



NOAA's Office of Ocean Exploration and Research (OER) is committed to improving America's environmental literacy by bringing the excitement of ocean exploration and discovery to a wide variety of audiences. Educators are essential to this mission, and NOAA OER offers many opportunities for educators to learn about NOAA Ocean Exploration and how they can use NOAA science and technology associated with exploring the ocean in their classrooms. The offerings listed here are designed to introduce educators to ocean scientist explorers, their explorations, and exemplary tools and resources for engaging students of all ages in an underwater world that few have ever seen.

NOAA Ship *Okeanos Explorer* Education Materials Collection A collection of education materials developed to personally involve educators and students with the voyages and discoveries of the *Okeanos Explorer*—America's first Federal ship dedicated to ocean exploration. The Collection includes standards-based lessons for grades 5-12 and many hands-on activities.

Volume 1: Why Do We Explore? guides student investigations into modern reasons for ocean exploration. (Climate Change, Energy, Ocean Health and Human Health)

<http://oceanexplorer.noaa.gov/okeanos/edu/collection/wdwe.html>

Volume 2: How Do We Explore? guides additional investigations into strategies and technologies used aboard the *Okeanos Explorer*. (Bathymetric mapping, Water Column Exploration, Remotely Operated Vehicles and Telepresence)

<http://oceanexplorer.noaa.gov/okeanos/edu/collection/hdwe.html>

Many of these lessons are also available in Spanish: <http://oceanexplorer.noaa.gov/okeanos/edu/collection/spanish.html>

Exploring the Deep Ocean with NOAA

Selected lessons and background information from the NOAA Ship *Okeanos Explorer* Education Materials Collection (V1: Why Do We Explore? and V2: How Do We Explore?) were updated in 2017 and engage educators and students engaged with expeditions and discoveries made by the *Okeanos Explorer* and other ships of exploration and inspire the next generation of ocean explorers, scientists, and engineers.

<http://oceanexplorer.noaa.gov/okeanos/edu/collection/exploringdeepocean.html>

Live Video Feed from the NOAA Ship *Okeanos Explorer* Expeditions

<http://oceanexplorer.noaa.gov/okeanos/media/exstream/exstream.html>

Expedition Education Modules Modules designed to share the excitement of daily at-sea discoveries and the science behind NOAA's major ocean exploration expeditions. Each module contains an Expedition Purpose, Lessons, Multimedia Resources, and more. <http://oceanexplorer.noaa.gov/edu/modules/welcome.html>

Expedition Webinars for Educators One hour webinars introduce the science behind upcoming expeditions and the associated lessons and classroom resources available to educators. All webinars are archived.

<http://oceanexplorer.noaa.gov/edu/development/webinars/welcome.html>

Topical Theme Pages Education Theme Pages are designed to provide the best of what the OER website has to offer on a number of popular ocean science topics. Each Theme page provides links to content essays, lessons, multimedia interactive activities, career information and associated past expeditions.

<http://oceanexplorer.noaa.gov/edu/themes/welcome.html>

Lessons Hundreds of hands-on, standards-based lessons that bring entire classrooms “on board” for exploration and discovery. Use the search engine to find lessons on specific deep-sea topics.

<http://oceanexplorer.noaa.gov/edu/lessonplans/lessonplans.html>

Learning Ocean Science through Ocean Exploration An Earth Science-based curriculum for grades 6-12 that takes lesson plans developed for NOAA ocean explorations and presents them in a comprehensive scope and sequence, integrating the OER website. <http://oceanexplorer.noaa.gov/edu/curriculum/welcome.html>

Lessons from the Deep: Exploring the Gulf of Mexico's Deep-Sea Ecosystems A selection of lessons from eleven OER-sponsored expeditions to explore deep-sea organisms and ecosystems in the Gulf of Mexico, plus new lessons and additional background on the 2010 Deepwater Horizon blowout event.

<http://oceanexplorer.noaa.gov/edu/guide/welcome.html>

Professional Development Onsite and online professional development to provide educators with opportunities to engage in learning about ocean exploration. <http://oceanexplorer.noaa.gov/edu/prodev.html>

OceanAGE Careers From underwater pilots to marine archaeologists, these marine mentors provide students with first-hand knowledge of exciting careers through video interviews and career profiles.

<http://oceanexplorer.noaa.gov/edu/oceanage/welcome.html>

Multimedia Discovery Missions A series of interactive multimedia presentations and learning activities that address a wide range of ocean topics. <http://oceanexplorer.noaa.gov/edu/learning/welcome.html>

OER's YouTube Channel A collection of some of OER's best expedition video content.

<https://www.youtube.com/oceanexplorergov>

OER's Facebook Page <https://www.facebook.com/OceanExplorationResearch>

OER's Education Listserv An educator listserv providing dates and locations of onsite and online professional development offerings and notifications of upcoming NOAA ocean exploration expeditions and associated lessons.

<http://oceanexplorer.noaa.gov/backmatter/feedback.html#educators>

Ocean Challenge Puzzle Team up with players around the globe or in your classroom to solve the puzzle.

www8.nos.noaa.gov/oequizx/welcome.html