

## NOAA TAS Lesson Plan (Ocean Careers)

This lesson is designed to introduce students to the types of careers available on NOAA ships in a way that ties it to the lesson about hydrography and shows the careers in action. While on the ship, I took quite a few photos and videos that showed everyday operations of the ship, including everything from basic ship activities, emergency practice drills, hydrography work on the ship and on the launches, safety briefings, and so on.

**Activity Title:** NOAA Careers at Sea!

**Subject (Focus/Topic):** This lesson is intended to introduce students to the various careers available in NOAA that work on the NOAA ships.

**Grade Level:** 7-12 (but could be modified for any grade)

**Average Learning Time:** One day

**Lesson Summary (Overview/Purpose):** The students will look at and watch a collection of pictures and videos showing ship-board operations, develop some observations and questions, and then participate in a discussion about life on a ship and NOAA careers.

**Overall Concept (Big Idea/Essential Question):**

Although the ultimate goal of NOAA ships is scientific exploration, many diverse careers are available through NOAA that draw upon diverse skills sets and talents.

**Specific Concepts (Key Concepts):**

NOAA is divided into the uniformed Corps and civilians

NOAA careers span everything from scientific careers to ship operations to a combination of both.

Effective work on a ship requires everyone to work together and focus on safety at all times.

**Background Information:**

One of the many exciting aspects of participating in the NOAA Teacher at Sea program is that in addition to contributing to the scientific work of the ship, I was also able to learn about what each of the other departments on the ship does, talk with the people about their life on the ship, and learn about ship-board operations. As a result, I got to learn a lot about the many different careers in NOAA.

**Common Misconceptions/Preconceptions:**

You have to be a scientist in order to work with NOAA (this is not true; NOAA relies on many individuals on their ships who do not have a scientific background, but who do have a great deal of experience in other areas, such as cooking or ship-board work).

**Materials:**

Pictures and videos of life on a ship.

**Technical Requirements:**

Computer for showing pictures and videos.

**Teacher Preparation:**

After participating in the Teacher at Sea program, teachers will have a variety of experiences and physical artifacts reflecting life on a ship and NOAA careers. For teachers interested in teaching about this to their students, many visual resources are available that would allow them to follow the same format as this lesson.

**Keywords:**

NOAA Corps  
Hydrography  
Deck Department  
Engineering Department  
Ship Steward

**Pre-assessment Strategy/Anticipatory Set (Optional):**

What do you think it's like to work on a ship? What challenges do you think there are?

**Lesson Procedure:**

1. Briefly describe the NOAA Teacher at Sea program, show some pictures of the teacher on the ship.
2. Ask students to make a T-chart on a piece of paper. The left side is for "observations" and the right side is for "questions". Show a series of pictures and/or videos to students. For each one, ask students to make observations on the left side of their t-chart and write down questions on the right side of their t-chart. For ease, it makes the most sense to show students a couple of pictures that all show similar operations (i.e. safety drills, morning briefing, bridge/navigation, hydrography room, etc) and then pause to talk about them.
3. Each grouping of photos/videos should have a theme and a goal. For example, pictures or videos of the bridge would show NOAA corps officers navigating, a member of the deck department at the helm, and various other members of the ship playing various roles. Looking at a group of these photos of the bridge would allow the teacher to talk about how navigation works on the ship as well as how each person contributes to this process. This is also a good time to talk about the NOAA corps, which is responsible for all navigation on the ship, something that all corps members learn both in training and on board the ship in their first few years.
4. For the Ship stewards and cooks, pictures of the mess and cooking would be an appropriate grouping.
5. For more on the deck department, pictures of docking/undocking, anchor set-up, lowering/raising the launches, driving the launches, etc.

6. For more on the NOAA corps, more pictures of the hydrography room, work on the launches, etc.
7. For the hydrography department, pictures of work on the launches, setting up tide gauges, the hydrography room, and so on.
8. For each set of pictures, the teacher should be prepared with anecdotes of his/her own that relate to the pictures, and more concrete talking points about each role: education requirements, typical entry methods into that career, levels of advancement. Students may also be interested in things like work schedule, vacation time, salary, etc.
9. For more information, share the teacher's blog with students.

**Assessment:**

Although this is not tied to a specific state or national standard, a good assessment piece would be to ask students to identify which of the NOAA career paths resonated the most with them and why, which not only allows the teacher to determine whether they understood the content of the lesson, but also allows the students to reflect on appropriate and interesting career paths for themselves.

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