Ocean Pollution

Students will research ocean pollution and compare/contrast current data, hypotheses and other information and check for accuracy.

Grade Level: 10 - 12th
Subject: Environmental, Science
Length of Time: 2 Class Periods

Common Core Alignment
CCSS.ELA-Literacy.11.RST.1 -
CCSS.ELA-Literacy.11.RST.6 -
CCSS.ELA-Literacy.11.RST.2 -
- (See note; not applicable as a separate requirement)

Objectives & Outcomes
Using the Internet and other resources the students will be able to determine the accuracy of current research, data, and other information related to ocean pollution. Using articles and other materials the students will come to conclusions about ocean pollution, as well as the causes and prevention.

Materials Needed
Internet access or other research resources, three Ocean Research worksheets, one Final Report worksheet

Prepare ahead of time: 1) Ocean Research Worksheet: Title of Article/reference, Summary of article, Conclusions based on article; 2) Final Report worksheet: Compare/contrast articles, Final conclusions; need two articles with different information/data about any topic.

Procedure
Opening to Lesson
- The teacher will read each article found ahead of time showing conflicting information regarding the same topic, often found on the Internet
- The teacher will ask the students how they could determine the accuracy of information
• Allow for discussion and sharing of ideas
• Ask students why the differences occur even though facts may prove otherwise

**Body of Lesson**

**Modeling**
• Ask the question: What do you know about ocean pollution?
• Allow for responses and discussion
• Identify and focus on the students’ conflicting answers if there are any
• Ask students why having conflicting information may be a problem
• Allow for a discussion

**Guided Practice**
• Distribute the three Ocean Research worksheets to each student
• Explain to students they are to find three articles from the Internet about the causes of ocean pollution and other information related to the issue
• Review what is expected on each worksheet
• Remind students they are not seeking facts about oceans such as what fish live in them, size of oceans, etc.
• Encourage students to think about the information presented and if there is evidence to back up conclusions
• Direct students to Internet search engines typing in various search terms, not just “ocean pollution” but others as well (What causes ocean pollution? What’s to blame for ocean pollution?)
• Allow students time to do research, find, and review the three article they choose to summarize
• Once students complete research distribute the Final Report worksheet
• Guide the students to compare/contrast the research and to come to final, hopefully factual, conclusions
• Collect final reports for evaluation

**Independent Practice**
• For homework: Students will research preventing ocean pollution, sharing the results in class the next day.

**Closing**
Allow students to share homework assignment, discuss how the Internet may not always have accurate fact-filled articles. Discuss some of the motives for some writers/researchers may be reporting inaccurate information. Talk about reasons for accuracy in science overall.

**Assessment & Evaluation**
Final written report with conclusions and insights and/or class presentation evaluation using expectations/rubrics prepared ahead of time.
Modification & Differentiation

Students may work in pairs; assign specific oceans or other bodies of water to each student; use body of water in close proximity to school; fieldtrip to nearby body of water; follow-up with lab exercises related to water pollution; Power Point presentations.

Related Lesson Plans

Water, Water, Everywhere

The students will identify products that need water to be manufactured, and the amount needed for each product.

Six Degrees of Science Separation

Using a list of terms from all fields of science, the students will connect them in six or less steps to a non-science term, explaining scientific relationships during the process.

Better Alternatives

The students, with a partner, will research the negative environmental impact of every day products and identify safer alternatives.

Words of the Environment

On day one, the students will list as many words as possible related to environmental science and on day two connect the meanings of each to real life situations based on research.