NOAA Teacher at Sea Program
Lesson Plan by Tammy Orilio

Activity Title: Exploring NOAA Shipboard Careers

Subject (Focus/Topic): NOAA job opportunities

Grade Level: 10-12

Average Learning Time: one 50-minute class period to explain project, plus one week for student research

Lesson Summary (Overview/Purpose): Starting in the classroom, students will explore the various career paths that NOAA can afford them, culminating in a poster or PowerPoint presentation to the rest of the class.

Overall Concept (Big Idea/Essential Question): The purpose of this activity is to allow students to see potential job/career opportunities within NOAA, and to demonstrate that multiple background disciplines may be involved in a single career.

Specific Concepts (Key Concepts):

- There are a multitude of career opportunities in the NOAA agency
- Every position requires hands-on training, post-secondary schooling, or a combination of both
- Many positions require certification/licensing in order to “move up” the ladder

Focus Questions (Specific Questions):

- What are some of the possible job opportunities on board a NOAA research vessel?
- Where is there a listing of all potential NOAA jobs (and their requirements)?
- What are the education and experience requirements of the job?
- What are some of the daily job duties required of this position?

Objectives/Learning Goals:

- Students will be able to identify many of the possible career tracks available through NOAA
- Students will understand the requirements (either hands-on work experience, training, or education) needed for a particular position at NOAA

Background Information: Students should first know what NOAA is and what the main vision of the agency is. Students should also be aware of the different types of research vessels & their missions, and understand the importance of the science conducted on each ship.

Common Misconceptions/Preconceptions:

- Students do not realize how many different types of people/jobs are required to make a research cruise successful

- Students often automatically assume that they will never be qualified to work on a NOAA vessel

Materials:
- Computer with internet access and PowerPoint
- Posterboard, markers, etc
- Printer

Technical Requirements:
- Internet access
- LCD projector

Teacher Preparation:
- Teacher will need to have either handouts or prepared slides to show students the various types of NOAA research vessels
- Teacher will need to have access to computers for classroom use

Keywords:
- Skilled fishermen
- Engineer
- Deckhand
- Seaman

Lesson Procedure:
1. Begin the lesson by showing pictures/video clips from a research or fishing vessel and ask the students to identify all of the potential jobs needed to make the ship run.
2. Tell students they will be creating an informational Powerpoint or poster about careers onboard NOAA ships.
3. Show students a PowerPoint (or handout) with short descriptions of ship jobs.
4. Students will then pick one potential job that interests them, and begin Internet research to explore that particular job.
5. Questions to explore:
    - What is a typical day like?
    - What location(s) would the ship be sailing?
    - How often are they out to sea?
    - How much physical labor is involved?
    - Is there any potential danger on the job?
    - What are the hours?
    - What kind of educational training is necessary for this position?
    - What kind of vocational (hands-on, job-related) training is necessary for this position?
    - Are there any opportunities for advancement?
    - What is the base salary?

6. Once all information has been gathered, students will assimilate into either a PowerPoint or poster presentation.
7. Each student will present his/her findings about each job to the rest of the class. During the presentations, students will complete a table for each different job presented.

Assessment and Evaluation:

- See rubric below

Standards:

- **National Science Education Standards Addressed**:
    1. Abilities to do scientific inquiry
    2. Science and technology in local, national, and global challenges
    3. Science as a human endeavor
- **Ocean Literacy Principles Addressed:**
    1. The ocean and humans are inextricably interconnected
- **State Science Standards Addressed:**
    1. student uses the scientific processes and habits of mind to solve problems
    2. student understands that science, technology, and society are interwoven and interdependent

Rubric: NOAA Job Opportunities

	Points Possible	Your Points	Comments
Poster/PowerPoint			
Job Title	0 1 2		
Your Name	0 1 2		
Graphic	0 1 2		
Job Description			
Basic Duties	0 1 2 3		
Education	0 1 2 3		
Experience	0 1 2 3		
Salary	0 1 2 3		
Dangers	0 1 2 3		
Advancement	0 1 2 3		
Additional Info	0 1 2 3		
Additional Info	0 1 2 3		
Additional Info	0 1 2 3		
Additional Info	0 1 2 3		
Spelling/Grammar	10		
Graphics	10		
Presentation Style			
Speak Clearly	0 1 2 3		
Eye Contact	0 1 2 3		
Posture	0 1 2 3		
No Gum	0 1 2 3		
Knowledgeable	0 1 2 3		

Peer Review: NOAA Career Presentations

Job	Duties	Education	Experience	Do you think you'd like this job? Explain.