

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

SEPTEMBER 2015

This update is funded by the National Marine Sanctuary Foundation in partnership with NOAA's Ocean Exploration and Research Program, with additional support from the National Marine Protected Areas Center, to share information pertinent to the marine educator community. It is intended to encourage exchange of information and programs. We hope that it will also promote collaboration among the different educators addressing similar issues in their programs.

Please share this email with your colleagues and constituents. If you request materials or respond to a request for information, please mention that you learned about it from NOAA's Information Exchange.

The information included here has been compiled from many different sources, including EE-NEWS@NAAEE, EEinGEORGIA, the Scout Report, scuttlebutt, NSTA Express, and others. We have verified web addresses, but make no guarantee that they will remain active. The Department of Commerce/NOAA does not necessarily endorse or promote the views or facts presented on these sites.

To subscribe or unsubscribe to this list, send information to include in the newsletter, or discuss further enhancements, please contact the editor directly at phyllis.dermer@noaa.gov, or by phone at (865) 932-5074

Collected archives and issues of the newsletter, past and present, are available at <http://marineprotectedareas.noaa.gov/resources/education/>.

NOTABLE REFERENCE

NOAA Fisheries Climate Science Strategy

The National Marine Fisheries Service (NOAA Fisheries) has released the NOAA Fisheries Climate Science Strategy. The Strategy offers information and tools to prepare for and respond to climate impacts on marine and coastal resources. The document identifies seven objectives to provide decision-makers with information to reduce impacts and increase resilience in a changing climate.

<http://www.st.nmfs.noaa.gov/ecosystems/climate/>

PROGRAM OF THE MONTH

Big Blue Live from Monterey Bay National Marine Sanctuary

Watch PBS during the Big Blue Live broadcasting from Monterey Bay National Marine Sanctuary through September 2, 2015. #BigBlueLive will be a celebration of Monterey Bay, and will feature animals that come to the marine sanctuary to feed. Scientists, filmmakers, animal behaviorists, and other experts will narrate the footage. The PBS website includes livestreaming cameras from the bay and the Monterey Bay Aquarium, images, and other materials.

<http://www.pbs.org/big-blue-live/home/>

<http://www.montereybayaquarium.org/big-blue-live>

<http://sanctuaries.noaa.gov/news/aug15/big-blue-live.html>

GRANTS AND OPPORTUNITIES

Ben & Jerry's Foundation Grassroots Organizing for Social Change Program

The Ben & Jerry's Foundation offers competitive grants to non-profit, grassroots community organizations working to bring about social change by addressing the underlying conditions of societal and environmental problems. The next deadline for application is October 15, 2015.

<http://benandjerrysfoundation.org/the-grassroots-organizing-for-social-change-program/>

Beneath the Waves Youth Making Ripples Film Competition

The aim of the Beneath the Waves Youth Making Ripples film festival and competition for K-12 students is to engage students in marine science education, and to highlight the importance of scientific research related to ocean and coastal communities. Educators and students are challenged to incorporate film into their curriculum by adopting a hands-on approach to marine science education using 21st century technology. Students should submit short films (< 5 minutes) on any marine science topic of their choice. The deadline for submission is December 5, 2015.

<http://www.beneaththewavesfilmfest.org/youth-making-ripples/forms/>

BioenergizeME Infographic Challenge

Participate in the U.S. Department of Energy's BioenergizeME Infographic Challenge to explore bioenergy. High school teams use technology to research, interpret, and then design an infographic that responds to one of four cross-curricular bioenergy topics: Bioenergy History, Workforce and Education, Science and Technology, and Environmental Impacts. See the website for complete details. The deadline for submission is March 4, 2016.

<http://www.energy.gov/eere/bioenergy/infographic-challenge>

Discovery Research PreK-12 Program

The Discovery Research PreK-12 program seeks to significantly enhance the learning and teaching of science, technology, engineering and mathematics (STEM) by PreK-12 students and teachers, through research and development of STEM education innovations and approaches. An estimated 40 awards will be granted yearly. The deadline for submission is December 7, 2015.

<http://nsf.gov/pubs/2015/nsf15592/nsf15592.htm>

Earth Science Week Contests

The goal of Earth Science Week, October 11-17, 2015 - conducted annually by the American Geological Institute in partnership with other sponsors - is to encourage students, educators, and the public to explore the natural world and learn about geosciences. With this year's theme, Visualizing Earth Systems, contests include a photography, visual arts, and essay contest. The deadline for entry is October 16, 2015.

<http://www.earthsciweek.org/contests>

Ecybermission Competition

Ecybermission is a web-based math, science, and technology competition for students in grades 6-9. Students compete for regional and national awards while working to solve problems in their community. The challenges this year include the environment, alternative sources of energy, robotics, and more. The deadline for team registration is December 16, 2015.

<http://www.ecybermission.com/>

Every Day Capacity Building Grants

Every Day Grants from the National Environmental Education Foundation, with support from Toyota Motor Sales USA, Inc., help strengthen nonprofit public lands support groups, enabling them to do more to connect their communities to the land. Capacity Building Grants will be awarded to groups who make the best case for how the funds will build their capacity to better serve the lands they love. The next deadline for application is October 30, 2015.

<http://publiclandseveryday.org/grants/capacity-building-grants>

Faces of Biology Photo Contest

The American Institute of Biological Sciences is hosting the Faces of Biology Photo Contest for those 18 years old or older. Photographs must depict a person engaging in biological research, in any setting. The deadline for entry is September 30, 2015.

<http://www.aibs.org/public-programs/photocontest.html>

Grants for Grades K-5

Toshiba America Foundation offers grants to K-5 grade teachers to help bring an innovative hands-on math or science project into their classrooms. The deadline for application is October 1, 2015.

<http://www.toshiba.com/taf/k5.jsp>

GrantSpace

GrantSpace, a website from the Foundation Center, offers self-service tools and resources which support apprentice and experienced grant writers. Resources include webinars, multimedia tools, an Ask us! feature, classes and events, and more.

<http://grantspace.org/>

Idea Wild

Idea Wild's efforts help conserve biodiversity by providing biologists and educators working in developing countries with equipment and supplies to aid in their conservation efforts. See the website for details.

<http://www.ideawild.org/apply.html>

Innovative Technology Experiences for Students and Teachers

Innovative Technology Experiences for Students and Teachers (ITEST) is a program that promotes PreK-12 student interests and capacities to participate in the STEM and information and communications technology workforce of the future. Approximately 15-20 Strategies awards with durations up to three years are expected to be funded. The deadline for proposals is November 13, 2015; see the website for complete details.

<http://www.nsf.gov/pubs/2015/nsf15599/nsf15599.htm>

International Photography Contest for Kids

The National Geographic International Photography Contest for Kids accepts photos from kids between the ages of 6 and 14. The categories are Amazing Animals, Dare to Explore, Weird But True, and Wild Vacation. The deadline for entry is October 15, 2015.

http://kids.nationalgeographic.com/content/kids/en_US/explore/contests/international-photography-contest-rules/

ISRS Logo Competition

The International Society for Reef Studies announces a competition to promote the production and dissemination of scientific knowledge and understanding of coral reefs, both living and fossil. The logo should capture the iconic nature of coral reefs wherever those reefs occur. The competition is open to society members. The deadline for submission is December 20, 2015.

Contact Kiho Kim at kiho@american.edu with ISRS Logo Competition in the subject line

National Medal for Museum and Library Service

This award honors museums and libraries that make extraordinary civic, educational, economic, environmental, and social contributions to their communities. The deadline for application is October 1, 2015.

<http://www.ims.gov/applicants/detail.aspx?GrantId=13>

National Recreation Trails Photo Contest

This annual contest, sponsored by American Trails, seeks to highlight the diversity of the National Recreation Trails and to make more Americans familiar with these resources. The deadline for entry is December 15, 2015.

<http://americantrails.org/nationalrecreationtrails/photocon.html>

NSTA Awards

The National Science Teachers Association sponsors numerous awards for which environmental educators or their students may be eligible. Most applications are due November 30, 2015.

<http://www.nsta.org/about/awards.aspx>

PBS Loves Teachers Sweepstakes

The PBS LearningMedia PBS Loves Teachers Back to School Sweepstakes offers four weekly prize drawings. The deadline for entry is September 13, 2015.

<https://offerpop.com/campaign/769030>

Save On Energy Teacher Grants

SaveOnEnergy.com[®] seeks lesson plans for teaching students about energy or sustainability. Six grants will be awarded. The deadline for submission is September 18, 2015.

<https://www.saveonenergy.com/teacher-grant/>

Siemens Competition in Math, Science and Technology

This competition encourages students to undertake individual or team research projects that foster intensive research and improve their understanding of the value of scientific study, and informs their consideration of future careers in these disciplines. The deadline for submission is September 22, 2015.

<https://siemenscompetition.discoveryeducation.com/>

Smith Postdoctoral Fellowship in Conservation Research

The Society for Conservation Biology offers the two year post-doctoral David H. Smith Conservation Research Fellowship Program to enable early-career scientists to improve and expand their research skills while directing their efforts towards problems of pressing conservation concern for the United States. The deadline for application is September 11, 2015.

<http://conbio.org/mini-sites/smith-fellows/apply/proposal-guidelines>

Start a Snowball Grants

Start a Snowball offers seed money for youth-led (ages 5-18) projects to help kids kick off their philanthropy efforts. Rolling deadlines.

<http://startasnowball.com/philanthropic-grant-for-kids/>

Target Field Trip Grants

The Target Field Trip Grants Program allows teachers to offer experiential learning gained from field trips to enhance students' classroom studies. Funds may be used to cover cost of transportation, entry fees, supplies and equipment, and resource materials. The deadline for application is September 30, 2015.

<https://corporate.target.com/corporate-responsibility/grants/field-trip-grants>

Watershed Threat Assessment Tool RFQ

The National Fish and Wildlife Foundation has released a Request for Quotation for the development of a watershed threat assessment tool. The objective is the creation of a step-wise decision tree for watershed managers that allows them to assess the threats facing their watershed in a cost effective manner with minimal technical expertise. The deadline for submission is October 1, 2015.

<http://www.nfwf.org/coralreef/Pages/coralRFQ.aspx>

Why Space Matters

To highlight the role of space-based science and technologies and their applications for sustainable development, the United Nations Office for Outer Space Affairs and NASA astronaut Scott Kelly seek photos depicting just why space matters to us all in our daily lives. Submit your photo and check out the monthly winners.

<http://www.unoosa.org/osa/contests/whyspacematters/index.html>

Young Writers Contest

The Young Writers Contest encourages young people, ages 10-18, to express themselves and their thoughts through writing and literacy skills. Winners will be selected based on originality, creativity, audience appeal, and writing skill. The winners will have their books published by BookLogix. The deadline for entry is October 5, 2015.

<http://booklogix.com/about/writing-contests/young-writers-contest>

FELLOWSHIPS, INTERNSHIPS, AND TEMPORARY OPPORTUNITIES

California Sea Grant State Fellows Program

California Sea Grant's State Fellows Program provides an educational opportunity for graduate students who are interested both in marine resources and in the policy decisions affecting those resources. The program matches highly motivated and qualified graduate students with hosts in California state agencies for a 12-month paid fellowship; 23 fellowships are available. The deadline for application is September 24, 2015.

<https://caseagrants.ucsd.edu/fellowships/california-sea-grant-state-fellowship>

Knowles Science Teaching Foundation Fellowships

The five-year Knowles Science Teaching Foundation Fellowships are available in the areas of biology, mathematics, and physical sciences to individuals who demonstrate exceptional content knowledge in the area they intend to teach, a commitment to teaching high school in U.S. schools, professional ability, and the potential for leadership. The deadline for application is November 1, 2015.

<http://www.kstf.org/fellowships/>

Marine Wildlife Internships - Massachusetts

The New England Coastal Wildlife Alliance offers marine wildlife internships to upper level high school students, college students, and professionals in southeastern Massachusetts. The unpaid internships provide educational outreach and research opportunities.

<http://necwa.org/internships.html>

Mickelson ExxonMobil Teachers Academy

Nominate a teacher for the 2016 Mickelson ExxonMobil Teachers Academy, an all-expenses-paid professional development program for teachers of grades 3-5 in Jersey City, New Jersey. Participants will learn interactive ways to inspire their students in math and science. The deadline for nomination is October 31, 2015.

<http://www.sendmyteacher.com/>

PolarTREC Teacher Research Experiences

PolarTREC (Teachers and Researchers Exploring and Collaborating) is currently accepting applications from teachers for teacher research experiences. Teachers are invited to submit an application to participate in field research learning experiences during the 2016 (usually Arctic) or 2016-17 (usually Antarctic) field seasons. Hurry - the deadline for application is September 8, 2015

<http://www.polartrec.com/teachers/application>

Teacher Under the Sea

Florida International University's Medina Aquarius Program is launching the Teacher Under the Sea initiative, soliciting applications from K-12 teachers to become aquanauts as mission outreach specialists. See the website for details, including an upcoming expedition November 8-15, 2015.

https://aquarius.fiu.edu/education/teacher_under_the_sea/

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Biology for Voters, Part 1 - Online

This edX course from the University of California, Berkeley, offers to teach the fundamentals of modern biology to help participants make more informed voting decisions. The course is seven weeks, starting September 9, 2015.

<https://www.edx.org/course/biology-voters-part-1-uc-berkeleyx-bfv101-1x>

Conservation in Action - Connecticut

Mystic Aquarium and partners offer the second of a three-part public speaker series. Conserving Our Coastal Ecosystem, October 6, 2015, in Mystic, Connecticut, with a first-hand account of sandpipers migration. Free registration is required.

<https://tickets.mysticaquarium.org/mainstore.asp?vid=3#cat1354>

Deep-Sea Webinar Series - Online

Hosted by Duke WebEx, the Deep-Sea Webinar Series covers economic topics. The next webinar, September 16, 2015, will feature a talk on the Deep Blue Economy. Sign up to attend, check out archived webinars, and more.

<http://www.linwoodpendleton.com/upcomingwebinars/>

Eco-Art Workshops - Texas

Artist Boat is now scheduling Eco-Art Workshops and Adventures for the Fall 2015 semester, which include a 2-hour workshop and 4-hour kayak adventure for grades 6-12. In addition, there are still a few scholarships to Cypress Swamp available, but spaces are going fast.

Contact Amanda Rinehart at atarinehart@artistboat.org

<http://www.artistboat.org/youth-programs.html>

EETAP Courses - Online

The University of Wisconsin-Stevens Point and the Environmental Education and Training Partnership (EETAP) offer Fall online courses. Scholarships may be available. Check the website for offerings, deadlines for registration, and course dates.

<http://www.uwsp.edu/cnr/AMP/Pages/Course%20Info/Registration.aspx>

Guidelines for Excellence in Environmental Education Workshop – Oregon

The University of Oregon will host this professional development workshop for informal educators, September 14, 2015 in Eugene, Oregon.

<http://natural-history.uoregon.edu/education-and-events/workshops>

Marine Mammals in Coastal Georgia Teacher Workshop - Georgia

Join experts in the marine mammal field for this teacher workshop, November 13, 2015 in Brunswick, Georgia. Topics will include current research, behaviors, and more, along with curriculum and classroom activities.

Contact Georgia Graves at georgiabeachwalk@bellsouth.net

NAAEE Conference

The North American Association for Environmental Education will hold its 44th Annual Conference and 12th Annual Research Symposium, October 15-18, 2015 in San Diego, California. The conference theme is Building a Stronger and More Inclusive Movement.

Note that volunteers are needed to keep the conference running smoothly; check the website for details.

<http://www.naaee.net/conference>

Ocean Acidification Curriculum Webinar - Online

The Channel Islands National Park and Channel Islands National Marine Sanctuary Ocean Acidification Curriculum is a series of middle school lessons that use the park and sanctuary as a backdrop for learning about ocean acidification. The webinar will provide an overview of curriculum which includes eight lessons that are aligned with Common Core and Next Generation Science Standards. Space is limited; free registration is required.

<https://attendee.gotowebinar.com/register/1263495359764788738>

Ocean Exploration Workshops – Various

NOAA's Ocean Exploration Program and partners offer the Okeanos Explorer Education Materials Collection How or Why Do We Explore? Professional Development Workshops for Educators. Participants will receive classroom-ready lessons, certificates of participation, and other resources. Contact the noted educator or check out the website for registration and more information

- October 3, 2015 with the Birch Aquarium at Scripps Institution of Oceanography in San Diego, California. How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is September 18, 2015. Contact Audrey Evans at eadrey@ucsd.edu
- October 17, 2015 with the New England Aquarium, Boston, Massachusetts. Why Do We Explore? Professional Development Workshop for Educators. The deadline for registration is September 25, 2015. Contact Tania Slywynskyj at tslywynskyj@neaq.org
- November 8, 2015 with the North Carolina Aquarium at Fort Fisher, Fort Fisher, North Carolina. Why Do We Explore? Professional Development Workshop for Educators. The deadline for registration is October 16, 2015. Contact Jennifer Metzler-Fiorino at jennifer.metzler-fiorino@ncaquariums.com
- November 14, 2015 with the John G. Shedd Aquarium, Chicago, Illinois. Why Do We Explore? Professional Development Workshop for Educators. The deadline for registration is October 23, 2015. Contact Jackie Formoso at jformoso@sheddaquarium.org
- November 14, 2015 with the Oregon Museum of Science and Industry, Portland, Oregon. Why Do We Explore? Professional Development Workshop for Educators. The deadline for registration is October 23, 2015. Contact Nate Lesiuk at nlesiuk@omsi.edu
- November 21, 2015 with the National Aquarium, Baltimore, Maryland. Why Do We Explore? Professional Development Workshop for Educators. The deadline for registration is October 30, 2015. Contact David Christopher at dchristopher@aqua.org

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

Rising Seas Summit

The Association of Climate Change Officers will host the third annual Rising Seas Summit, November 3-5, 2015 in Boston, Massachusetts. The conference will examine the relationships between sea level rise, climate change, and extreme events. Topics include legal challenges to adaptation, public health implications of sea level rise, natural

systems resilience, unsustainable policies that lead to risk, relocation issues, adaptive infrastructure, and quantifying climate risk.

<http://www.risingseassummit.org/index.html>

Texas State Aquarium Fall Teacher Learning Opportunities – Texas

The Texas State Aquarium and Flint Hills Resources Center for Excellence in Science, Technology, Engineering and Math Education offer educators learning opportunities and resources designed to support and enhance classroom-based STEM curriculum, pedagogical best practices, and student-centered discovery. Check out the upcoming Brunch by the Beach, Tracking Sharks, and Aquavision Distance Learning opportunities.

<https://texasstateaquarium.org/programs-camps/teacher-resources/>

Tropical Coastal Ecosystems - Online

This edX course from the University of Queensland helps students develop the skills and knowledge needed to help preserve tropical coastal ecosystems. While the nine-week course starts September 1, 2015, students may be able to catch up if registering after the course begins.

<https://www.edx.org/course/tropical-coastal-ecosystems-ugx-tropic101x-0>

U.S. Fish and Wildlife Service Courses

The U.S. Fish and Wildlife Service offers professional development courses at the National Conservation Training Center campus in West Virginia, through the University of Wisconsin Stevens Point, and with partners throughout the country.

- Making Environmental Education Relevant for Culturally Diverse Audiences, October 5-December 22, 2015, online. Contact Michelle Donlan at Michelle_Donlan@fws.gov
- Needs Assessment in Environmental Education, October 7-November 20, 2015, online. Contact Michelle Donlan at Michelle_Donlan@fws.gov
- Connecting People with Nature through Birds, April 25-28, 2015 in Soldotna, Alaska. Contact Michelle Donlan at Michelle_Donlan@fws.gov
- Teaching Youth Outdoors, May 2-6, 2016 in West Virginia. Contact Werner Barz at Werner_Barz@fws.gov

EDUCATIONAL RESOURCES

Classroom Apps

From KQED News' MindShift, Teacher Recommended: 50 Favorite Classroom Apps reviews a variety of technology apps for use in the classroom. Categories include apps to acquire information, apps which help organize or share information, and knowledge transfer apps.

<http://ww2.kqed.org/mindshift/2015/07/29/teacher-recommended-50-favorite-teaching-apps/>

Climate Change and Energy Curricula

This interdisciplinary global warming curriculum from the Will Steger Foundation helps students in grades 3-12 master background information on global climate change processes, the Arctic's importance to global climate, and the potential effects of global warming in the Arctic.

<http://www.climategen.org/what-we-do/education/climate-change-and-energy-cirricula/>

Climate Connections: A Global Journey

National Public Radio and National Geographic host the Climate Connections website with news items, a daily podcast, and more. An interactive map allows visitors to follow NPR reporting on areas of the world impacted by global warming, and the Wild Chronicles offers videos on a variety of wildlife and global warming issues. Topics include Deep Time, Thawing Ice, and much more.

<http://www.npr.org/news/specials/climate/interactive/?ps=bb3>

Coral Ecosystem Connectivity 2015: From Pulley Ridge to the Florida Keys Expedition

NOAA's Office of Ocean Exploration and Research offers the Coral Ecosystem Connectivity 2015: From Pulley Ridge to the Florida Keys Expedition Web page on its Ocean Explorer website. The expedition, August 22-September 4, 2015 is part of a five-year project, with researchers working to better understand the role that mesophotic reefs may play in replenishing key fish species and other organisms in the downstream reefs of the Florida Keys and Dry Tortugas. The website will include mission logs and content essays, multimedia, educational resources, and much more.

<http://oceanexplorer.noaa.gov/explorations/15pulleyridge/welcome.html>

Foundation Center

The Foundation Center offers information about philanthropy worldwide. Through data, analysis, and training, it connects people who want to change the world to the resources they need to succeed. The center maintains a database on U.S. and global grantmakers and their grants.

<http://foundationcenter.org/>

Good Thinking

Good Thinking is an animated series from the Smithsonian Science Education Center that explores topics in science, cognition, and pedagogy. The short videos address common student misconceptions with animated episodes specifically geared toward science educators.

<http://www.ssec.si.edu/GoodThinking>

Green Strides Website

This website from the U.S. Department of Education showcases free resources that schools can use to meet the criteria for its Green Ribbon Schools award program or simply use to help green their operations. Check out links to Nature Explore, NOAA's Ocean Guardian School, and more under the Resources tab.

<http://www.greenstrides.org/>

Gulf of Mexico Curriculum

The Deep-C Consortium offers this Gulf of Mexico Curriculum, Deep Sea to Coast Connectivity: Utilizing scientific research to help students make connections between the theoretical nature of science and real world applications. The multidisciplinary curriculum was developed around five main research areas: geomorphology, geochemistry, ecology, physical oceanography, and modeling. Each module includes five cumulative lessons, background information on the topic, relevant supplementary reading materials, a glossary, and an assessment.

<http://deep-c.org/education-and-outreach/gom-curriculum>

Hohonu Moana: Exploring Deep Waters off Hawai i

NOAA's Office of Ocean Exploration and Research launched the NOAA Ship Okeanos Explorer Expedition - Hohonu Moana: Exploring Deep Waters Off Hawaii 2015, July 10-September 30, 2015. Researchers and scientists, both at-sea and on shore, will conduct mapping and remotely operated vehicle operations in the deep waters of the Hawaiian Archipelago, including the Papahānaumokuākea Marine National Monument and Johnston Atoll – part of the recently expanded Pacific Remote Islands Marine National Monument. Currently planned as a three-year effort, the Campaign to Address Pacific monument Science, Technology, and Ocean NEeds (CAPSTONE), will focus on systematically collecting baseline information to support science and management needs within and around the U.S. Marine National Monuments and other protected places in the Pacific Ocean.

<http://oceanexplorer.noaa.gov/okeanos/explorations/ex1504/welcome.html>

Improving Public Speaking Skills

These 10 Helpful Online Resources for Improving Public Speaking Skills have been gathered together by the Graduate School at the University of Notre Dame in an effort to help students overcome stage fright. Visitors will find articles, videos, and podcasts that are designed to educate and, by extension, ameliorate the fear of public speaking.

<http://blogs.nd.edu/graduate-school-professional-development/2013/02/12/10-helpful-online-resources-for-improving-public-speaking-skills/>

Introduction to Water and Climate

This edX course from Delft University of Technology explores how climate change, water availability, and engineering innovation are key challenges for the planet. The course consists of knowledge clips, movies, exercises, discussion, and homework assignments. The free course starts September 1, 2015 and runs for seven weeks.

<https://www.edx.org/course/introduction-water-climate-delftx-ctb3300wcx-0?>

Investigating Evidence

Investigating Evidence, from BirdSleuth, is now aligned with both Common Core and Next Generation Science Standards. The free curriculum includes a Teacher's Guide, accompanying Resource and Journal pages, and online resources that support citizen-science projects and outdoor explorations. Lead your students in making observations, crafting and testing hypotheses, collecting and graphing data, drawing meaningful conclusions, and sharing their work.

<http://www.birdsleuth.org/investigation/>

Life Support: Tennessee's Water

The Cumberland River Compact offers the free, downloadable Life Support: Tennessee's Water, which can be used to supplement to existing science curricula, covering environmental issues that may not be dealt with in existing science texts. It includes information on water science, water resources, and water management, and offers interactive exercises to engage students and help them to understand water issues in a hands-on way. Both teacher and student editions are available.

<http://cumberlandrivercompact.org/life-support-tennessees-water/>

Mapping Activities from NOAA OER

NOAA's National Coastal Data Development Center provides a map-based atlas that links to information about past expeditions of NOAA's Ocean Explorer program that began in 2001. The Digital Atlas can be used to obtain information about past NOAA

Ocean Explorer expeditions, education resources associated with the expeditions, ship tracks, bathymetric maps, dive tracks, and more.

http://www.ncddc.noaa.gov/website/google_maps/OE/mapsOE.htm

Marine Ecosystem Services Mapper

The Marine Ecosystem Services Partnership is a virtual center for information and communication on the human uses of marine ecosystem services around the world. The mapper helps visualize data from valuation studies for the use of policy makers, environmental managers, researchers, and others.

<http://marineecosystemsolutions.org/explore>

Marine Planning Concierge

This website from the Natural Capital Project is designed to make it easier to learn about and implement marine spatial planning, incorporating ecosystem services. The information organizes existing technical approaches, information, and tools in a generalized spatial planning framework.

http://msp.naturalcapitalproject.org/msp_concierge_master/

MarineCadastre

MarineCadastre.gov, a joint effort between NOAA and the Bureau of Ocean Energy Management, is an integrated marine information system that provides data, tools, and technical support for ocean and Great Lakes planning. The project has three primary focus areas: web map viewers and decision-support tools, a spatial data registry, and technical support and regional capacity-building.

<http://marinecadastre.gov/>

NASA STEM Webinars

The NASA STEM Educator Professional Development Collaborative is presenting a series of free webinars open to all educators. Check out both upcoming and archived webinars.

<http://www.txstate-epdc.net/events/>

National Water Quality Monitoring Council Webinar Series

The National Water Quality Monitoring Council will offer the webinar, Effective Science Communication with emphasis on visual science communication tools, September 15, 2015. The webinar will discuss the art of storytelling to capture the key messages from scientific research and make the data compelling. The presenter is from the Integration and Application Network of the University of Maryland Center for Environmental Science, which aims to enable better communication to empower change by exploring new and innovative ways to visualize scientific data. Note that many of the council's webinars are archived for future viewing.

<http://acwi.gov/monitoring/webinars/index.html>

RAW

RAW offers an online data visualization tool for spreadsheet data. The results can be exported in an SVG format.

<http://app.raw.densitydesign.org/>

Rhode Island Shipwrecks

The University of Rhode Island's R/V *Endeavor* will explore WWII wreck sites, September 2-6, 2015. The wrecks will be explored using an ROV equipped with high

definition cameras. The Inner Space Center will be sharing this expedition live through the use of telepresence technologies, with scientists, divers, and archaeologists. Live feeds will be viewable on the expedition website 24 hours a day, while special, live broadcasts with scientists, historians, engineers, and divers will take place September 3-5, 2015. See the website for additional opportunities.

<http://innerspacecenter.org/riwrecks>

Soil Moisture Citizen Science

NASA scientists are on a mission to map global soil moisture, and through SciStarter, they're teaming up with citizen scientists to gather data from the ground to complement and validate what is seen from space. Known as the Soil Moisture Active Passive satellite mission, the research will help scientists understand links among Earth's water, energy, and carbon cycles. Sign up as an individual or team.

<http://scistarter.com/project/1226-SMAP:%20Soil%20Moisture%20Active%20Passive>

Supercomputing the Climate

This video from NASA's Goddard Media Studios offers an overview of how computer models work. It explains the process of data assimilation, which is necessary to ensure that models are tied to reality.

<http://svs.gsfc.nasa.gov/vis/a010000/a010500/a010563/index.html>

Water Quality & Weather Data Graphing Tool

The National Estuarine Research Reserve System's Estuary Education pages offers an updated Water Quality & Weather Data Graphing Tool. Check the Graphing Tool Tutorial for tips and suggestions for using the collected data in your classroom.

Students can use these data to explore coastal challenges such as a hurricane's impacts on water quality, rainfall impacts on oyster populations, and more. Be sure to explore the curriculum and students links, along with many additional resources.

<http://estuaries.noaa.gov/ScienceData/Graphing.aspx>

What are Your Wetlands Worth?

The Texas Coastal Watershed Program offers this clearinghouse of programs that provide payments (either direct payment or financial assistance), technical services, tax deductions, low-interest loans, and regulatory assurances for conservation with an emphasis on wetland conservation. It is particularly applicable to private landowners on the upper Texas Coast but can be informative for everyone. The mission of this website is to provide landowners with easily accessible information and program links on ways they can economically benefit by choosing sustainable land management.

<http://valuwetlands.tamu.edu/>

INITIATIVES, JOURNALS, and MORE

Discount Gear for Youth Fishing Programs

Pure Fishing Global offers fishing tackle, lures, rods, and reels at discounted prices for nonprofit aquatic education programs and youth events. These include programs and events at national wildlife refuges and elsewhere.

Contact Roxanne Coleman at grcoleman@purefishing.com

Emergency Contact Card

Save the Children offers a free, downloadable emergency contact card to help children and their caregivers by offering a reliable emergency contact card that can be used during a calamity.

https://secure.savethechildren.org/site/c.8rKLIXMGIpI4E/b.9292307/k.E461/Get_Ready_Get_Safe_Emergency_Contact_Cards/apps/ka/ct/contactcustom.asp

International Coastal Cleanup - Washington

Washington CoastSavers offers online registration for volunteers joining the International Coastal Cleanup September 19, 2015. Volunteers are needed to help clean beaches from Cape Disappointment to Cape Flattery and into the Strait of Juan de Fuca. Check out the CoastSavers website for maps of the beaches involved and logistics for each site; click on a site to volunteer and for more information. Contact Jon Schmidt for more information.

<http://www.coastsavers.org/index.php/international-coastal-cleanup/>

Contact Jon Schmidt at jon@coastsavers.org

National Climate Game Jam

NOAA is announcing a national climate game jam October 2-4, 2015 that will be held in multiple sites around the country. This event offers a unique opportunity for educators, students, scientists, game designers, and interested public members to work together on the development of climate game jam prototypes that span a range of platforms, topics, and audiences. The Climate Game Jam will encourage the creation of new game prototypes that allow players to learn about climate change and resilience through science-based interactive experience. Join the webcast, October 2, 2015, for a kick-off event.

<http://climategamejam.org/>

National Estuaries Week

National Estuaries Week is September 19 -26, 2015. Every year, Restore America's Estuaries member organizations, NOAA's National Estuarine Research Reserve System, and EPA's National Estuary Program organize special events, including beach clean-ups, hikes, canoe and kayak trips, cruises, workshops, and more. Take advantage of volunteer opportunities and hands-on restoration in your nearby bay or estuary, participate in a guided walk or boat tour, or explore your estuary with family and friends. Check out events near you.

<https://www.estuaries.org/national-estuaries-week>

<http://nerrs.noaa.gov/about/national-estuaries-week.html>

REEF Fest 2015

Join Reef Environmental Education Foundation to celebrate marine conservation success in the Florida Keys, September 24-27, 2015 in Key Largo, Florida. The festival includes educational seminars such as Fish Identification and Behavior, Coral Restoration, and more. Workshops and most of the social events are free of charge, but pre-registration is requested.

<http://www.reef.org/REEFFest2015>