

Sources of Pollution in Our Watershed

Ask students to list several types of pollution. Then read the article together. Discuss the difference between point and nonpoint water pollution. For an extended activity, have students collect several examples of pollution and create a poster, collage or mural with the materials. Include messages and slogans that encourage people to reduce water pollution. You may also want to do the activity suggested at the end of the article.

Sunshine State Standards *Science (6-8):* How Living Things Interact with Their Environment, SC.G.2.3. *The Arts (6-8):* Creation and Communication, VA.B.1.3. *Science (9-12):* How Living Things Interact with Their Environment, SC.G.2.4. *The Arts (9-12):* Creation and Communication, VA.B.1.4.

Career Focus

Job Opportunities

Emphasize to students that it is never too early to begin thinking about a future career. There are many career opportunities available for people who want to work in the environment. For a role-play activity, select four students to represent the different jobs described and have them read their parts. After each job description has been read, ask the rest of the class to offer opinions about the skills and responsibilities necessary for success. For additional information, use the books and Web sites listed at the end of the article.

Sunshine State Standards *Language Arts (6-8):* Reading, LA.A.2.3. *Language Arts (9-12):* Reading, LA.A.2.4

It's Your Turn

Restoring Huckaby Creek

Before reading the article, discuss the concept of restoration and ask students to describe examples of restoration projects. Read the article together. Then ask students to describe a restoration project that could occur nearby. Also, ask them to find out if there are any restoration projects going on in their area that may need volunteers.

Sunshine State Standards *Science (6-8):* Processes that Shape the Earth, SC.D.1.3, SC.D.2.3. *Science (9-12):* Processes that Shape the Earth, SC.D.1.4, SC.D.2.4

Classroom Activity

Create Your Own Watershed

Before beginning this activity, make sure that your students understand the concept of a watershed. For additional background, guide students through a review of other sections of the newsletter. Proceed with the activity and use the discussion questions to enhance their understanding of watersheds.

Sunshine State Standards *Science (6-8):* Processes that Shape the Earth, SC.D.1.3, SC.D.2.3; *The Nature of Science, SC.H.1.3, SC.H.2.3. Social Studies (6-8):* People, Places and Environments, SS.B.1.3, SS.B.2.3. *Science (9-12):* Processes that Shape the Earth, SC.D.2.4; *The Nature of Science, SC.H.2.4. Social Studies (9-12):* People, Places and Environments, SS.B.2.4.

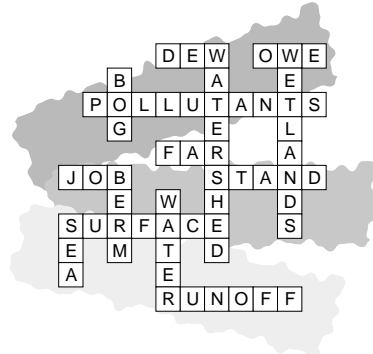
Many other free materials are available from the Southwest Florida Water Management District. We also offer water resources workshops for teachers in your county. Please contact us at 1-800-423-1476, ext. 4757, if you have any questions or suggestions about our water resources education program. Visit our Web site at www.swfwmd.state.fl.us.



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Although these activities are meant to be fun, they are designed to reinforce important vocabulary and concepts associated with understanding watersheds.



SCRAMBLE Answers

protect, surface, runoff, watershed

Sunshine State Standards *Language Arts (6-8):* Reading, LA.A.1.3, LA.A.2.3. *Language Arts (9-12):* Reading, LA.A.1.4, LA.A.2.4.



A lot of information is available on watersheds at the following Web site: <http://www.epa.gov/surf/states/FL>. Be sure to try a few of the other sites that are linked to it. As an extended activity, ask students to prepare research questions about watersheds and search for answers on the Internet.

Sunshine State Standards *Science (6-8):* Processes that Shape the Earth, SC.D.1.3, SC.D.2.3; *Language Arts (6-8):* Reading, LA.A.2.3. *Science (9-12):* Processes that Shape the Earth, SC.D.1.3, SC.D.2.3; *Language Arts (9-12):* Reading, LA.A.2.4.

WaterWeb Challenge

WaterWeb Challenge 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 FCAT. Students should be allowed to use the *WaterWeb* issue as they complete the Challenge. Answers to multiple choice items: 1-d, 2-d, 3-d, 4-c, 5-a, 6-b, 7-b, 8-a, 9-d, 10-a

Extended Response Items

Responses will vary. Students should be able to accurately describe the features of different surface water bodies as discussed on page 3 of *WaterWeb*. Their understanding of closed and open systems should include details presented on page 1 of *WaterWeb*. Responses will vary. Students should be able to assimilate information presented about water pollution and restoration projects throughout *WaterWeb*.

Sunshine State Standards *Science (6-8):* Processes that Shape the Earth, SC.D.1.3, SC.D.2.3, SC.G.2.3. *Social Studies (6-8):* People, Places and Environments, SS.B.2.3, SS.D.1.3. *Language Arts (6-8):* Reading, LA.A.2.3; Writing, LA.B.2.3. *Science (9-12):* Processes that Shape the Earth, SC.D.1.3, SC.D.2.3, SC.G.2.4. *Social Studies (9-12):* People, Places and Environments, SS.B.1.4. *Language Arts (9-12):* Reading, LA.A.2.4; Writing, LA.B.2.4.



Directions: This is your opportunity to demonstrate what you have learned about watersheds. It is also an opportunity for you to practice answering questions similar to those found on the FCAT. Do your best and meet the challenge!

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

- Regardless of exactly where you live, you do live in a watershed. What is a watershed?
 - area of land that water flows across as it moves toward a larger water body
 - like a funnel in which surface water runs off and drains into a common collection area
 - area of land from which water drains to a particular water body
 - a, b and c
- According to the article about water quality on page 2, what is the biggest threat to the quality of water in our surface water bodies?
 - recreational activities
 - state and local governments
 - habitat restoration projects
 - stormwater runoff
- What is surface water?
 - water that has not seeped into the ground
 - water that is exposed to the air
 - water that is underground in aquifers
 - both a and b
- Which one below is not an example of a body of fresh water?
 - lake
 - river
 - ocean
 - pond
- Wetlands play an important role in watersheds in west central Florida. What is a wetland?
 - an area of land where the water table is close to or level with the surface of land
 - an area of land that needs to be irrigated because it can't hold water
 - an area of land where few plants and animal species can survive
 - both a and b
- What can be generalized about pollution in the watershed?
 - All pollutants are harmful to humans.
 - Most pollutants get into our water because of the actions of people.
 - Pollution rarely affects the quality of water in a watershed.
 - Most pollution found in a watershed comes from one source.
- Which one below does NOT belong in a list of characteristics about wetlands?
 - purify polluted waters
 - contain mostly salt water
 - act as a reservoir for stormwater runoff
 - may include ponds, marshes and swamps
- Many successful restoration projects are occurring to protect our natural resources. What is the main purpose of a restoration project?
 - to convert altered areas back to their original, natural form
 - to provide an outdoor activity for volunteers
 - to use taxpayer dollars for outdoor recreation
 - to employ the services of local government agencies
- Why is nonpoint pollution so difficult to identify?
 - because a person can point a finger at the source
 - because its source is usually at the highest point of elevation
 - because its source is usually at the lowest point of elevation
 - because it can come from a variety of sources
- What is the purpose of the Career Focus on page 4?
 - to show that there are many opportunities in environmental careers
 - to stress that all environmental jobs require people to work outdoors
 - to describe the limited variety of jobs available in the environment
 - to show that few skills and abilities are required for jobs in the environment