

Coastal Wetlands Need YOU!

http://www.ccschools.com/btnep_educators/client_files/editor_files/ACTIVITY%2014%20Coastal%20Wetlands%20Need%20YOU.pdf

Focus on Inquiry

The student will analyze the problem of wetland loss and communicate ways to help solve the problem.

Lesson Overview



Students will use their knowledge of causes and effects of wetlands loss and problems to brainstorm ways in which they can contribute to solving and abating the problems associated with coastal land loss and habitat destruction. Students will then create a Citizen Action Brochure outlining an opportunity for citizens to help save and restore Louisiana’s wetlands.

Duration 2-50 minute class periods	Setting Classroom	Grouping Individual or small group	PTI Inquiry Subskills 5.2, 5.3, 7.3
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Lesson Components	Estimated Time	Inquiry Subskills Used	Technology Used	Level of Student Engagement	Brief Description
<i>Engage</i>	10 min	None	None	2	Students discuss ways they can help solve coastal land loss problems. A list of ways is generated for further research.
<i>Explore</i>	45 min	5.2 5.3, 7.3	Computer (brochure)	3	Students research ways to help solve coastal land loss problems and create a brochure to educate the public on ways to save the coast.
<i>Explain</i>	20 min	7.3	None	3	Students present their brochures and explain ways to help solve coastal land loss problem.
<i>Expand</i>	15 min	7.3	Computer (letter)	3	Students write letter to government official stating reasons for national support of wetland conservation issues and include why some consider La wetland loss a national crisis.
<i>Evaluate</i>	Varies	None	None	N/A	Assessment of student brochures.

Level of Student Engagement

1	Low	Listen to lecture, observe the teacher, individual reading, teacher demonstration, teacher-centered instruction
2	Moderate	Raise questions, lecture with discussion, record data, make predictions, technology interaction with assistance
3	High	Hands-on activity or inquiry; critique others, draw conclusions, make connections, problem-solve, student-centered

<p>National Science Education Standards – Inquiry Develop descriptions, explanations, predictions, and models using evidence. Think critically and logically to make the relationships between evidence and explanations. Communicate scientific procedures and explanations.</p>	
<p>National Science Education Standards – Earth Science Land forms are the result of a combination of constructive and destructive forces. Constructive forces include crustal deformation, volcanic eruption, and deposition of sediment, while destructive forces include weathering and erosion.</p>	
<p>Louisiana Grade Level Expectations – Inquiry Gr. 8, Inquiry GLE#12 – Use data and information gathered to develop an explanation of experimental results (SI-M-A4) Gr. 8, Inquiry GLE#16 – Use evidence to make inferences and predict trends (SI-M-A5) Gr. 8, Inquiry GLE#19 – Communicate ideas in a variety of ways (e.g., symbols, illustrations, graphs, charts, spreadsheets, concept maps, oral and written reports, equations) (SI-M-A7)</p>	
<p>Louisiana Grade Level Expectations Earth Science Gr. 8, GLE#19 – Determine the results of constructive and destructive forces upon landform development with the aid of geologic maps of Louisiana (ESS-M-A7) Gr. 8, GLE#20 – Describe how humans’ actions and natural processes have modified coastal regions in Louisiana</p>	

and other locations (ESS-M-A8)
 Gr. 8, GLE#53 – Distinguish among several examples of erosion (e.g., stream bank, topsoil, coastal) and describe common preventive measures (SE-M-A10)

Materials List (per group)

Information on the following topics:

- Christmas Tree Project
- Vegetative shoreline protection options
- Using native plants for landscaping and migratory birds
- School-based plant nurseries (Coastal Roots Project)

Materials for brochure:

Paper and art supplies or multimedia software to create brochure using a computer

Advance Preparation

1. Obtain resources containing information on the topics listed in the materials list.
2. Locate newspaper articles on volunteer opportunities to help save and restore the Louisiana wetlands or visit <http://www.btnep.org> and click on Volunteers.
3. Read *Background Information* section of activity lesson plan.
4. Prepare a rubric to assess student brochures.
5. Copy **Blackline Master #1** for each student.

Other Information

Learning Objectives

The learner will...

- identify ways they can help reduce coastal erosion and habitat destruction.
- design a public education brochure explaining how Louisiana residents can contribute to the solutions of coastal land loss.

Prior Knowledge Needed by the Students

- Students should be familiar with the causes and effects of coastal land loss in Louisiana.

Procedure

Engage (See activity Procedure #1-2)

1. Engage students in a class discussion on the problem of coastal land and habitat loss in Louisiana. Explain to them that scientists and engineers are working diligently to find new ways to mitigate and correct these problems.
2. Engage students in a discussion on the following questions:
 - a. Do you think it is possible for you and me to help solve some of the coastal land loss problems?
 - b. What are some ways that citizens can help?
3. Write students' list on board or on newsprint. The list should include the Christmas tree recycling projects, wetlands vegetation planting projects, ways landowners can preserve wetlands, measure homeowners whose property is on waterways can take to reduce wake erosion of banks, ways homeowners can preserve sand dunes on the barrier islands, storm drain marking, etc.
4. Explain to students we need to understand each of the ways citizens can help with coastal land loss problems in more detail.

Explore (See activity Procedure #3)

1. Students will research as much as they can about the topics using information collected from parish and state coastal management programs, the newspaper, BTNEP, the Internet, etc.
2. Students will complete **Blackline Master #1**, *Louisiana Wetlands Need YOU! Citizen Action Brochure*, to complete the steps needed to take into their brochure development. A copy of the



handout can be obtained from the activity website http://www.ccschools.com/btnep_educators/client_files/editor_files/ACTIVITY%201-14%20Coastal%20Wetlands%20Need%20YOU.pdf

3. Students will make a brochure (or write newspaper articles) that can be used to help educate the public about how they can join the effort to save the Louisiana coast. They will include facts and figures that will convince people that it is worth their time to get involved.

Explain

1. Students present their brochures to classmates.

Expand (See Extension section of activity website)

1. Have students write a letter to the Governor, the State Legislature, Congress, or the President stating reasons for national support of wetland conservation issues. Include support of why some people consider Louisiana's wetland loss a national crisis.

Evaluate

1. Teacher uses a rubric to assess student brochures.

Blackline Master

1. **Louisiana Wetlands Need YOU! Citizen Action Brochure** available at: http://www.ccschools.com/btnep_educators/client_files/editor_files/ACTIVITY%201-14%20Coastal%20Wetlands%20Need%20YOU.pdf

Supplementary Resources

Barataria Terrebonne National Estuary Program's Online Estuary Education resource Module
<http://educators.btnep.org/default.asp?id=64>

This website contains a comprehensive source of information and activities for formal and non-formal educators. The activities are created specifically for students K through 12th grade. A variety of websites, CD's, and references are listed on the activity website.