

NOAA Teacher at Sea Program

Lesson Plan

(Addressing Careers)

Activity Title: Ocean careers for everyone

Subject (Focus/Topic): Ocean careers

Grade Level: Grade 5

Average Learning Time: Approximately three 60-minute class periods.

Lesson Summary (Overview/Purpose): Students will select an oceans career that interests them based on their responses to an student career interest inventory. Students will create a brochure or poster to present to the class with information about their selected career.

Overall Concept (Big Idea/Essential Question):

What ocean careers exist that match-up with your interests?

Specific Concepts (Key Concepts):

- There are many different ocean-related careers
- Different careers require different skills, education, etc.
- It is important to start to plan for your future when you are still young so that you can plan your education and attain your dreams

Focus Questions (Specific Questions):

- What are my interests?
- What types of ocean careers relate to my interests?
- What education do I need to attain an ocean-related job that I am interested in?
- What will I do in the ocean career that interests me most?

Objectives/Learning Goals:

- Students will be able to take a career interest survey
- Students will be able to select an ocean career that matches-up with their interests
- Students will be able to research that specific career – noting important information about the career (education required, type of work that they will do, profile a specific employee in that career, the amount of money that they will make, etc.) given an outline for note-taking
- Students will be able to present the information they gather in a creative manner to their classmates (PowerPoint, poster, brochure, interactive “infomercial,” etc.)

Background Information: Students should understand that there are many different types of science and that there are many different types of careers related to science. They should have familiarity with oceanography and basic background information about the types of things that oceanographers study and the type of work that oceanographers do. They will probably be surprised to learn in this lesson that there are many other types of careers related to oceans not strictly “scientific” that they may be more interested in exploring and potentially pursuing one day.

Common Misconceptions/Preconceptions:

- All scientists are men.
- Scientists work in labs by themselves.
- Scientists do not have fun.
- “I” cannot be a scientist when I grow-up.
- If I want to work with/study the ocean, I have to be an oceanographer.
- If I want to work in an ocean-related career, I have to go to college.

Materials:

- Student interest inventory
- Student note-taking outline
- 1 computer per student
- Poster board, markers, crayons, scissors, paper, etc. for creation of creative presentations
- PMI reflection worksheet

Technical Requirements:

- Access to Internet for student research.

Teacher Preparation:

- Teacher will photocopy the student interest inventory, the note-taking outline and the PMI reflection worksheet.
- Teacher will request the media center for computer time.
- Teacher will gather supplies for students to use to develop their presentations about the career of their choice.
- Teacher will print out pictures of different ocean-related science careers found at www.oceanexplorer.noaa.gov. Teachers should print the career name on different papers (so students can match the picture with the career name). There should be one packet of career names and photos for every 4/5 students to match.

Keywords: career, interest, oceanography, (names of various ocean-related careers)

Pre-assessment Strategy:

- Ask students who has visited the ocean and/or been on a boat.
- Ask students what they know about careers related to the ocean.
- Ask students what questions they have about ocean-related careers.
- Create a class T-chart on the chalkboard or whiteboard. Record the information that they already know on one side and questions that they have on the other side.

- Pass out one packet of ocean-related career pictures and career name cards to each group of 4-5 students. Have students try to match the career photo with the career name. When all groups are finish, correct the matches as a class and address any misconceptions that arise.

Lesson Procedure:*Interest Inventory:*

- Students complete the career interest inventory on their own. Stress that they should take this seriously and not try to put the same answers at their friends.

- When students finish, they should share their results with the members of their table. Assign a reporter to report a summary of the group results to the entire class. (Ex. Two students are interested in helping protect the environment, three students are interested in working on ships, etc.). You may decide to help the class graph this data on a bar graph to get a graphical representation of the class's interests.

Research:

- Take students to the media room/computer lab and demonstrate how to use the www.oceancareers.com website to search for ocean careers by interest.
- Pass out the note-taking outline to students and give them time to read through the outline and ask any questions they may have.
- Give students time to select one career that interests them and to fill out the note-taking outline. Those who finish early may either select a second career and complete a second note-taking outline or write a summary of the information in their first note-taking outline.

Creative project:

- Students work independently to transform the information from their note-taking outline into a creative format to present to the class. Suggestions include 1) a poster with colors, pictures, etc.; 2) a PowerPoint presentation; 3) an interactive "info commercial" skit.

Presentation:

- Students separate into groups based on their interests and present their career projects to the peers in their interest group.
- Following the presentations, students fill out a PMI (Positive, Minus, Interesting) reflection worksheet. They should list one "positive" thing about the careers activity, one "negative" thing, and one "interesting" thing.

Assessment and Evaluation:

- Interest inventory completed
- Note-taking outline completed
- Poster/creative project completed
- Oral presentation completed
- Final PMI reflection completed

National Science Education Standards Addressed:

N/A

Additional Resources:

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

http://www.oceancareers.com/2.0/available_careers.php

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Student Career Interest Inventory

INSTRUCCIONES: Use the rating scale to complete the following questions based on your personal interests.

Not interested	Somewhat interested	Interested	Very interested
1	2	3	4

1. Work on ships

1 2 3 4

2. Work in the ocean sciences

1 2 3 4

3. Design, build, or maintain equipment, ships or structures

1 2 3 4

4. Help protect the environment

1 2 3 4

5. Work with animals

1 2 3 4

6. Work in law enforcement, regulation, national security, or defense

1 2 3 4

7. Teach or share information with others

1 2 3 4

8. Work with sea-going transportation of cargo and passengers

1 2 3 4

9. Participate in energy or mineral research, exploration, and extraction

1 2 3 4

Name: _____

Date:

Note-taking Outline

www.oceancareers.com

Career:

Typical education:

Annual Salary:

Tasks and Duties:

-
-
-
-

Job Requirements:

-
-
-

List three interesting things you learned about the career?

-
-
-

Profile -- Scientist's name:

What does he/she do in the career?

-
-
-

What do you most like about this career?

Name: _____



P = _____



M = _____



I = _____

Name: _____



P = _____



M = _____



I = _____

Name: _____



P = _____



M = _____



I = _____

Name: _____



P = _____



M = _____



I = _____