

Score one for the Estuary

Estuary Concept

Every citizen has a responsibility to help protect and maintain the health of estuaries, especially if that means repairing damage caused by human activities.

Learning Objectives

- Integrate the knowledge that humans can have both negative and positive impacts on the health of estuaries in the design of a stewardship activity.
- Relate stewardship as a way for people, including young people, to care for or maintain the environment, an estuary, or wetlands.
- Associate people working together, despite age, can have a big impact on estuaries and wetlands.
- Recognize the variety of stewardship activities that they can take part in to help lessen the impacts of climate change.

Teacher Background

This exercise helps students plan a stewardship project aimed at resolving a problem or improving environmental quality at a local estuary, wetland, or waterway. Having students design their own action plan will enhance student involvement. Students will come to realize that they are stakeholders in their local environment



Activity Information

Grade Level

6-8, 9-12

Time Required

Multiple days

Topic

Threats and Pressures

Make a Difference

Overview

In this exercise, students will apply problem solving skills to improve the environment of a local estuary, wetland or waterway through participation in a stewardship project.

and therefore should be stewards charged with maintaining or improving the quality of that environment. Suitable sites in your area may be a river, lake, or wetland or, if you live near the ocean, possibly a saltwater marsh or a shoreline.

Teacher Preparation

Decide if you really want to do a class stewardship project. You may not have time or it may simply not be practical. There is educational value in going through the process of brainstorming a project plan and trying to figure out how that plan could be implemented. Consider having the students complete a plan, even if the plan never gets carried out.

You may want to choose a site and environmental need or issue before students start their project planning, or you may want the choosing of a site and an issue to be part of your students' planning. Either way, it would be good for you to know as much about potential site choices as possible. You may want to contact a local nature center, a NERR site near your school, your state's Department of Natural Resources, etc., for advice. Other important considerations in choosing a site include distance from your school and safety factors. Visit potential sites before starting any stewardship project.

If your class does not start its own stewardship project, perhaps your students can join an existing stewardship project at one of the local sites researched.



Procedure or Activity Steps

1. As a class show the [Estuaries: Nature's Water Filters](#). This animation will demonstrate how estuaries function so that students can see why they are important. After viewing ask students to share why they think estuaries are important.
2. Divide your class into several teams. Have each team read "[Human Disturbances to Estuaries](#)" to get background on the effects humans have on estuaries. Discuss impacts they read about and then share ideas of ways they could potentially lessen their impact. This information could drive the project students select.
3. Distribute copies of Student Master: Planning Your Stewardship Project. Explain to students that now that they know the purpose of an estuary and some of the things humans are doing to harm them use their Planning Stewardship Project worksheet to begin brainstorming projects that could help improve their local estuary.
4. Student teams follow the Student Master: Planning Your Stewardship Project to design a stewardship project. Allow time for in-class team discussions, research, etc.
5. Student teams should then present their project ideas to the entire class. If you have more than one class, you may want to have each class vote on that class's best project idea and then find a way to have all of your classes hear presentations by the "finalists" before voting on one project that all of your classes can implement together.
6. Focus pre-vote discussions on what makes for a good stewardship project. What considerations of time and money might make one project better, or perhaps simply more feasible, than another?
7. If possible, help your students implement their stewardship project.
8. Get in touch with someone at your local NERR to see if they are interested in sharing some of your students' other stewardship project ideas with the public via their learning centers or web sites.

Materials Needed

- Computer
- Student Master: Planning Your Stewardship Project

Planning Your Stewardship Project

Stewardship: to care for or maintain something (in this case, the environment)

Team name: _____

Participants: _____

Project Title: _____

Thinking It Through

What do you plan to do for your estuary, wetland, or waterway? Describe your stewardship project idea in one or two paragraphs.

What do you hope to accomplish by doing this project?

How does your project help protect waterways and/or the estuaries?

How will this project make a difference and for whom?

Planning

When do you plan to begin (now, next month, next semester, etc.)?

How much time will you need to complete the project?

To your knowledge, has this type of project been done before? If so, what were the results? How will your project be different?

List any community members, community organizations, state or national organizations (such as your local NERR) that might be able to help you with your project. Include names of individual contacts and how to contact them (email address, phone numbers, etc.):

List any special services you might need to complete your project. (This might include things like transportation, garbage disposal, etc.)

Will there be any costs associated with your project? If so, how do you plan to pay the costs? (List costs and possible sources of funding.) Are there any ways you can lower the costs?

List any other resources, materials, or supplies that you will need for the project (gloves, trash bags, tarps, etc.):

If your project requires group work, where and when can you and the other group members get together to work on the project?

Place:

When:

Actions

Now outline the specific steps or actions your group will take to accomplish the project. Assign specific tasks to each person with clear instructions and completion times. (Use additional sheets of paper as needed.)

Action Item 1: _____

Lead Student: _____ Completion Date: _____

Action Item 2: _____

Lead Student: _____ Completion Date: _____

Action Item 3: _____

Lead Student: _____ Completion Date: _____

Action Item 4: _____

Lead Student: _____ Completion Date: _____

Action Item 5: _____

Lead Student: _____ Completion Date: _____

Reviewing & Reporting

Did you complete your project and meet your goal?

Did you learn anything that surprised you during your project? What?

Were there any unexpected things you had to overcome in order to complete your project?

How can you share the information you learned and results with others?

Did your project bring up any other questions or issues that could become future project ideas?

What is the most important thing you learned from doing this project?