LESSON PLAN MARINE INDUSTRY & CAREER DEVELOPMENT

SUMMARY

90% of all consumer goods have spent some part of their journey on a ship, making the maritime industry one of the primary drivers of globalization and trade. Vessels move cargo around the world in far greater volumes more efficiently, safely, and with a lower environmental impact than any other mode of transportation. Increasing awareness about the maritime industry and the industry's dedication to the health and safety of its crew, the environment, and its fleet is a part of NAMEPA's mission.

Next Generation Science Standard

MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

BACKGROUND INFORMATION

Since resources around the world are not evenly distributed, countries rely on one another to trade for goods they need. Shipping is the most efficient way to transport goods to where they need to be at the lowest cost.

We define the maritime industry to include any economic activity of or relating to the oceans, rivers, and the Great Lakes. This includes traditional maritime activities such as designing, constructing, manufacturing, supplying, maintaining vessels or parts, operating and managing shipping lines, or crewing ships. It can also include engaging in maritime law, brokerage services, insurance, customs services, fishing operations, marine science, salvage operations, and the operation of ports, shipyards, drydocks, and cruise lines.

OBJECTIVES

Students will:

- Identify potential maritime industry careers.
- Apply an engineering design process to generate and evaluate possible solutions to maritime industry problems.

LESSON 8: MARINE INDUSTRY & CAREER DEVELOPMENT

TIME
45 minutes

MATERIALS
- Maritime Careers slides
- Maritime Adventures Board Game

ENGAGE

Start a discussion with students about the maritime industry by introducing examples of careers such as ship captain, engineer, archaeologist, marine biologist, etc. Provide students with real-world examples related to the maritime industry such as asking students how long transportation by ship has been around. Ask students what design solutions must be in place for ships to limit their impact on the marine environment.

EXPLORE

Have students play NAMEPA's Maritime Adventures Board Game. Students will explore the maritime industry as a ship on a port-to-port journey transporting cargo. Along the way, students will encounter real-world situations which can either help, or hinder, its voyage.

EXPLAIN

Share with students the different career opportunities they can explore in the maritime industry. Remind students that the industry offers extensive and accessible career pathways.

EXTEND

Assign students individually, or in small groups, specific roles in the maritime industry. Have students research these roles and create a slide with information. Use the slides to develop a career opportunity journal for students to reflect on.

EVALUATE

Wrap up the lesson by having students reflect on what they learned about maritime industry careers and the role of engineers in addressing real-world problems in the maritime industry.

SUPPLEMENTAL

- Invite NAMEPA corporate partners or members to guest speak and share their career experiences and insights.
- Participate in the NAMEPA Adopt A Ship program.
- Check out MPSEC on NAMEPA's website