about tannins, a measurement activity using wetland trees, careers in wetland environments, and activities and suggestions for learning more about wetlands using the Internet. All the information and activities are designed to teach students about wetlands. In addition, we have included Currents Challenge, which contains items similar to those students could expect to find on the Florida Comprehensive Assessment Test (FCAT).

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 free water resources workshops for teachers. 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, ext. 4757  
1-800-423-1476, ext. 4757 (FL only)  
[WaterEducation@WaterMatters.org](mailto:WaterEducation@WaterMatters.org)

Southwest Florida  
Water Management District

WATERMATTERS.ORG • 1-800-423-1476

### Introduction

Ask students to share their experiences in wetland environments. Discuss the impact Florida's growing population has on wetlands. Emphasize the importance of protecting wetland areas to ensure a clean and healthy environment for future generations.

### Sunshine State Standards

**Science (9–12):** *Processes that Shape the Earth, SC.D.1.4, SC.D.2.4; How Living Things Interact with Their Environment, SC.G.1.4, SC.G.2.4; The Nature of Science, SC.H.1.4, SC.H.3.4. Social Studies (9–12):* *People, Places and Environments, SS.B.2.4; Government and the Citizen, SS.C.1.4; Economics, SS.D.1.4.*

### Language Arts (9–12):

*Writing, LA.B.2.4.*

Pg 1

Defend our  
wetlands!

## **The World of Wetlands Pg 2**

Ask students if they can name a specific type of wetland or the difference between a swamp and a marsh. Read about some of the wetlands in Florida. Then have students complete the writing activity and share their responses with others.

### **Sunshine State Standards**

**Science (9–12):** *Processes that Shape the Earth, SC.D.1.4, SC.D.2.4; How Living Things Interact with Their Environment, SC.G.1.4, SC.G.2.4; The Nature of Science, SC.H.1.4, SC.H.2.4.*

**Social Studies (9–12):** *People, Places and Environments, SS.B.2.4; Economics, SS.D.1.4. Language Arts (9–12): Writing, LA.B.2.4.*

## **Currently Wondering Pg 2**

Ask students to predict the appearance of water in a wetland area. Would they expect it to be clear, cloudy, tinted, etc.? Have them provide reasons for their answers. Then have students read the question and answer.

### **Sunshine State Standards**

**Science (9–12):** *Processes that Shape the Earth, SC.D.1.4, SC.D.2.4; How Living Things Interact with Their Environment, SC.G.1.4, SC.G.2.4.*

## **Why Are Wetlands Important? Pg 2**

Ask students if they know any reasons why wetlands are important. Read the article and ask if they can think of any additional reasons wetlands are essential to the natural environment.

### **Sunshine State Standards**

**Science (9–12):** *Processes that Shape the Earth, SC.D.1.4, SC.D.2.4; How Living Things Interact with Their Environment, SC.G.1.4, SC.G.2.4; The Nature of Science, SC.H.2.4. Social Studies (9–12):* *People, Places and Environments, SS.B.2.4.*

### **Whiz Quiz Answers:**

1-True, 2-False, 3-False, 4-True, 5-False

### **Sunshine State Standards**

**Science (9–12):** *Processes that Shape the Earth, SC.D.1.4, SC.D.2.4; How Living Things Interact with Their Environment, SC.G.1.4, SC.G.2.4; The Nature of Science, SC.H.2.4. Social Studies (9–12):* *People, Places and Environments, SS.B.2.4.*

## **Classroom Activity Pg 3**

### **Measuring Up Our Wetland Trees**

Ask students to list the types of trees they would expect to find in a nearby wetland area. After completing the activity, have students share their data and answers to the discussion questions.

### **Sunshine State Standards**

**Mathematics (9–12):** *Number Sense, Concepts and Operations, MA.A.1.4, MA.A.2.4, MA.A.3.4; Measurement, MA.B.1.4, MA.B.2.4, MA.B.3.4, MA.B.4.4; Geometry and Spatial Sense, MA.C.3.4, MA.D.1.4, MA.D.2.4; Data Analysis and Probability, MA.E.1.4. Science (9–12):* *Processes that Shape the Earth, SC.D.2.4; How Living Things Interact with Their Environment, SC.G.1.4, SC.G.2.4.*

## **Wetland Facts & Currents Quiz Pg 3**

Read the interesting facts about wetlands and encourage students to add their own to the list. Ask students to develop good questions for our Currents Quiz and send them in as a class set.

### **Sunshine State Standards**

**Science (9–12):** *Processes that Shape the Earth, SC.D.1.4, SC.D.2.4; How Living Things Interact with Their Environment, SC.G.1.4, SC.G.2.4. Language Arts (9–12):* *Writing, LA.B.2.4.*

## **Careers in Wetland Environments Pg 4**

Encourage students to learn about other environmental careers by visiting the library or surfing the Internet.

### **Sunshine State Standards**

**Science (9–12):** *Processes that Shape the Earth, SC.D.2.4; How Living Things Interact with Their Environment, SC.G.2.4. Social Studies (9–12):* *People, Places and Environments, SS.B.2.4.*

## **Sites to Explore Pg 4**

For a virtual wetland experience, have your students take the Green Swamp tour by visiting the SWFWMD's web site listed in this section.

### **Sunshine State Standards**

**Science (9–12):** *Processes that Shape the Earth, SC.D.2.4; How Living Things Interact with Their Environment, SC.G.2.4. Social Studies (9–12):* *People, Places and Environments, SS.B.2.4. Language Arts (9–12):* *Reading, LA.A.2.4.*

# **CURRENTS** **challenge** **ANSWERS**

Items included in the Challenge are similar to those presented on the Florida Comprehensive Assessment Test (FCAT). Make copies of the Challenge and explain to students that this provides good practice for preparing for the FCAT.

Answers to multiple-choice items: 1-d, 2-c, 3-d, 4-b, 5-d, 6-b, 7-a, 8-b, 9-c, 10-a

Answers to extended-response items:

**Question 1.** Responses will vary. Students should be able to demonstrate an understanding of the concept of wetlands and distinctions between various types of wetlands.

**Score 2 Points If...** The response indicates that the student has a thorough understanding of the concept of wetlands. The student has provided a brief description of three types of wetlands.

**Score 1 Point If...** The response indicates that the student has a partial understanding of the concept of wetlands. The student has provided a brief description of at least two types of wetlands.

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

**Question 2.** Responses will vary. Students should be able to describe one type of career that pertains to working in a wetland environment.

**Score 2 Points If ...** The response indicates that the student can effectively describe a career related to a wetland environment and provides several reasons to support the selected career.

**Score 1 Point If ...** The response indicates that the student has a partial understanding of a career related to a wetland environment and provides a few reasons to support the selected career.

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

### **Sunshine State Standards**

**Science (9–12):** *Processes that Shape the Earth, SC.D.2.4; How Living Things Interact with Their Environment, SC.G.2.4; The Nature of Science, SC.H.1.4, SC.H.3.4. Social Studies (9–12):* *People, Places and Environments, SS.B.2.4. Language Arts (9–12):* *Reading, LA.A.2.4; Writing, LA.B.2.4.*

# CURRENTS

## Challenge



Directions: This is your opportunity to demonstrate what you have learned about wetlands. It is also an opportunity for you to practice taking items that are similar to the FCAT.

For each multiple-choice item, select the best answer.

- 1 Which one below is a characteristic of a wetland?
  - a. The soil is rarely waterlogged.
  - b. The soil is covered with only salty water.
  - c. The surface water contains a high amount of oxygen.
  - d. The soil is hydric.
- 2 Which type of wetland resembles a pond filled with grasses and flowers?
  - a. coastal marsh
  - b. mangrove swamp
  - c. freshwater marsh
  - d. cypress swamp
- 3 What percent of all existing wetlands in the United States are located in Florida?
  - a. 5 percent
  - b. 30 percent
  - c. 15 percent
  - d. 20 percent
- 4 What is the difference between a swamp and a marsh?
  - a. Swamps are full of fresh water; marshes are full of salt water.
  - b. Marshes are filled with grasses; swamps are filled with trees.
  - c. Marshes are full of fresh water; swamps are full of salt water.
  - d. Swamps are filled with grasses; marshes are filled with trees.
- 5 Which type of trees are often called “walking trees” because of their roots?
  - a. cypresses
  - b. white mangroves
  - c. black mangroves
  - d. red mangroves
- 6 What is a simple technique that can be used to measure the height of a tree?
  - a. circumference measurement
  - b. shadow measurement
  - c. annual ring counting
  - d. leaf measurement
- 7 How do wetlands help to protect water quality?
  - a. They filter sediments, nutrients and other material from runoff.
  - b. They cause areas to flood into larger water bodies.
  - c. They prevent water from being stored in their areas.
  - d. They cause the water to be filled with tannins.
- 8 Which area of science focuses on the study of plants and animals found in freshwater ecosystems?
  - a. marine biology
  - b. aquatic biology
  - c. hydrogeology
  - d. botany
- 9 Careers in wetland environments that involve studying mammals, birds, snakes, fish or amphibians are associated with which of the following broad fields in science?
  - a. geology
  - b. botany
  - c. zoology
  - d. biology
- 10 What is an important message of this issue of *Currents*?
  - a. The future of our wetlands depends on the support from government agencies, private groups and citizens.
  - b. Regardless of what citizens do, all the wetlands will disappear within a decade.
  - c. Wetland restoration is cheaper than education and preservation.
  - d. Wetland areas will continue to expand in number and size throughout our state.

