Pollution and the Ocean

Grade Level
6th – 8th

Subject Area
Science

Objectives

- To identify some of the pollutants in the ocean and explain how the pollutants got into the ocean
- To define marine debris and describe its impact on the environment
- To explain the importance of the Marine Debris Research, Prevention and Reduction Act
- To write a plan on how to be a good steward of the ocean

Activities
1. Involve students in the "Keep Oceans Clean" pollution game at http://www.keepoceansclean.org so they will begin thinking about how their actions affect the health of the ocean. Students should be able to identify the pollutants they see in the game and explain how they got into the ocean.

2. Have students define the term "marine debris" and describe its impact on the environment. Students should be able to list the types of pollution in the ocean and its sources.

http://marinedebris.noaa.gov/marinedebris101/mdinfo.html

For further information, students are to watch the short video "What is Marine Debris" in order to see examples of wildlife entanglement in marine debris and pictures of how the ocean is affected by pollution. Students can also get ideas of how they can help to be part of the solution.

http://marinedebris.noaa.gov/outreach/video.html

3. Instruct students to learn about the Marine Debris Research, Prevention and Reduction Act, using the following websites, and then discuss its importance as a class.

On December 22, 2006, the Marine Debris Research, Prevention and Reduction Act was signed into law.
http://www.ocean.us/node/524

Columbia University graduate students wrote a policy analysis of the act.
http://www.columbia.edu/cu/mpaenvironment/pages/news_worlshopsum05_final.html
(click on "Marine Debris Research Prevention and Reduction Act" under presentations)

The 2007 "Trashing Your Livelihood" brochure from AMSEA (Alaska Marine Safety

Education Association) instructs commercial fishermen to be careful not to incur fines or cause future harm to the environment because of illegal discards.
http://www.amsea.org/pdf/TrashingYourLivelihood-brochure.pdf

Evaluation
Students will be tested on types of pollutants in the ocean and their origin, the impact of marine debris on the environment and being able to explain the importance of the Marine Debris Research, Prevention and Reduction Act.

Extension
Instruct students to write a personal plan on how to be a good steward of the ocean. Some elements that could be included are volunteering to pick up trash at the beach, staying informed by reading about protecting the ocean or writing to their congressman. At home students can follow the "3 R's" of the environment: reduce, reuse and recycle.