



Navigating Communication & Collaboration

Dear Educators,

Set sail for a new journey into the world of marine careers! Captain Sandy's Charities, in collaboration with the State of Florida and the curriculum specialists at Young Minds Inspired, is pleased to offer a new set of classroom activities and resources that bring the real world of marine careers into the classroom. These language arts and STEM activities will "buoy up" students' career readiness skills with activities that support analytical thinking, teamwork, and cooperation.

We hope that you enjoy this program and will share it with other teachers. And please tell us what you think at ymiclassroom.com/feedback-stsnavigating. We look forward to receiving your comments.

Sincerely,
Dr. Dominic Kinsley
Editor in Chief
Young Minds Inspired

Questions? Contact YMI toll-free at 1-800-859-8005 or by email at feedback@ymiclassroom.com



How to Use This Guide

Photocopy the activity sheets and use the information that follows as a guide for implementing them. Activity 2 requires a smartboard or overhead projector for video viewing. Review all *Beyond the Docks* career tips and have students share one specific way they can use each tip now or in the future.

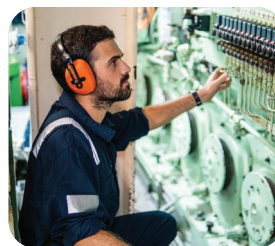
ACTIVITY 1: Navigating the Roles

Parts 1 and 2. To start, ask students what role they think communication plays in careers they are familiar with. Next, distribute the activity sheet and have students review the marine jobs. Ask students why communication aboard a ship is important. Explain that it is important for safety, teamwork, and problem solving. For example, crew members need to communicate clearly to work together, move cargo safely, and respond quickly when weather, equipment, or other conditions change. Have students complete the action/reaction chain of command diagram and discuss the answers.



Answers: Part 1. 1. Ship Captain; 2. Port Harbor Pilot; 3. Deckhand; 4. Marine Engineer; 5. Marine Hydraulic Technician; 6. Marine Crane Operator. **Part 2.** 1. Marine Crane Operator; 2. Deckhand; 3. Ship Captain; 4. Marine Engineer; 5. Marine Hydraulic Technician; 6. Port Harbor Pilot.

ACTIVITY 2: On-the-Job Problem Solving



Distribute the activity sheet and review the instructions with students. Explain that a ship's captain and crew, dockworkers, engineers, mechanics, and others in the marine industry work as a team to complete tasks and problem-solve along the way.

Have students work in teams to decode options for the scenarios featured and choose the best responses. Invite the groups to share their answers.

Target Audience

Grades 6-12

Components

Available at ymiclassroom.com/stsnavigating:

- Activities for Grades 6-12
- A marine career handout
- A standards chart
- An online feedback form

Concepts & Skills

Explore marine careers	Communication
Career preparedness and planning	Cooperation and teamwork
Environmental stewardship	Problem solving and critical thinking

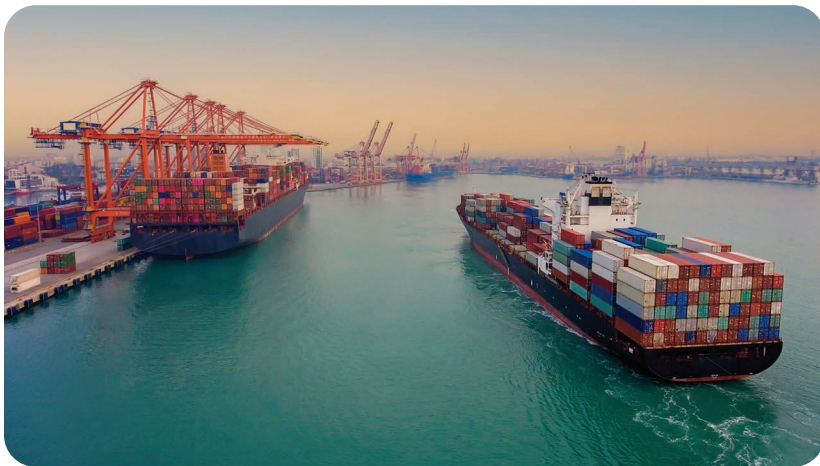


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To conclude, tell students that the scenarios represent Florida's Blue Economy. Screen the "What is the Blue Economy?" video (at theinvadingsea.com/2024/07/09/blue-economy-ocean-florida-aquaculture-fishing-energy-tourism-transportation-marine-research) for further explanation.

Answers: Part 1. 1. Tape, Weld, Hide; Best option: Option B. Welding is the only permanent, professional repair. Taping risks leaks, which could spill into the ocean. Hiding violates safety practices. 2. Scoop, Sweep, Block; Best option: Option A. Scooping up the sugar maintains legal procedures and ensures habitat protection. **Part 2. Sum-It-Up Challenge:** teamwork, safety, environment.

Extension Activity: Screen the video, "Tour of the Palm Beach Port" (youtube.com/watch?v=x_fOWAWjaJE), for an overview of a busy cargo port, and the National Oceanic and Atmospheric Administration (NOAA)'s "American Blue Economy" video (oceanservice.noaa.gov/economy/blue-economy-strategy) for more on the Blue Economy. After viewing, lead a class discussion where students share at least one thing they learned, one new question they have, and one thing they would like to learn more about.



ACTIVITY 3: Communication Clears the Chaos

Distribute the activity sheet and give students a few minutes to review the ship location terms. Explain that a ship can be positioned in any direction with workers in different places; therefore, specific location vocabulary is required. To get started, let students practice using the terms with a game that demonstrates the importance of clear communication and quick responses. First, help students apply ship location terms to classroom locations.



Then have them take turns giving the class directions such as: *Face port, point to the bow*, etc. Try more complicated directions like, *Storm coming from starboard* (point right). *Drop anchor at stern* (point back).

Next, have students practice giving directions by filling in the blanks below for this scenario:

A box of fresh food is sitting outside on the left side of the ship.

- **Direction:** _____ (name the role), can you please help us by going to the _____ side (ship location), collect the box, and bring it to the _____ (ship location). [Answer: Bosun, port, galley]

- **Who is giving the direction?** (Chief Steward)

Parts 1 and 2. Have students complete the activity sheet independently or with a partner, then share their responses and correct them as needed.

Answers: Part 1. 1. D; 2. A; 3. C; 4. B; 5. E.

Part 2. 1. Marine Electronics Technician, bridge; First Mate is giving the direction; 2. Bosun, bow, starboard; First Mate is giving the direction; 3. **Direction:** Bosun, please bring the heavy-duty clean-up equipment to the galley right away to help clear a water leak. Chief Steward is giving the direction.

Extension Activity: Build a Team! Have students work in groups to create a fictitious new marine business in Florida that also aims to keep Florida's waters clean and safe. Ask them which of these three types of marine business they would start: eco-tour boat, clean cargo ship, or green shipyard. Then, after reviewing jobs featured on the activity sheet, have them determine five roles or types of jobs the business needs to fill and list one way these employees will work with one another, telling how and why. Students can name their business, create logos, and share their work with one another.

There's more online!

Visit ymiclassroom.com/marinecareers for resources on yachting, ocean protection, and land-based marine careers, including lessons, a digital magazine, handouts, and an interactive quiz.

Also, get a behind-the-scenes look at careers in the marine industry with Captain Sandy and industry professionals in the **Beyond the Docks** video series at youtube.com/@CaptainSandysCharities.





Navigating the Roles

From the open ocean to the shipyard docks, marine workers depend on each other to keep ships safe and cargo moving. Clear communication is essential, helping everyone stay informed, work together, and respond quickly when conditions change. Meet some of the important members of the marine team.

- **Ship Captain:** commands the ship, navigates waterways, gives operational directions to crew
- **Marine Crane Operator:** loads, unloads, and moves cargo, equipment, and other materials on and off a ship
- **Marine Hydraulic Technician:** repairs and maintains fluid-power systems like cranes, steering, and cargo-lifts (onboard or in shipyard)
- **Deckhand:** secures cargo and gear, maintains ship equipment and machinery on deck, maintains deck surfaces and interiors, assists in docking and undocking
- **Port Harbor Pilot:** expert in local waterways and channels that surround ports, assists ships in navigating in and out of port safely
- **Marine Engineer:** keeps marine vessels running, including engines, power and propulsion systems, steering controls, and mechanical and electrical systems (can be onboard or in a shipyard)



PART 1: Chain of Command Interactions

Read the actions below. On the line above each action, write the correct job title from the list above to complete the chain of command to exhibit safe and efficient communication.

1. _____
↓ Gives final command to depart and begin transit
2. _____
↓ Takes helm to navigate narrow port channel
3. _____
↓ Stands watch on deck to visually confirm ship is clear of obstacles
4. _____
↓ Notices a major pressure drop on system gauges
5. _____
↓ Meets ship at nearest pier to make repairs
6. _____
Operates dock cranes to unload cargo at ship's final destination

PART 2: Port Dilemma

A cargo ship is parked at the dock and begins to unload its cargo. Suddenly the crane stops working because a hydraulic hose leaks fluid onto the deck. The ship cannot finish unloading until the crane is fixed and the deck is cleaned for safety.

Write the job title that shows who is responsible for each action in the above scenario.

1. Who is operating the machine that breaks down?

2. Who sees the fluid leak on the deck first, reports it, and manages the leak clean-up on deck?

3. Who is the leader in charge who will make the final decisions in this scenario? _____
4. Who is the main mechanic on the ship who inspects the broken crane first? _____
5. Who is the onshore specialist called in to fix the high-pressure hoses? _____
6. Who guides the ship out of the harbor safely once the job is done? _____



Beyond the Docks Career Readiness Tip: Whatever career you're aiming for, remember to dress with confidence! Show you are ready to take the helm by wearing neat, clean outfits that make you feel professional and prepared to take on new school or career challenges.



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On-the-Job Problem Solving

Welcome aboard your **Florida coastal mission** where you will work in teams to determine the safest most eco-friendly way to solve each marine problem.

PART 1: What's the Solution? Use the code below to decode the words and reveal your options for each scenario.

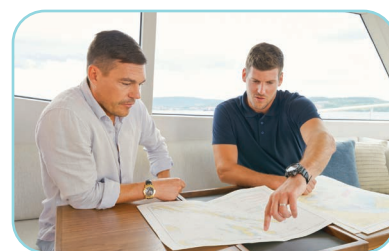
A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

1. Pipe Leak! The Marine Engineer spots a small crack in a pipe creating a leak near the shrimping boat's engine. This crack could get bigger and pollute the ocean waters, possibly even sparking a fire on board, yet you are very close to port.

What should you do?

- **Option A:** 20-1-16-5 _____ it quickly for a temporary fix to stay on schedule.
- **Option B:** 23-5-12-4 _____ the metal securely. This requires a 4-hour wait for a certified pipefitter.
- **Option C:** 8-9-4-5 _____ the leak from the Captain until you arrive at port and hope it does not get worse.



Team Decision: Which action is the safest choice for both the crew and the port environment and why?

2. A Sugar Spill! Your crew is loading a cargo ship with Florida-grown raw cane sugar when a crane drops a pallet, causing the sugar to spill next to the water. It's so close that the sugar could wind up in the harbor and impact the local fish habitat.

What should you do?

- **Option A:** 19-3-15-15-16 _____ up the sugar to be sent to a composting facility and wash the rest safely away from the water.
- **Option B:** 19-23-5-5-16 _____ the sugar into the water quickly to clear the dock so the crane can keep working.
- **Option C:** 2-12-15-3-11 _____ the dock workers from the area and take care of it after the ship departs.

Team Decision: Which option balances legal waste management with keeping the port waters clean and why?

PART 2: Sum-It-Up Challenge! Unscramble the bold letters to reveal an important marine rule of Florida's oceans!

In Florida's Blue Economy, crews thrive on (**KOWRMETA**) _____, anchor their choices in worker (**FYSTAE**) _____, and fiercely defend the ocean (**VROEMINENNT**) _____.

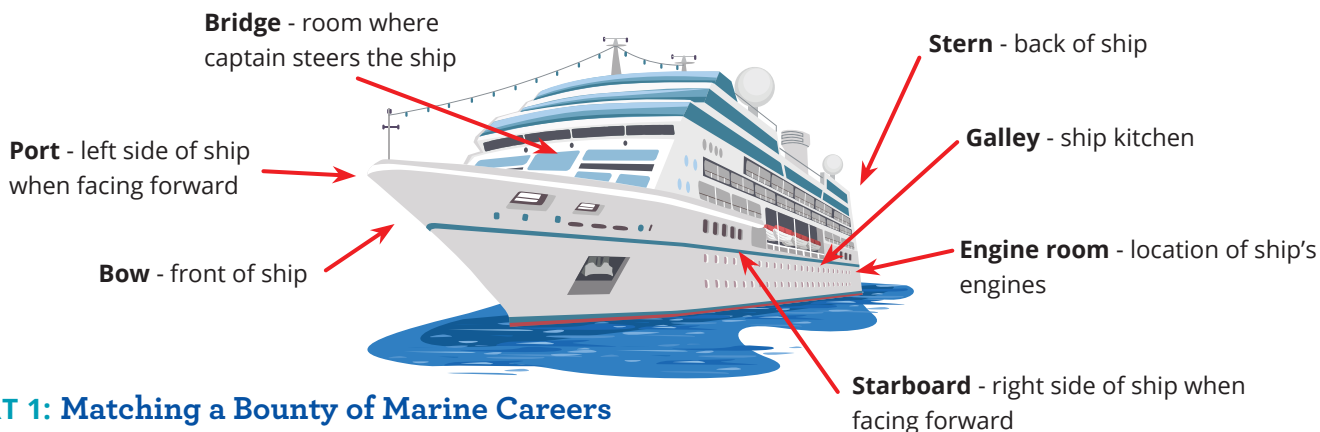


Beyond the Docks Career Readiness Tip: Whether you are navigating a group project in the classroom or working on a professional boat, collaboration is key! Always treat your crew with respect and do your part.



Communication Clears the Chaos

Clear communication is everything when it comes to a safe and successful voyage. Workers often cannot see each other on a ship and with so many moving parts, using exact words and location names is essential to getting the job done.



PART 1: Matching a Bounty of Marine Careers

Write the letter for the role that matches the career description.

A. Chief Steward **B.** Marine Biologist **C.** Bosun **D.** Marine Electronics Technician **E.** First Mate

- _____ Fixes navigation systems, radio, radar displays, and computer networks on the ship
- _____ Takes care of passenger and crew comfort, oversees kitchen staff, coordinates food supplies
- _____ Leads the deck crew, manages physical equipment including ropes, rigging, and anchors
- _____ Studies ocean wildlife, tracks marine habitats, collects underwater samples
- _____ Second-in-command, monitors ship's position, supervises deck crew, plans safety routines

PART 2: Communicate It!

Use the ship diagram and career titles to fill in the blanks to provide directions to the crew member who can assist with the situation.

Scenario 1: The underwater tracking computer at the steering station completely lost signal to the satellite.

Direction: _____ (career role), please come up to the _____ (ship location) to repair the computer screen and restore the satellite connection.

Who is giving the direction?

Scenario 2: Heavy storage ropes on the right side of the deck are loose and rolling around near the front of the boat.

Direction: _____ (career role), please head toward the _____ (ship location) on the _____ (ship location) side and secure the rolling ropes immediately.

Who is giving the direction?

Scenario 3: Try your hand at writing the directions for the scenario!

A sudden leak from a fresh-water pipe has flooded the floor of the galley. The kitchen crew needs the deck crew to bring heavy-duty water vacuums to clean it up before dinner service.

Direction: _____

Who is giving the direction?



Beyond the Docks Career Readiness Tip: Build your personal sea stamina! When life or school gets stressful, anchor your attention on what you can control and try calming measures like taking slow deep breaths or listening to your favorite music.

