

NOAA Teacher at Sea Program

Lesson Plan #5

Unit Plan: Sustainable Harvesting of Chinook Salmon; A Fisheries Management Decision

Activity Title: An Investigation of Careers

Subject (Focus/Topic): Life science: marine ecology /fisheries/technology

Grade Level: 9th – 12th Grade

Average Learning Time: 45 minutes

Lesson Summary (Overview/Purpose): Students will investigate and discuss various careers associated with the fishing industries.

Overall Concept (Big Idea/Essential Question): This activity is designed to give students an opportunity to explore careers that are linked to Marine Science.

Specific Concepts (Key Concepts)

- Students gather and share information about the scientists include biographies, what their daily day is like and current research interests.
- Students gain insight into the careers of people associated with the fishing industry.

Focus Questions

- 1) What does the professional you investigated specifically do?
- 2) What specific education and/or skills does your professional have?
- 3) Did anything surprise you about this profession? (Why or Why not)
- 4) What do you think is the best part of this profession?
- 5) What do you think is the most challenging aspect of this profession?

Objectives/Learning Goals

- Students will be able to describe a career associated with marine science.
- Students will be able to describe the wide varieties of ways their lives may be impacted by a person who's job involves some aspect of the ocean.

Background Information

There are many careers that are linked to the ocean. Some involve studying and exploring the ocean while other manage it's resources. There are even some careers that simply take advantage of the ocean's resources such as a fisherman or trader. Students will look up various ocean-related careers and sharing them via a discussion thread.

Web Resources

NOAA Ocean Careers to Inspire Another Generation of Explorers

<http://oceanexplorer.noaa.gov/edu/oceanage/welcome.html>

Wikispaces.com

Common Misconceptions/Preconceptions

- The only marine science careers is a Marine Biologist.

Materials

Provide students with discussion questions either directly on the Discussion Form or through some other means.

Technical Requirements

Internet Access:

- Set up a discussion thread that is dedicated to Ocean Careers on your classe's Wikispace page that was developed for Lesson #1
- Provide link to NOAA Ocean Careers to Inspire Another Generation of Explorers on the wikipage dedicated to exploring ocean careers.

Teacher Preparation

This lesson has students select an ocean career on a first-come first-serve basis. The student describes various aspects of the career in a class online discussion forum. Students are mandated to reply to atleast two of their classmate's postings.

Pre-assessment Strategy/Anticipatory Set (Optional)

You may wish for the students, as a class, to first brainstorm careers that involve the ocean. Keep the results for a later comparison.

Lesson Procedure

1. Students access the “NOAA Ocean Careers to Inspire Another Generation of Explorers” website and surfs to look at the different types of careers that are listed.
2. Students select on of the career to investigate further and note their choice on the class Wikispace page dedicated to this lesson.
3. Student answer the following questions about their career of choice by using the information provided by the website.
 - a. What does the professional you investigated specifically do?
 - b. What specific education and/or skills does your professional have?
 - c. Did anything surprise you about this profession? (Why or Why not)
 - d. What do you think is the best part of this profession?
 - e. What do you think is the most challenging aspect of this profession?
4. Students make one well-written posting addressing the questions above. In addition, student are required to post at least two (2) thoughtful responses to your classmate's postings.

Assessment and Evaluation

Evaluation of the Discussion Forum entries can be based on the following:

- A well written and thought out posting(s) - almost perfect. No spelling or grammatical mistakes that I can see. Quality, not quantity is the issue with getting high scores in discussions. However, because this is a discussion assignment, 1-2 sentence postings usually will not receive high marks. Personal opinions or ideas are supported with outside information, statistics, quotes, etc.
- A well written and thought out posting(s) that shows the student has a grasp of the topic or content being discussed. However, this posting could be improved upon in some ways. Maybe the content needs a little more substance. The posting(s) might be good but the student should have elaborated more with supporting details. There are a few spelling and grammatical mistakes but not enough to detract from what is written.
- Completed the assignment with average results. Grammatical and spelling mistakes are numerous enough to distract from the meaning and content of what is written and discussed. The content might be good but the overall posting might look and feel like it is in a rough draft form. Structure of content is a little hard to follow or the progression of thought might not flow well.

Standards

National Science Education Standard(s) Addressed:

• NSES A: Unifying Concepts and Processes

Sub-category 1

• NSES B: Science as Inquiry

Sub-category 2

• NSES F: Science and Technology

Sub-category 1 and 2

• NSES G: Personal and Social Perspectives

Sub-category 6

• NSES H: History and Nature of Science

Sub-categories 1, 2 and 3

Ocean Literacy Principles Addressed:

• Principle 5: The ocean supports a great diversity of life and ecosystems.

Fundamental Concepts: a, e, f, g and h

• Principle 6: The ocean and humans are inextricably interconnected

Fundamental Concepts: a, b, c, d, e, f and g

• Principle 7: The ocean is largely unexplored.

Fundamental Concept: a, b, c, d, e, and f

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