



a nonprofit membership organization dedicated to improving and protecting our coral reef ecosystem
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Virtual Marine Science Classroom

Unit 6: Ocean Lovers (Careers)

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Course Description: This unit was designed to supplement existing science coursework. Students will learn about different marine science careers and will learn from many experts about their career paths.

Course Objective:

1. Students will learn the various careers associated with marine conservation.
2. Students will understand the importance of each career path.
3. To inspire students to identify how they can use their passions to help with marine conservation.

Attendance:

Students are able to complete this at their own pace. There are no deadlines for materials, and it is up to the student and parent/teacher to keep said student on their desired pace.

Internet Etiquette:

Reef Relief staff has enabled commenting on the materials. The comment sections shall be used to ask legitimate questions or voice formatting/technological issues. Should there be any concern about this please contact us.

Materials:

All course materials and worksheets are provided in an online PDF format. If your student does not have access to a printer, feel free to write down your answers on a separate piece of paper.

Technical Difficulties:

Please contact us via email or phone to let us know about any technical difficulties, we will be more than happy to assist!

Course Work:

Reef Relief has provided many different videos and activities for the students. Students are not required to complete all of the materials in this unit, it is ultimately up to the student, parent or teacher.

Skill Level:

Many activities are labeled Beginner, Medium, or Advanced and it is up to the adult to decide what they would like their student to complete. We recommend the following to evaluate:

- Beginner: Someone new to marine science or is between the ages of 5-8.
- Medium: Someone who has received a moderate amount of science education or between the ages of 9-11.
- Advanced: Someone who is comfortable with more in depth science topics or between the ages of 12-17.

Grading:

Reef Relief will not be implementing any grading. Parents and teachers may make the personal decision to grade their student's work. There will be a section labeled answer keys that can be used to check your student's work.

Sharing of Material:

Please do not share classroom materials with others. This includes but is not limited to the class password, the class link, worksheets, video, etc.

Office Hours:

Reef Relief is open Monday- Friday from 10:00AM until 4:00PM EST. Outside events may change these hours however we will do our best to respond as promptly as possible.

Feedback:

We appreciate your feedback! Please let us know if you have any questions, comments, or concerns by emailing us or posting in the classroom. There is also a survey within the unit you may submit your feedback in.

Unit 6 Syllabus

Pre-Questionnaire: Instead of quizzing, students will fill out this document identifying their passions and current/future goals. Students should fill this out BEFORE reviewing the rest of the content. Choose the questionnaire best suited to your experience level.

Introduction:

- Lesson 1: Introduction to Ocean Careers
 - An introduction to Unit 6 and what you can expect to learn in it.
- Worksheet: Color the Ocean Career (Beginner)
- Worksheet: Job Match (Medium)
 - Identify the job description with the job title.
- Resource: Ocean Careers
 - This booklet has interviews with over 20 marine science professionals and counting! This resource is a very accessible way to learn about the many career options that have to do with the ocean.

Hobbyist:

- Lesson 2: Hobbyist
 - Do you know what a hobby is? Do you have a hobby? Let's figure out how we can turn our hobbies into a career.
- Expert Interview: Doris Szabo, 4Ocean
 - Doris works for the business 4Ocean, a company that sells ethical clothing and accessories and in return, cleans the ocean of marine debris. Learn more about the company and her role.
- Expert Interview: Jaclyn & Yasmin, Fin Pin Shop
 - These two ocean lovers met at a shark convention and since then have created a successful small business! They've turned their love for the ocean, art, and sense of humor into products that help promote ocean conservation.
- Expert Interview: Hyatt Mamoun, Wildlife Documentary Film
 - Hyatt combined her passion for photography/videography with her interest in wildlife to become a wildlife photographer! Learn how she learned her skills, and how she got into the work she does.
- Expert Interview: Jessica Connell, Photographer and Teacher
 - Jessica uses her hobby of photography to help herself make an income while she teaches science at her local middle school.
- Expert Interview: Dr. Patrick Rynne, CEO Waterlust

- From getting his PhD in marine physics, Patrick has now turned to ethical fashion as a way to spread ocean conservation. But the products his business makes are more than just clothing, they help provide important conservation messages and help initiate conversations about our marine life.
- Worksheet: Hobby Matching (Beginner)
 - Write the correct hobby under the picture.
- Worksheet: Hobby Careers (Medium)
 - For the hobbies listed, write the different careers you could have that would allow you to continue enjoying that hobby. Bonus points if they are marine science related.
- Worksheet: Crossword Puzzle (Advanced)
 - Each hint describes a marine science occupation. You must figure out which hobby discussed in the lesson it would apply to.
- Presenter Notes: Hobbyist
 - A copy of the PowerPoint slides for reference and to assist with activities.

Ecotourism:

- Lesson 3: Introduction to Ecotourism
 - An introduction to the principles of Ecotourism.
- Lesson Notes: Ecotourism
 - Fill this out as you follow along with the lesson video.
- Expert Interview: Brady Stonesifer and Billy Litmer, Honest Eco Tours
 - Listen in to an interview with the owner and head captain of Honest Eco.
- Worksheet: My Ecotour Business (Medium)
 - Fill in the questions below to create your own ecotour business.
- Expert Interview: Kristina Pendleton, Key West Aquarium
 - Listen in to an interview with the education manager at the Key West Aquarium.
- Presenter Notes: Ecotourism
 - A copy of the PowerPoint slides for reference and to assist with activities.

Research Scientists:

- Lesson 4: Research Scientists
 - Follow along with this video to learn the difference between a researcher and a scientist and how you can be a scientist at any age.
- Expert Interview: Carlee Jackson, Shark Scientist
 - Enjoy this interview with the Carlee Jackson, as she talks about her experience as a graduate student and a shark scientist. Learn about shark research and co-founding a nonprofit as well as balancing graduate school.
- Expert Interview: Rose Santana, Aquatic Toxicologist
 - Discover what it is like as an aquatic toxicologist and learn some tips for applying different skill sets to research.
- Expert Interview: Kelli O'Donnell, NOAA Fish Biologist
 - Join us as we interview a fish biologist from NOAA and learn the importance of networking.
- Expert Interview: Ian Silver-Gorges, Graduate Student (Sea Turtles)
 - Graduate student at Florida State University, learn about the work he does with sea turtles and how he got to this point.
- Expert Interview: Michelle Dobler, Coral Scientist
 - Michelle helps save corals from Stony Coral Tissue Loss Disease learn about how her lab is saving corals, and about how she got to this point in her career.
- Expert Interview: Dr. Ross Boucek, Bonefish and Tarpon Trust
 - Research scientist from Bonefish and Tarpon Trust, Dr. Ross Boucek is tagging bony fish to help us better understand them.
- Expert Interview: Dr. Joaquin Rodrigo Garza Perez
 - Join us in our talk with Dr. Joaquin Rodrigo Garza Perez about his work as a professor and his research and work using GIS (Geological Information System) in coral management.
- Expert Interview: Dr. Patrick Rice, Chief Science & Research Officer College of the Florida Keys

- Learn all about Dr. Patrick Rice's experience in the marine science field, with topics covering his time doing aquaculture work in Fiji as part of the US Peace Corps (8:10-14:15), research in shark repellent technology (16:05-19:32), and current research at the College of the Florida Keys and its potential applications utilizing Integrated Multitrophic Aquaculture (19:32-35:41).
- Shark Research (Extended Discussion): If shark research piques your interest, check out this extended cut of our discussion with Dr. Rice on his work in shark research and his development of shark repellent technology (SharkDefense Technologies, LLC). This discussion picks up at timestamp 14:15 of the interview.
- Neptune Rising (Bonus Discussion): Watch this video to learn about one of Dr. Rice's ideas that pulls together many of the topics and research projects discussed in our interview called "Neptune Rising" which was awarded the federal "Moonshot Award" from the National Renewable Energy Laboratory. This discussion picks up at timestamp 35:41 of the interview.
- Expert Interview: Dr. Karen Neely, Coral Research Scientist
 - Join us in introducing Dr. Karen Neely, a Coral Research Scientist at Nova Southeastern University. Watch her interview from 2020 where she discusses Stony Coral Tissue Loss Disease in the Florida Barrier Reef, and our "update on the reef" discussion in our 2025 interview.
- Expert Interview: Dr. Samantha Levell, Fish Biologist/Professor
 - Learn about Dr. Samantha's path to becoming a fish biologist and her research with seahorse and pipefish populations in Sarasota Bay.
- Expert Interview: Bella Ianotta, Deep Sea Graduate Student
 - Join us in talking with graduate student Bella about her experience so far in deep sea research as a student at the University of South Florida College of Marine Science.
- Expert Interview: Trina Rosing, Lab & Field Manager/Graduate Student
 - Join us in talking to Trina about her job as the Lab & Field Manager at the University of Miami and her masters degree she is currently pursuing in Physical Oceanography/Marine Geochemistry.
- Worksheet: Name that "ology"
 - Match the "ology" with the topic you think it studies.
- Worksheet: Design Your Own Experiment (Medium)
 - Fill out the steps to the scientific process.
- Presenter Notes: Research Scientists
 - A copy of the PowerPoint slides for reference and to assist with activities.

Inventors & Technology:

- Lesson 5: Inventors & Technology
 - We will be learning about people who have recognized a problem and invented a solution. Whether it is a new product, or how they use current technology to answer burning questions they may have.
- Expert Interview: Autumn Blum, Founder Stream2Sea
 - Autumn, a chemist, noticed a pollution problem happening to our coral reefs. Thus, she invented a solution to our everyday skin care products to help make a difference. You can use code reefrelief for 20% off your Stream2Sea order.
- Expert Interview: Brian Guadagno, Founder Raw Elements USA
 - It started when he was an ocean lifeguard who noticed an issue happening to our environment. Learn about the products he has created to help protect your skin and also protect our environment.
- Expert Interview: Bruce Jones, Triton Submarines
 - The CEO of Triton submarines.
- Expert Interview: Colin Foord, Co-Founder Coral Morphologic
 - Coral Morphologic is the leading creator of innovative underwater media chronicling Earth's imperiled coral reefs.
- Expert Interview: John Fields, CEO Cruz Foam
 - John Fields created a way to turn seafood waste into environmentally friendly packaging.
- Expert Interview: Michael Blades, Logistics Director of RPM Nautical Foundation
 - Michael Blades works for a marine archaeology foundation. Learned about what they do and the thousand year old artifacts they uncover and how technology plays a role.
- Expert Interview: Trevor Mendelow, CEO View Into the Blue
 - Trevor Mendelow invented an underwater camera with a self cleaning apparatus that can live stream to many personal electronics. Learn about how his work can help us further understand what happens

below the surface.

- Worksheet: Brainstorm Ocean Solutions (Medium)
 - Brainstorm solutions to ocean problems or write down solutions you know people have come up with.
- Movie: Mission to Inner Space
 - See how marine scientists are using technology to live in the very ecosystem they are studying.
- Additional Resource: Wildlife Livestreams
 - Technology can help us learn a lot about different ecosystems. Visit the provided links to see how technology helps us learn about different ecosystems. These links have recorded and live footage.
- Presenter Notes: Inventors & Technology
 - A copy of the PowerPoint slides for reference and to assist with activities.

Advocators:

- Lesson 6: Advocators
 - Learn about the broad field of advocates.
- Expert Interview: Haley Burleson, Mote Marine Laboratory Community Event Coordinator
 - Learn about being a community event coordinator and how research is used to educate the public.
- Expert Interview: Jemma DeLeon, Policy Advocate
 - Check out our interview with policy advocate, Jemma DeLeon. Currently based in Chicago, Jemma helps increase support for ocean policies, whether this is getting businesses on board, educating the public about potential policies, or talking to legislators. Learn why ocean policy is important for protecting our oceans and how you can get involved.
- Expert Interview: JP Brooker, Ocean Conservancy Lawyer
 - Listen to our interview with JP Brooker, a lawyer at the Ocean Conservancy, as we talk about defending ocean conservation and fish management laws. Learn how your passion should drive your future career.
- Expert Interview: Jim Ritterhoff, Force Blue Co-Founder (Advanced) ***PARENTAL ADVISORY***
 - Join us with Jim Ritterhoff as we learn why he decided to co-found Force Blue, a non-profit organization uniting Special Operations military veterans with the world of marine conservation and coral conservation, for the betterment of both. Get a look behind the scenes of what goes into running a non-profit and the passion needed to get started.
 - **PARENTAL ADVISORY:** The content of this video contains references to situations that could be triggering to some. Terms such as: PTSD, addiction, drugs, and suicide are referenced. Please consult an adult before watching this interview.
- Expert Interview: Zackery Rago, Chasing Coral
 - Learn about Zackery Rago's most recent endeavor to direct Chasing Coral and encompass the changes in our marine habitat.
- Expert Interview: Greg Holder, Diver & Shark Educator
 - Learn about Greg Holder and his passion to protect the oceans and sharks in the United Kingdom.
- Interview with a Scientist: Meghan Heaney-Grier, Freediver
 - Join champion free-diver Meghan to learn about day-to-day changes you can make to improve your conservation skills and her work to educate the public about ocean conservation. Check out her YouTube channel at the provided link.
- Interview with an Ocean Lover: Morgan Davis, Amri Salon
 - Learn about Morgan Davis and her mission to run a zero-waste salon. Amri Sustainable Day Spa is an ethical and sustainable day spa, salon, and boutique located in the heart of Key West, FL. The beauty industry creates 877 pounds of waste per minute, Amri is dedicated to being a zero waste salon by working with Green Circle Salons to recycle all waste created. Check out the provided links to learn more about Green Circle Salons and Amri Salon.
- Expert Interview: Megan Fryer, Coral Restoration Foundation
 - Megan combines her various experiences as an educator with her passion for diving in her current role as the Assistant Dive Safety Officer and Senior Dive Operations Associate at the Coral Restoration Foundation. We also discuss her past experiences in shark research and ecotourism.
- Expert Interview: Alicia Melton, Seacamp Association Inc.
 - Join us in talking to Alicia about her work as the Science Program Director, Seacamp Association Inc., and her journey to this position.
- Expert Interview: Jessica Dockery, United Way of Collier and the Keys

- Jessica is the Reef Revitalization Project Liaison for United Way of Collier and the Keys. She works to support and provide funding for many opportunities and projects that help protect and restore the Florida Barrier Reef.
- Expert Interview: Martina Gaglioti, Educator
 - Join us in talking to Martina about her background as a researcher and educator in Italy.
- Presenter Notes: Advocators
 - A copy of the PowerPoint slides for reference and to assist with activities.

Government and Regulation:

- Lesson 7: Government and Regulation
 - Follow along to learn about all the marine science careers in our government.
- Lesson Notes: Government and Regulation
 - Answer the questions as you follow along with the lesson video.
- Expert Interview: Curtis Hall, National Park Service Park Ranger
 - Listen in to our interview with Curtis Hall where we discuss his job as the Lead Park Ranger of Education, Outreach, and Volunteers at the Dry Tortugas National Park.
- Worksheet: Fishing Regulations (Medium)
 - Practice being a Florida Fish and Wildlife Conservation Commission officer and match the fishing regulation to the marine animal species it correlates with.
- Activity: Fishing Regulations Game (Medium to Advanced)
 - Play this game to learn about fishing regulations. Use the provided link to the FWC fishing regulations chart for reference.
- Presenter Notes: Government and Regulation
 - A copy of the PowerPoint slides for reference and to assist with activities.

Post-Questionnaires: To be completed at the end of the unit. The goal is to see if learning about these different careers can allow students to see if they can turn their own hobbies into a marine science career.

Answer Key: We have provided answers to most worksheet activities and have combined them into this folder for parents and teachers to check their student's work.