



Careers in Dredging

GRADE LEVEL: 1 - 8

TIME: 40 MIN

SUMMARY

In the lesson, students will be introduced to different careers that are part of the dredging process. Students will learn that these careers require a variety of educational backgrounds and can involve many different activities throughout the work day.

OBJECTIVES

1. Learn about the history of Poplar Island and the dredging process that resulted in its restoration.
2. Identify different careers involved in the dredging process and explore the daily life of those jobs.

VOCABULARY

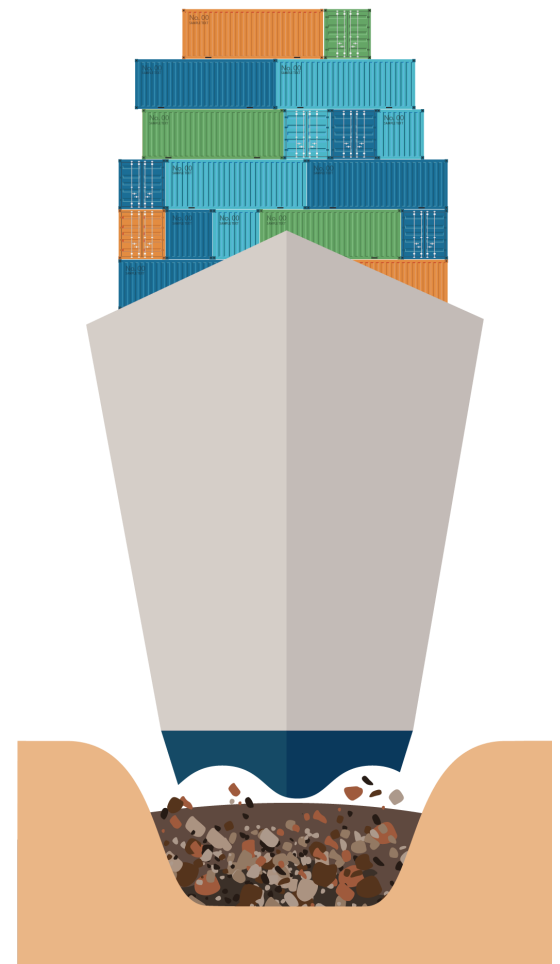
- **Cargo** - Goods carried on a ship, aircraft, or motor vehicle.
- **Cargo Ship** - A ship that transports goods and materials from one port to another
- **Draft**- The vertical distance between the water surface and the bottom of the ship.
- **Dredging** - The process of removing sediment from shipping channels.
- **Dredged Material** - The sediment removed from the shipping channels.
- **Dredge Technician** - A person who coordinates and monitors dredge material placement.
- **Dredging Outreach and Education Specialist** - A person who teaches students and adults about the dredging process in Maryland and the resulting ecological restoration.
- **Environmental Specialist** - A person who collects data about the environment.
- **Shipping Channels** - Areas in the water that are maintained to a depth that can accommodate cargo ships. They are marked by buoys and identified on nautical charts (so ship captains know where to travel).

MATERIALS

- "Careers in Dredging" Power Point
- Career costumes:
 - Dredge technician (hard hat, work boots, safety vest, safety glasses, toy construction vehicles)
 - Environmental specialist (safety vest, waders, sunglasses, clipboard, binoculars, bird checklist, toy crab)
 - Outreach education specialist (baseball hat, sunglasses, safety vest, large bus cutout)

BACKGROUND

When people think about careers involved with the Port



of Baltimore, most automatically think of life on ships. However, many jobs are involved in maintaining the shipping channels and keeping the Port open for business. On every important job is to dredge shipping channels to make sure they are deep enough for ships to safely navigate to the Port of Baltimore terminals. Because the Chesapeake Bay has an average natural depth of only 21 feet, the approach channels to the Port of Baltimore are naturally too shallow to accommodate ships that require a maximum draft of 50 feet. The Maryland Department of Transportation Maryland Port Administration and the United States Army Corps of Engineers maintain the shipping channels to a depth of 50 feet to make it safe for cargo ships to travel to the Port terminals. Ships that travel to the Port of Baltimore travel 150 miles further inland, allowing for more cost effective and efficient transport of goods closer to the center of the country.

ACTIVITY

1. **Engage/Elicit (35 min):**
Walk through the “Careers in Dredging” PowerPoint with students. This will give background on the Poplar Island story and introduce the role of the Port of Baltimore in the restoration of the Island.
2. **Explore (integrated into above-mentioned PowerPoint):**
At the “Meet the Worker” slides, have a student volunteer put on the associated costume and perform the motions specified when describing their day. Students in the audience can participate by chanting the phrase that describes the volunteer student’s motion.

3. **Explain (integrated into above-mentioned PowerPoint):**
Encourage discussion after the “Meet the Worker” slide. Ask what would be fun about the job, and if students would be interested in this job as an adult. Point out the general educational requirements for the job listed on each slide.
4. **Evaluate/Wrap-Up (5 min):**
On the classroom board, write a list of the words and concepts that were covered in the lesson (dredged material, shipping channels, environmental specialist, dredge technician, 50 feet, 21 feet, port, cargo ship, erosion, Poplar Island, outreach education specialist). One by one, describe each word and allow students to guess which one you are describing. Once they have been reminded of all the lesson’s vocabulary, ask students whether they would be interested in any of the jobs that they learned about and why.

DIVE DEEPER

Have students brainstorm a list of other jobs that could be involved with the dredging process. As a homework assignment, have them choose one job to complete independent research to find the following:

1. Level of education needed
2. Average hourly wage
3. One interesting part of the job

