



Dear Educator,

It's full S.T.E.A.M. ahead with the Ocean Rangers! Captain Sandy's Charities, the State of Florida, and the curriculum specialists at Young Minds Inspired present free, standards-based resources designed to teach your students about Florida's oceans and equip them to help protect the plants and animals that live in them. In these activities, students will learn about maritime careers, ocean research technology, and Florida's unique ocean habitats.

Please share this teaching kit with other teachers. And tell us what you think of it by sending back the enclosed reply card or by visiting ymiclassroom.com/feedback-oceanrangers. 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.

Target Audience

Grades 4-6

Program Components

- This teacher's guide
- Three reproducible student activity sheets
- A classroom poster
- A reply card for your comments

Additional resources at ymiclassroom.com/oceanrangers:

- Bonus activities
- A reproducible family letter (in English and Spanish)
- An interactive online quiz
- A teaching kit for grades 1-3
- A Florida standards chart
- A feedback form

Concepts and Skills

Engineering design	Creativity
Marine science	Persuasive writing
Problem solving	Reading comprehension

How to Use This Guide

Photocopy the activity sheets before displaying the poster in your classroom and use the information that follows as a guide for implementing them. Visit the link above for a letter to send home to families.

About The Ocean Rangers

The Ocean Rangers are an eclectic, fictional crew of brave adventurers whose mission is to explore the waters of the world while protecting everyone and everything in them. Led by Captain Sandy, this intrepid team includes a mysterious benefactor, an AI robot, a daring first mate, a talented chef with an octopus helper, a clever young inventor, and a state-of-the-art vessel with all the technology and supplies the Ocean Rangers need to save the day.

Activity 1: All Hands on Deck

Ask the students to think about a team they belong to. This could be a sports team or a group that works together such as an orchestra. Ask: *Does each member of the team have the same role? How does the team work together?*

Read "About The Ocean Rangers" to your students. Explain that each member of the team has a different, but equally important role to which they bring their unique traits and talents. And as a team, they must work together to complete their missions. Review and discuss the questions on the poster about the team's missions.

Pass out the activity sheet and have the students complete the inventory quiz and write about the results. When finished, see how many students selected each role. Which is most popular?

Activity 2: Explore the Waters

Explain that the Ocean Rangers' home base is a state-of-the-art ocean vessel equipped with the latest technology. Ask students what type of equipment they think a ship designed to help protect marine life (plants and animals) and study oceans might need.

Pass out the activity sheet and review Part 1 together. Then have students work in small teams to invent a tool to help the Ocean Rangers. Have students share their final inventions.

Activity 3: Set Sail for Adventure

Florida has some unique ocean habitats for the Ocean Rangers to explore as part of their mission. Pass out the activity sheet and have students work individually or in small groups to research Florida's coral reef, seagrass beds, or mangrove forests and then create posters about their findings. When done, invite the students to present their research to the class and display their posters.

Check Out the Interactive Quiz!

Visit ymiclassroom.com/oceanrangers for a digital quiz for students and additional activities to extend the learning.



All Hands on Deck

Imagine you are part of the crew on an ocean exploration vessel. Which role will you play? Read the descriptions of the Ocean Rangers' roles and then answer the questions to find out. Circle "yes" or "no" to each question.

- | | | |
|--|-----|----|
| 1. Do you like to be in charge? | Yes | No |
| 2. Are you a natural leader but don't like to be the boss? | Yes | No |
| 3. Do you like to cook? | Yes | No |
| 4. Do you enjoy creating new things? | Yes | No |
| 5. Do you like technology? | Yes | No |
| 6. Do you enjoy solving puzzles? | Yes | No |
| 7. Are you good at making important decisions? | Yes | No |
| 8. Do you enjoy working with others? | Yes | No |
| 9. Do you enjoy taking care of people? | Yes | No |
| 10. Do you like learning new things? | Yes | No |

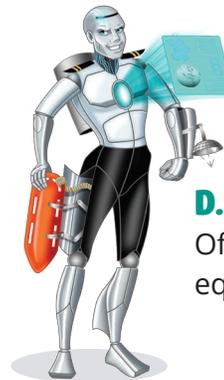
Results

If you answered "yes" to questions:

- **1 and 7:** You might want to be a captain like Captain Sandy.
- **2 and 10:** You might want to be a first officer like JD.
- **3 and 9:** You might want to be a chef or medical officer like Chef Cocci.
- **4, 5, and 6:** You might want to be a second officer like D.I.N.G.H.Y.
- **4 and 10:** You might want to be an apprentice like Keel.

Aboard a ship, you're a team, so enjoying working with others is key to all roles. Based on the quiz and the descriptions of the Ocean Rangers, write about the role you would enjoy the most and why you are a good fit for that role. Use the back of this sheet.

Captain Sandy - Captain of the ship; in charge of all operations and leader of the crew.



D.I.N.G.H.Y. - Second Officer; maintains the ship's equipment and technology.

Keel - Apprentice; learns from the others and invents things to help their missions.



Chef Cocci - Chef and Medical Officer; creates healthy meals for the crew, treats injuries, and speaks Spanish.



Jeremy Diver (JD) - First Officer; second in command, carries out the captain's orders.



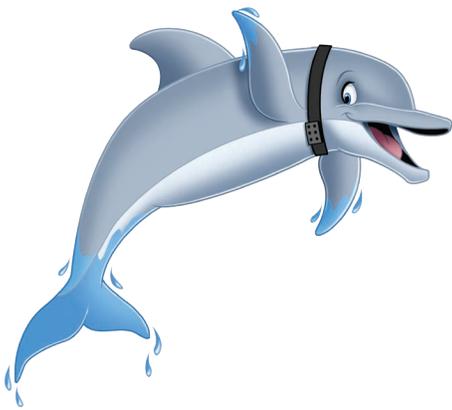
Pulpo - Assistant to Chef Cocci; an octopus with eight helpful arms. (You can't become an octopus, but you could be an assistant!)



Explore the Waters

The Ocean Rangers have a state-of-the-art vessel full of amazing technology — just like real ocean scientists! With their high-tech equipment, ocean scientists can map currents and the ocean floor to measure the temperature and depth of the water.

In addition, many ocean research ships carry both manned and unmanned robots designed to explore and collect samples from the ocean depths. Some research ships even have huge cranes designed to lower remotely operated vehicles over the side and multiple control centers rising from the deck, with radar domes perched on top. Sound navigation and ranging equipment (SONAR) uses sound waves to map the ocean floor, helping to identify underwater hazards and objects such as shipwrecks.



Invent It!

Keel needs your help. He wants to invent a tool to help the Ocean Rangers explore the water and marine animals. He is thinking about something waterproof that he can attach to Dolly, a dolphin. Keel rides Dolly — she is like his own personal watercraft. What do you recommend? Is it a tool that takes pictures, interprets animal sounds, helps with navigation, discovers ways to help protect marine life, or something else? Write about your tool below. Then draw a picture of it on the back of this sheet.

A large blue-bordered box containing seven horizontal lines for writing.



Set Sail for Adventure

Exploring Florida's waters is an adventure like no other.

First there's Florida's **coral reef**, which stretches more than 350 miles along Florida's southeast coast, making it the largest coral reef in the continental United States. Home to more than 6,000 species of marine life, it is vital in many ways. For example, commercial fishers catch close to 3.2 million pounds of reef fish each year, valued at more than \$10 million. The reef is also a hot spot for tourists, who head there for world-class fishing, snorkeling, and diving.

Florida's waters are also home to vast **seagrass beds**, which not only provide food and shelter for sea life, but also filter the water and help protect the coastline. And closer to shore, Florida's **mangrove forests** provide food and shelter for many kinds of marine life, stabilize the land, and filter pollutants from the water.

These three interconnected habitats have unique roles but are all part of the same "team" — an invaluable ocean ecosystem.



Coral reef



Seagrass bed



Mangrove forest



Discover More!

Research Florida's coral reef, seagrass beds, or mangrove forests. Below are some links to get you started. Then create a poster with interesting facts about your topic, as well as ways we can help care for the plants and animals that live in that habitat. Keep your messages clear and succinct.

Coral reef:

floridadep.gov/rcp/coral-protection-restoration/content/floridas-coral-reef
floridamuseum.ufl.edu/southflorida/habitats/corals/
floridakeys.noaa.gov/corals/coralreefs.html

Seagrass beds:

floridadep.gov/rcp/rcp/content/florida-seagrasses
floridamuseum.ufl.edu/southflorida/habitats/seagrasses/
floridakeys.noaa.gov/plants/seagrass.html

Mangrove forests:

floridadep.gov/rcp/rcp/content/floridas-mangroves
floridamuseum.ufl.edu/southflorida/habitats/mangroves/
floridakeys.noaa.gov/plants/mangroves.html





Dear Parents and Caregivers,

With a free classroom program from Captain Sandy's Charities, the State of Florida, and curriculum specialists at Young Minds Inspired, our class has set off on an adventure with the Ocean Rangers to explore Florida's waters and learn how to help protect our oceans and marine creatures, while also learning about real-life marine careers. Ask your child to share what they have learned.

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Continue the exploration and learning at home!



- Talk about ways you can protect the ocean and local waters as a family. For example:
 - Use cloth shopping bags instead of plastic ones, as turtles and other sea life often mistake plastic bags for food.
 - Adopt a sea turtle or other marine creature online and follow their journey through Florida's waters.
 - Clear storm drains before and after storms and pick up litter at the beach.
 - Consider joining a group that helps to protect Florida's diverse waters.
- Explore books about Florida's waters and unique animal habitats.
- Check out the Ocean Rangers' fun online quiz as a family to learn more about Florida's waterways and wildlife, and how we can help keep them healthy and flourishing. See ymclassroom.com/oceanrangers.





Join The Ocean Rangers on their missions!



Exploring a Shipwreck

How can shipwrecks be positive and negative for local marine life? What role would you play in exploring a shipwreck? What might you find?



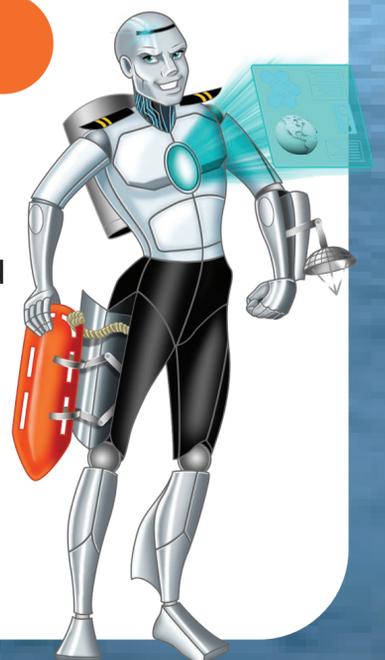
Studying Our Waters

What technology and equipment can help scientists research and explore our oceans and the plants and animals in them? How can their studies help us?



Helping Marine Life

What threatens marine life? What are the consequences of these threats? How can you help protect the animals and plants in our waters?



Captain Sandy's Charities



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