

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

FEBRUARY 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 REFERENCES

Disaster Preparedness for Seniors by Seniors

This downloadable guide offers practical information about pre-disaster preparedness, with a focus on special needs of seniors.

http://www.redcross.org/images/MEDIA_CustomProductCatalog/m4640086_Disaster_Preparedness_for_Srs-English.revised_7-09.pdf

Guide to Implementing the Next Generation Science Standards

The Framework for K–12 Science Education and the Next Generation Science Standards (NGSS) describe a vision for science learning and teaching. This report from the National Research Council, intended primarily for district and school leaders and teachers in charge of developing and implementing NGSS, includes seven principles to

guide the implementation of the vision of the framework, and provides recommendations in the areas of instruction; professional learning for teachers and district leaders; curriculum resources; policies and communication; collaboration, networks and partnerships; and assessment that need to be considered when implementing NGSS.

http://www.nap.edu/openbook.php?record_id=18802

Protected Area Governance and Management

The IUCN offers this 1000-page book covering protected area governance and management. It combines original text, case studies from across the world, and scientific literature. Contributors included five editors, 164 principal and supporting authors, and 27 peer reviewers over a period of two and a half years. It is available as a free download and will be available in print.

<http://press.anu.edu.au/titles/protected-area-governance-and-management/attachment/b-thumb-protectedarea/>

Representativeness of Marine Protected Areas of the United States

This report assesses two aspects of representativeness in MPAs in United States waters: the presence of MPAs in the 19 marine ecoregions of U.S. waters; and, the presence and representativeness in those MPAs of major habitat types (e.g., corals, seagrass, rocky intertidal, submarine canyons), key natural resources (e.g., invertebrates, fish, marine mammals, birds), and ecologically important areas and processes (e.g., fish spawning, bird nesting and upwelling areas and feeding grounds).

<http://marineprotectedareas.noaa.gov/dataanalysis/mpainventory/rep-report15.pdf>

PROGRAMS OF THE MONTH

Essential Lens: Analyzing Photographs Across the Curriculum

Essential Lens: Analyzing Photographs Across the Curriculum is a multidisciplinary resource for middle and high school teachers from Annenberg Learner. It offers practical methods to facilitate the use of photographic materials in classroom settings. Learn how to analyze photographs and guide students' use of photographs to enhance their understanding of a topic, an era, an event, or a discovery. The website hosts more than 250 rights-cleared photos curated by topic; 4 videos documenting the work of photo-journalists, filmmakers, photo editors and showing photo use in classrooms; lesson plans; and an interactive tool for analyzing photos.

<http://www.learner.org/courses/lens/>

Hudson River Lesson Plans

The Hudson River Estuary Program and New York Sea Grant offer place-based and interdisciplinary lessons that use the river as context. Topics cover climate change, English Language Arts, Social Studies, and much more.

<http://www.dec.ny.gov/education/25386.html>

<http://www.seagrant.sunysb.edu/articles/t/hudson-river-estuary-climate-change-lesson-project-hudson-river-estuary-news>

WEBSITE OF THE MONTH

Zooniverse

The Zooniverse from the Citizen Science Alliance follows citizen science projects. Readers may join a project and start contributing to data analysis of various kinds, while

teachers will find education resources within the Community tab. The website links to Zoo Teach, with lesson plans and activities; Zoo Tools, for data collection; and more. Dive into the planktonic world, model Earth's climate using historic ship logs, and much more.

<https://www.zooniverse.org/>

REQUESTS

Announcements for Reef Encounter

The next issue of the International Society for Reef Studies news journal *Reef Encounter* is due for publication in late February. Please submit any reef related news or announcements that you would like to have included.

Submit news items to Sue Wells at suwells1212@gmail.com

Submit announcements to Rupert Ormond at rupert.ormond.mci@gmail.com

GRANTS AND OPPORTUNITIES

Audubon Photography Contest

The annual Audubon Magazine Photography Awards encourages participants to submit photographs that depict birdlife in any form. The deadline for entry is February 23, 2015.

<http://audubonphotoawards.org/>

Bezos Scholars Program

The Bezos Scholars Program @ the Aspen Institute is a year-long leadership development program for high school juniors and educators. It begins with a scholarship to the Aspen Ideas Festival and continues through the following school year when scholar teams return home to launch sustainable, Local Ideas Festivals to transform their schools and communities. The deadline for application is February 17, 2015.

<http://www.bezosfamilyfoundation.org/scholars>

Braitmayer Foundation Education Grants

The Braitmayer Foundation offers grants to fund a broad range of K-12 education programs with curricular reform initiatives and professional development opportunities for teachers, particularly those which encourage people of high ability and diverse background to enter and remain in K-12 teaching. The deadline for application is March 15, 2015.

<http://www.braitmayerfoundation.org/guidelines/>

California Sea Grant Preliminary Proposals - California

The California Sea Grant College Program is soliciting preliminary proposals for projects to begin February 1, 2016. Faculty and academic staff from universities, and scientists from research institutions throughout California are invited to apply. Standard Core Awards should address Healthy Coastal and Marine Ecosystems, Resilient Coastal Communities, and/or Safe and Sustainable Fisheries and Seafood Supply. The deadline for preproposals is February 19, 2015.

<http://www-csgc.ucsd.edu/FUNDING/APPLYING/PRELIMINARY/IndxPrelim.html>

Davidson Fellows Scholarship

The Davidson Fellows Scholarship awards scholarships to youth, 18 and under, who have completed a significant piece of work in categories including science, technology,

and "outside the box." The work must be recognized as an outstanding accomplishment by experts in the field and have the potential to benefit society. Hurry – the deadline for submission is February 11, 2015.

<http://www.davidsongifted.org/fellows/>

"Discover the Marine Industry" Art Contest

Students in grades K-12 are invited to participate in this art contest sponsored by the North American Marine Environment Protection Association, the U.S. Coast Guard, and Sea Research Foundation. Students are asked to find a creative way to answer "How does the marine industry affect your everyday life?" The deadline for submission is March 1, 2015.

<http://www.namepa.net/art-contest/>

Discovery Education 3M Young Scientist Challenge

Discovery Education 3M challenges students in grades 5-8 to make a short video describing a new innovation or solution that could solve or impact an everyday problem. The deadline for entry is April 21, 2015.

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

Dorothy Stout Professional Development Grants

The National Association of Geoscience Teachers awards grants to K-12 teachers and faculty and students at two-year colleges. The grants support professional growth in, or classroom teaching of, Earth science. The deadline for application is April 15, 2015.

<http://www.nagt.org/nagt/programs/stout.html>

Eco-Comedy 2015

The Spring 2015 Eco-Comedy theme is Clean Water, Clean Air. Participants produce a short (3 minutes maximum) video which communicate a clear, humorous message around the broad theme of clean water, clean air, and overall environmental conservation.

<http://www.american.edu/soc/cef/eco-comedy-film-competition.cfm>

EcoTech Grants

The Captain Planet Foundation in partnership with the Ray C. Anderson Foundation will award grants to schools or non-profits organizations for the purpose of engaging children in inquiry-based projects in STEM fields that use innovation, biomimicry / nature-based design, or new uses for technology to address environmental problems in their communities. The rolling deadline for application is April 30, 2015 (as funds allow).

<http://captainplanetfoundation.org/ecotech-grants/>

Engineering for You Video Challenge

The National Academy of Engineering has outlined 14 Grand Challenges for Engineering for the 21st century. Challenge topics include solar and fusion energy, clean water, carbon sequestration, and more. Educators should submit a short video that shows how achieving one or more of them will lead to a more sustainable, healthy, secure, and/or joyous world. The deadline for submission is March 2, 2015.

<http://www.nae.edu/e4u2/>

Ezra Jack Keats Mini-Grant Program for Public Libraries and Public Schools

The Ezra Jack Keats Foundation is accepting applications from public schools and libraries for program or event mini-grants. The deadline for application is March 15, 2015.

<http://www.ezra-jack-keats.org/minigrant-program/>

Fulbright Arctic Initiative

The Fulbright Arctic Initiative will create a network to stimulate international scientific collaboration on Arctic issues while increasing mutual understanding between people of the United States and of other countries. Selected scholars will participate in a series of three seminar meetings and a Fulbright exchange experience between spring 2015 and fall 2016. The deadline for application is February 16, 2015.

<http://www.cies.org/program/fulbright-arctic-initiative>

Gloria Barron Prize for Young Heroes

The Gloria Barron Prize recognizes young people, ages 8-18, who have shown leadership and courage in public service to people and the planet. The deadline for nomination is April 15, 2015.

<http://barronprize.org/>

IoT World Forum Young Women's Innovation Grand Challenge

The IoT World Forum Young Women's Innovation Grand Challenge is open to women between the ages of 13-18. The aim of the challenge is to recognize, promote, and reward young innovators as they come up with new uses for Internet of Things technologies. Innovations should answer the questions, What is a problem you see today or expect to emerge in the next 5 years? and How can connecting more devices and everyday objects to the Internet or other networks help to solve this problem? The deadline for submission is March 25, 2015.

<http://iotchallenge-cisco.younoodle.com/>

JASON National Argonaut

Apply to become a JASON National Argonaut. The JASON Project seeks a diverse, creative, and adventurous group of students and teachers to venture into the field with JASON scientists. Experience with the JASON program is required. The deadline for application February 16, 2015.

<http://www.jason.org/argo2015>

Kohl's Cares Scholarship Program

The Kohl's Cares Scholarship Program recognizes volunteers (ages 6-18) who help make their communities a better place to live. The deadline for nomination is March 13, 2015.

<http://www.kohlscorporation.com/CommunityRelations/scholarship/>

McCarthy Dressman Grants

The McCarthy Dressman Education Foundation partners with individuals to expand educational opportunities for America's youth that inspire students by nurturing their curiosity about the world and their place in it. Funding includes Academic Enrichment Grants, Teacher Development Grants, and Student Teaching Scholarships. The deadline for application is April 15, 2015.

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

Minority University Research and Education Project

NASA offers MUREP scholarships for individuals pursuing or planning to pursue undergraduate studies leading to associate or bachelor's degrees in relevant NASA-related disciplines at an accredited U.S. minority-serving institution. These opportunities are open to students pursuing degrees in science, technology, engineering and mathematics, specifically in areas of projected deficiencies in the NASA STEM workforce. The deadline for application is March 31, 2015.

<http://www.nasa.gov/offices/education/programs/national/murep/home/index.html#.VM18jS7Lkbg>

NMEA Awards

These National Marine Educators Association Awards honor educators and individuals who have shown exceptional leadership in the field of marine education:

- Johnette D. Bosarge Memorial Award – the deadline for application is February 20, 2015
- Outstanding Teacher Award - For educators who have shown effective and innovative classroom teaching at all levels.
- James Centorino Award - For individuals who have shown distinguished performance in marine education by professionals not in the classroom setting.
- Marine Education Award - For outstanding leadership and work in any aspect in marine education on the local, regional, or national level.

Except where noted, the deadline for nomination is April 1, 2015.

<http://www.marine-ed.org/?page=awards>

NMEA Scholarships

There are three different types of scholarships available for those who wish to attend the 2015 NMEA Conference, June 28-July 2, 2015 in Newport, Rhode Island: NMEA member-only scholarships, Expanding Audiences scholarships, and Traditional Knowledge scholarships. The deadline for application is March 15, 2015.

<http://www.marine-ed.org/?page=scholarships>

Norm Strung Youth Writing Award

The Outdoor Writers Association of America offers the annual Norm Strung Youth Writing Contest to students in grades 6-12 for published poetry and prose with an outdoor focus. The deadline for submission is March 16, 2015.

<http://owaa.org/programs/contests/norm-strung-youth-writing-awards/>

North American Wetlands Conservation Act Grants

The North American Wetlands Conservation Act provides matching grants to organizations and individuals who have developed partnerships to carry out wetlands conservation projects in the United States, Canada, and Mexico for the benefit of wetlands-associated migratory birds and other wildlife. There are both Standard and Small grants programs. The next deadline for application is February 27, 2015; see the website for additional deadlines.

<http://www.fws.gov/birdhabitat/Grants/NAWCA/index.shtm>

Oregon Sea Grant Undergraduate Summer Scholars Program

Oregon Sea Grant offers a Summer Scholars Program for eligible undergraduates, June 15-August 21, 2015. Students will work with an academic, government, or non-

governmental organization in marine resource science, policy, management, and outreach. The deadline for application is February 20, 2015.

<http://seagrant.oregonstate.edu/fellowships/summer-scholars>

Presidential Award for Excellence in Mathematics and Science Teaching

NSF is accepting nominations for the Presidential Awards for Excellence in Mathematics and Science Teaching. The award recognizes citizens and organizations that have demonstrated excellence in mentoring individuals from underrepresented groups in STEM education and career paths. The deadline for nomination is April 1, 2015.

<https://www.paemst.org/>

Roosevelt-Ashe Conservation Awards

Wild South invites nominations for its annual Roosevelt-Ashe Conservation Awards recognizing contributions to environmental conservation in the South. Categories include Outstanding Youth, Outstanding Educator, and more. The deadline for nomination is February 14, 2015.

<http://wildsouth.org/call-for-nominations-2014-roosevelt-ashe-conservation-awards/>

Science Without Borders Challenge

The Khaled bin Sultan Living Oceans Foundation hosts the Science Without Borders Challenge; the theme this year is Reef Relationships. Participants (ages 11-19) should submit an original piece of poster art. The deadline for submission is April 27, 2015.

<http://www.livingoceansfoundation.org/resources/for-educators/science-without-borders-challenge/>

State-Fish Art Project

The Wildlife Forever State-Fish Art Project challenges young artists to create an illustration of their state fish and a written composition on its behavior, habitat, and efforts to conserve it. The deadline for entry is March 31, 2015.

<http://www.wildlifeforever.org/contest/details>

Stockholm Junior Water Prize

The Stockholm Junior Water Prize is a youth award for a water-related science project. High school students submit their research papers online. As a first step, state winners and their science teachers win a trip to the U.S. competition in Virginia. The deadline for entry is April 15, 2015.

<http://www.wef.org/sjwp/>

FELLOWSHIPS, INTERNSHIPS, AND TEMPORARY OPPORTUNITIES

AMS Congressional Science Fellowship

The American Meteorological Society seeks candidates with backgrounds in the Earth sciences for the 2015-2016 AMS Congressional Science Fellowship, September 1, 2015-August 31, 2016. Fellows participate in the legislative process by joining a Congressional office of their choosing in the United States Senate or House of Representatives. Typical duties include developing legislation, negotiating legislative compromises, writing speeches and briefing memos, meeting with constituents, and conducting background research. Fellows must be U.S. citizens and complete all requirements for their Ph.D. prior to the start of the fellowship year. The deadline for application is March 15, 2015.

<http://www2.ametsoc.org/ams/index.cfm/policy/congressional-science-fellowship/>

Research Experience for Undergraduates - Caribbean

The Central Caribbean Marine Institute invites undergraduate students to apply to the Research Experience for Undergraduates (REU) program in Coral Reef Biodiversity and Resilience, June 20-August 14, 2015 on Little Cayman Island. The deadline for application is March 15, 2015.

<http://reefresearch.org/research/research-experience-for-undergraduates/>

Sea Grant Marine Education Internships - Georgia

Georgia Sea Grant is accepting applications for paid one-year Marine Education Intern positions, September 1, 2015-August 12, 2016. The internships are designed for recent college graduates who want teaching experience in marine science and coastal ecology. The deadline for application is April 4, 2015.

http://marex.uga.edu/sea_grant_internship/

Summer Undergraduate Research Fellowships – New Hampshire

The Center for Coastal and Ocean Mapping's Summer Undergraduate Research Fellowship (CCOM-SURF) program in Durham, New Hampshire is designed to create research experiences for undergraduate students who are interested in pursuing graduate work in science, engineering, or math and are completing their junior year. During the program, students work under the guidance of a CCOM faculty member conducting research related to acoustics, bathymetric mapping, data visualization, and similar projects. The deadline for application is March 1, 2015.

<http://ccom.unh.edu/surf>

Tropical Biology Scholarships

Scholarships are available for scholarships to the Organization for Tropical Studies professional development course, Inquiry in Rainforests: A Field Course for Teachers, July 8-21, 2015 in Costa Rica. The deadlines for submission start April 1, 2015. See the website for complete details.

<http://www.inquiryinrainforests.org/Scholarships.html>

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

American Wilderness Leadership School - Wyoming

This eight-day course provides educators with an understanding of science-based conservation and land management techniques, and the supplies needed to pass this knowledge on to their students. Teachers should apply for course sponsorship to their local Safari Club International chapter. Applications are accepted until sessions are filled; see the website for workshop dates.

<http://www.safariclubfoundation.org/education/awls>

CERF Conference – Call for Abstracts

The Coastal and Estuarine Research Federation's 2015 conference, November 8-12, 2015 in Portland, Oregon includes a special focus on the Grand Challenges in Coastal and Estuarine Science. The deadline for submissions is May 1, 2015.

<http://www.erf.org/call-for-abstracts>

Climate Change Academy - Alaska

The second Climate Change Academy program, held in collaboration with the National Park Service, will be July 14-24, 2015 from Anchorage, Alaska. In addition to the trip, the program involves climate-specific curriculum meetings in the spring and follow-up campaign aimed at spreading awareness about climate change in the fall. Openings are available for both students and teachers, but see the website for complete details.

http://www.nobarriersyouth.org/programs/climate_change_academy

Climate Communication: Changing the Conversation - Virginia

Join educators from the Virginia Aquarium and the Chesapeake Bay National Estuarine Research Reserve, February 21, 2015 in Newport News, Virginia for this climate communication workshop, with activities and lessons from the National Network of Ocean and Climate Change Interpretation. This hands-on workshop will explore best practices for communicating climate change as participants look at how audiences think, and tools to promote sustainable energy practices.

<http://www.mamea.org/vamini.html>

Climate Science & Sustainability - Texas

The University of Texas' Environmental Science Institute will hold this professional development workshop for K-12 teachers, February 19, 2015 in Austin, Texas, during UT Energy Week. Highlights will include a sustainability tour of the UT Microgrid, a panel discussion on the impact of water resources on energy technology, lesson plan activities related to climate and alternative energies, and more.

Contact Karen Bishop at karen.bishop@esi.utexas.edu

Coastal Concerns Teacher Workshop – Georgia

Join the Sapelo Reserve for the Coastal Concerns Teacher Workshop, February 27, 2015 in Brunswick, Georgia. The workshop will cover topics including climate change, coastal hazards, and more. Hurry - the deadline for registration is February 12, 2015; space is limited.

Contact Georgia Graves at georgiabeachwalk@bellsouth.net

Down Under, Out Yonder Teacher Training Expedition - Texas

The Down Under, Out Yonder coral reef workshop and scuba trip, sponsored annually by the Gulf of Mexico Foundation for K-12 and college entry educators nationwide, will take place July 11-15, 2015, starting in Galveston, Texas. The workshop includes a two-day land-based workshop featuring instruction from Flower Garden Banks National Marine Sanctuary staff and guest speakers, as well as educational materials to bring back to the classroom. Afterwards, participants travel to Freeport, Texas, for three days of SCUBA diving. Educators must be previously SCUBA certified to participate in the diving field experience. Workshop space is limited and spaces are filled quickly through a competitive application process. The deadline for application is March 6, 2015.

<http://www.gulfmex.org/education-training/duoy/>

Interpreting Climate Change - Online

This course, March 10-13, 2015, provides an overview of the knowledge and skills to develop effective, engaging climate change programming for both natural and cultural sites. Participants consider a range of engagement techniques such as facilitated dialogue, skills for dealing with controversy, and presenting multiple perspectives. Although the focus of this course is on personal services interpretation, many of the practices are also applicable to media development. Participants must be familiar with

the content in the free on-line mini-course "Foundations of Interpretation" available at www.interptraining.org. Hurry - the deadline for registration is February 10, 2015. Contact Debbie Cox for registration information at 304-535-6277 <http://www.doi.gov//doilearn/index.cfm>

Marine Biodiversity Workshop

The Division of Invertebrates at the Florida Museum of Natural History offers this free workshop for Florida high school biology teachers, February 20-22, 2015 in St. Augustine, Florida. <http://leef-florida.org/net/calendar/details.aspx?s=117750.0.0.37432>

Marine Education Workshop - Florida

Newfound Harbor Marine Institute offers this Marine Education Workshop, April 24-26, 2015 on Big Pine Key, Florida. Subjects include Soft and Hard Corals, Mangrove Islands, Sponge and Sea Grass Beds, and more. The workshop includes labs, field trips, and more. <http://fmsea.org/wp-content/uploads/2015/01/Seacamp-Teachers-Workshop-2015.pdf>

Maury Project Summer Workshop - Maryland

The Maury Project is a teacher enhancement program of the American Meteorological Society based on studies of the physical foundations of oceanography. The workshop, July 12-24 in Annapolis, Maryland, is intended to: introduce master teachers to the physical foundations of selected oceanographic topics and issues; explore and suggest ways in which these understandings and concepts can be employed in school studies; and prepare workshop attendees to conduct training sessions on selected oceanography topics and issues for teachers in their home areas during the next school year, as well as possibly participate in DataStreme Ocean Local Implementation Teams. Teachers interested in promoting minority participation in science are particularly encouraged to apply. The deadline for application is March 20, 2015. <http://www.ametsoc.org/amstedu/MAURY/summer.html>

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. The deadline for proposals is March 24, 2015. <http://www.naaee.net/conference>

NAI National Workshop

The theme of the 2015 National Association for Interpretation's National Workshop, November 10-14, 2015 in Virginia Beach, Virginia is Tidewater, Where stories ebb and flow. The deadline for proposals is March 31, 2015. http://www.interpnet.com/NAI/interp/Events/NAI_National_Workshop/nai_events/NAI_National_Workshop.aspx

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 curriculum with CD-ROM's, certificates of participation, and more. Contact the noted educator or check out the website for registration and more information.

- March 7, 2015 with the Seattle Aquarium in Seattle, Washington; Why Do We Explore? Professional Development Workshop for Educators. The deadline for registration is February 13, 2015. Contact Dan Newburn at d.newburn@seattleaquarium.org
- March 14, 2015 with the South Carolina Aquarium in Charleston, South Carolina; How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is February 20, 2015. Contact Jaime Thom at jthom@scaquarium.org
- March 14, 2015 with the Georgia Aquarium in Atlanta, Georgia; How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is February 20, 2015. Contact Kim Morris-Zarneke at kzarneke@georgiaaquarium.org
- March 21, 2015 with the Aquarium of the Pacific in Long Beach, California; How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is February 27, 2015. Contact Staci Wong at swong@lbaop.org
- March 28, 2015 with the National Aquarium in Baltimore, Maryland; How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is March 6, 2015. Contact David Christopher at dchristopher@aqua.org

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

Project WILD and WILD Aquatic - Virginia

The Hoffler Creek Wildlife Preserve will host a free workshop for teachers and informal educators, February 16, 2015 in Portsmouth, Virginia. The deadline for registration is February 12, 2015.

<http://www.hofflercreek.org/calendar-of-events/>

Sea Turtle Conservation Teacher Workshop - Georgia

Join educators at the Sapelo Island National Estuarine Research Reserve, June 15-17, 2015 on Sapelo Island, Georgia, for the Georgia Sea Turtle and Conservation Teacher Workshop. The deadline for registration is May 15, 2015.

Contact Georgia Graves at georgiabeachwalk@bellsouth.net

Seminars on Science - Online

Registration is open for upcoming sessions of Seminars on Science from the American Museum of Natural History. Courses are co-taught by an experienced classroom teacher and a research scientist. Upcoming courses include Climate Change, Earth: Inside and Out, The Ocean System, and more. See the website for complete details. The deadline for registration is March 2, 2015.

<http://www.amnh.org/learn/calendar>

STEM Student Research Facilitation Course - Online

Northwestern University's Office of STEM Education Partnerships offers a free, 11-week professional development opportunity for STEM teachers to develop or advance a program that facilitates their own students' research. The program starts February 16, 2015. Teachers learn about models and tools for implementing student research in their school district, advance planning efforts to facilitate student research opportunities, and share best practices with experienced area teachers and STEM leaders.

<http://www.surveygizmo.com/s3/1778107/STEM-Student-Research-Registration-Fall-2014>

Summer Institute for Middle School Teachers - Maryland

The National Institute for Standards and Technology's (NIST) Summer Institute, July 6-17, 2015 in Gaithersburg, Maryland, brings together teachers and NIST scientists and engineers for hands-on science based on the cutting edge measurement science research at NIST, designed to match the middle school curricula. The deadline for application is March 13, 2015; see the website for application details.

<http://www.nist.gov/iaao/teachlearn/aboutus.cfm>

Summer Teacher Institutes – Washington, D.C.

The Library of Congress offers week-long Summer Institutes for K-12 educators in Washington, D.C. Education specialists facilitate sessions modeling strategies for using primary sources to engage students, build critical thinking skills, and construct knowledge.

- Open sessions (any subject area): June 22-26, July 6-10, and July 27-31, 2015
- Science focus: July 20-24, 2015

The deadline for application is March 24, 2015.

<http://www.loc.gov/teachers/professionaldevelopment/teacherinstitute/>

Water in the Western US - Online

This Massive Open Online Course (MOOC), a free, self-paced online course, will take place April 1-May 6, 2015. It will require 20-25 hours to complete and will cover management, policy, and research. Professional development credit is available for a fee.

<http://www.climate.gov/teaching/professional-development/water-western-us>

Youth Ocean Conservation Summit - Georgia

Georgia's first annual Youth Ocean Conservation Summit will be held February 28, 2015 on Skidaway Island, Georgia. Youth participants will learn from marine scientists and conservationists about current threats facing marine ecosystems, will work with mentors to develop action plans for their own ocean conservation projects, and will take part in workshops designed to give them the skills necessary to successfully implement these projects.

<https://docs.google.com/a/noaa.gov/forms/d/1Zvf8QvkYTqDZv3OOjBB71Nc0LMqEahDDH8eEk-BoSms/viewform>

EDUCATIONAL RESOURCES

BirdNote

BirdNote seeks to inspire listeners to care about the natural world and take steps to protect it by telling vivid, sound-rich stories about birds and the challenges they face. While the stories are aired on public radio stations, the archives are available for listening to, or reading, online.

<http://birdnote.org/>

Coral Bleaching YouTube Cartoon Video

The Great Barrier Reef Marine Park Authority posted this humorous video in cartoon form about coral bleaching.

<https://www.youtube.com/watch?v=aEdoizgeNJK>

Creep into the Deep

WhaleTimes' Creep into the Deep Virtual Research Mission is designed for grades 3-6 classrooms and creates a connection between scientists and students. The program brings deep-sea animals, exploration, and science into participating classrooms, with students becoming virtual members of a deep sea mission, receiving daily emails from scientists, photos, and answers to their questions. Upcoming missions will take place July 19-24, 2015 (Vision and Bioluminescence in the Deep-sea Benthos II) and September 21-31, 2015 (Deep-Pelagic Nekton Dynamics of the Gulf of Mexico). Be sure to sign up early, as space is limited. Check out the additional resources and information on the website.

http://whaletimes.org/?page_id=86

Deep Argo: Diving for Answers in the Ocean's Abyss

Check out this news article from Climate.gov, exploring new research into heat energy storage from global warming. And be sure to check out additional news, teaching resources, and much more on the website.

<http://climate.gov/news-features/climate-tech/deep-argo-diving-answers-ocean%E2%80%99s-abyss>

DragonflyTV

Twin Cities Public Television hosts DragonflyTV with a diverse group of pre-adolescents as hosts and experimenters. The website features include scientists reporting on their research and careers, science videos, games, and more.

<http://pbskids.org/dragonflytv/index.html>

Estuaries in Balance

The International Crane Foundation hosts the interactive program for grades 4-8, called Estuaries in Balance: The Texas Coastal Bend. It explores topics of biodiversity, habitat quality, and watershed management while highlighting how Whooping Cranes, blue crabs, redfish, and oysters depend on healthy estuaries. Please send feedback about the program to Cathy Wakefield at CWakefield@savingcranes.org.

<http://www.savingcranes.org/estuaries-in-the-balance.html>

Explore the Role of Snow Cover in Shaping Climate

The Earth Exploration Toolbook offers Using NASA NEO and ImageJ to Explore the Role of Snow Cover in Shaping Climate. Students download satellite images displaying land surface temperature, snow cover, and reflected short wave radiation data and explore and animate these images. They use web-based analysis tools to observe, graph, and analyze the relationships among these three variables.

<http://serc.carleton.edu/eet/albedo/index.html>

Global Change - Reading Ocean Fossils - Online

Sign up for the upcoming Smithsonian Science How webcast on ocean fossils and global changes, February 12, 2015. The webcasts are archived, provide access to associated teaching resources, and are correlated to the NGSS.

<https://qrius.si.edu/global-change-reading-ocean-fossils>

Governor's Guide to Mass Evacuations

This guide was prepared to help governors and other state leaders prepare to play their roles in disaster response in advance of an emergency that involves mass evacuations. The guide covers important elements such as knowing the extent of authority, coordinating with nonprofits and volunteer organizations, establishing shelters, training, and reentry issues.

<http://www.nga.org/files/live/sites/NGA/files/pdf/GovGuideMassEvacuation.pdf>

Grouper Moon Project

Watch live-feed or archived webcasts of the Little Cayman Nassau Grouper spawning aggregation. Live broadcasts will be held February 6, 9, and 11, 2015.

<http://www.reef.org/node/10098#node-10099>

Gulf of Mexico Research Initiative

The goal of the Gulf of Mexico Research Initiative is to improve society's ability to understand, respond to, and mitigate the impacts of petroleum pollution and related stressors of the marine and coastal ecosystems, with an emphasis on conditions found in the Gulf of Mexico. Knowledge accrued will be applied to restoration and to improving the long-term environmental health of the Gulf of Mexico. The education resources include lesson plans, activities, multimedia, and much more.

<http://gulfresearchinitiative.org/>

Ig Nobel Prize TED Talk

Marc Abrahams, MC of the Ig Nobel Awards and editor of the Annals of Improbable Research, focuses on research that makes you laugh, and then think. Well worth watching. And be sure to check out the Ig Nobel website.

<https://www.youtube.com/watch?v=RA-imyU9je0>

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

Know More

Know More, from the Washington Post, looks at a range of complex topics through a simple picture, line graph, or other visual representation. When readers find themselves intrigued, they may click "know more" to navigate to a longer explanation.

<http://knowmore.washingtonpost.com/>

Marine Careers

This Sea Grant website introduces visitors to a wide range of marine career fields and to people working in those fields. The interviews include what those interviewed like and dislike about their careers, what they see for the future in their fields, and more.

<http://www.marinecareers.net/>

Monitoring Estuarine Water Quality

The NOAA Data in the Classroom curriculum module, Monitoring Estuarine Water Quality, helps teachers and students use scientific data to explore dynamic Earth processes and understand the impact of environmental events on a regional or global scale. The website features five activities at different levels, along with a teacher's guide and other materials. Be sure to check out the other curriculum on El Niño, Sea Level, Ocean Acidification, and Coral Bleaching.

<http://dataintheclassroom.noaa.gov/SitePages/water-quality/index#.VNDtDC7Lkbh>

MPA Teaching Materials

The California Marine Sanctuary Foundation hosts a collection of teaching and training guides, and curriculum based materials about MPAs. Check out the teaching materials, mobile resources, and more.

<http://californiampas.org/>

Mystery Class – Exploring Sunlight and the Seasons

Teachers and students are invited to participate in Journey North’s Mystery Class project. Students try to find ten secret sites around the globe using the changing sunlight at each site as the clue.

<http://www.learner.org/jnorth/mclass/>

National Wildlife Week

National Wildlife Week 2015 will take place from March 9-15, 2015 with the theme Living with Wildlife. The National Wildlife Federation offers a toolkit that includes lessons, activities, and more.

<http://www.nwf.org/national-wildlife-week.aspx>

Natural Inquirer

The Natural Inquirer is a middle school science education journal written directly from published Forest Service research. It is available as a print edition and free download. The articles include educational add-ons, and the website offers additional lesson plans. The website offers lists of articles relating to birds, climate change, soil, and water, along with additional search abilities.

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

Newsela

Newsela is an online news-as-literacy website featuring current articles in seven categories, including Science, Arts, and more. It is updated weekly, and all articles are Common Core-aligned and available in five different Lexile levels. Many of the articles are accompanied by a comprehension quiz. Free registration is required for the kid-focused version.

<https://newsela.com/>

Ocean Acidification Webinars

This series of free webinars jointly sponsored by NOAA’s National Marine Sanctuaries and the Ocean Acidification Program is entitled Sharing Ocean Acidification Resources for Communicators and Educators (SOARCE). The webinars provide ocean acidification communication tools. Check out upcoming webinars and review archived presentations.

<http://oceanacidification.noaa.gov/AreasofFocus/EducationOutreach/SOARCEWebinarSeries.aspx>

Ocean Explorer Education Theme Pages

NOAA’s Office of Ocean Exploration and Research offers Education Theme Pages to provide educators with easy access to popular ocean science topics. Each Theme Page provides links to content essays, lessons, multimedia interactive activities, career information, and associated past expeditions. Theme Pages include Seamounts, Deep-sea Corals, and more; check back as additional pages will continue to be added.

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

Okeanos Explorer: 2015 Field Season Overview

From February through September 2015, NOAA Ship *Okeanos Explorer* will embark on journeys to investigate and document the Caribbean and the Hawaiian Islands. Scientists, technicians, and engineers – both on board the ship and on shore – will map and explore the geological, biological, archaeological, and chemical features of these vast areas. The first series of cruises, scheduled for February 18-April 30, 2015, will focus on the diversity and distribution of deepwater habitats in Caribbean trenches and seamounts.

<http://oceanexplorer.noaa.gov/okeanos/explorations/2015-overview/welcome.html>

On the Line

On the Line is a NOAA Fisheries podcast about marine fish and wildlife and their ocean habitats, with stories told by the people who study, manage, and protect these resources. Each podcast comes with photos and a short feature story. Sign up for the latest feature and check out the archives.

<http://www.nmfs.noaa.gov/podcasts/index.html#.VM0svC7Lkbg>

Project CONVERGE

Scientists will be living at Palmer Station, Antarctica through mid February 2015, to study the food chain that supports everything from phytoplankton to penguins. The project is designed to help students virtually engage with scientist as they conduct research, ask science questions, analyze and interpret data, and plan and carry out their science investigations. Read the daily project blog, Ask a Question, and more.

<http://coseenow.net/converge/>

Resilience Toolkit

Sea Grant has launched the National Sea Grant Resilience Toolkit, a compilation of tools and resources that have been developed over the years by the Sea Grant Network to help local communities become more resilient. Visitors can browse by topic area, tool type, and more.

<http://seagrants.noaa.gov/WhatWeDo/ResilienceToolkit.aspx>

Sailors for the Sea

Sailors for the Sea engages the sailing and boating community through education and inspiration. Their Kids Environmental Lesson Plans (KELP) downloadable modules are based on the seven principles of Ocean Literacy as established by the National Marine Educator's Association. The lesson plans are focused on the informal educator and are contributed by leading marine institutions and organizations. Free registration is required. Be sure to check out the Ocean Watch articles, Clean Boating information, blogs, and more.

<http://sailorsforthesea.org/>

School of Open

The School of Open offers free online courses, face-to-face workshops, and training programs on the subject of openness - in education, research, and science. Topics include Creative Commons licenses, open educational resources, and more. Training programs are offered in Spanish, English, and other languages. Check out dScribe: Peer-produced Open Educational Resources, How to use Open Educational Resources, and more.

<http://schoolofopen.p2pu.org>

Science In The Classroom

Science In The Classroom is a collection of annotated research papers and accompanying teaching materials designed to help students understand the structure and workings of professional scientific research, using articles from the magazine, *Science*. Articles are accompanied by discussion questions, links to related materials, teacher guides, and more.

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

Science Demonstrations for Young Learners

Fun Science Demos, or Science Demonstrations for Young Learners, is a YouTube resource for teachers to use with science students. Each short demonstration is connected to a science concept highlighted in the NGSS. Categories include Earth/Space Science, Life Science, and Physical Science.

<https://www.youtube.com/user/funsciencedemos>

Science Now

NSF's Science Now is a weekly newscast covering some of the latest in NSF-funded research.

<http://science360.gov/series/nsf-science-now/89a1b896-e8a7-4176-816e-08b4415308f8>

SMAP

The SMAP (Soil Moisture Active Passive) satellite is designed to measure soil moisture every 2-3 days over a three-year period. This will permit changes to be observed, ranging from major storms to repeated measurements of changes over the seasons. Check out classroom activities, the connection between water and carbon cycles, and more. The observations will help improve weather forecasts, drought monitoring, flood prediction, and more.

<http://smap.jpl.nasa.gov/>

Sustainability and Climate Change

Sustainability and Climate Change is an online course for middle school educators. The course focuses on the causes and impacts of climate change and introduced strategies to engage students in solutions. Participants develop approaches to integrating the NGSS with the Common Core standards. The online course offers five multimedia lessons that integrate climate data, modeling, and more.

<http://moodle2.creativechange.net/course/view.php?id=3>

Topics in Archeology Webinar Series

This National Park Service webinar lecture series is devoted to dissemination of information about current research in archeology both inside and outside of national parks. Topics include locational technologies (LiDAR, satellite imagery, underwater locational technologies and more), research being carried out in parks, and climate change and archeology. If possible, use Internet Explorer to view the webinars. For other web browsers, use the second website and click on the video link to download to your computer to view.

<http://www.nps.gov/training/NPSArcheology/html/index.cfm>

<http://www.nps.gov/archeology/tools/webinars.htm>

Untold History of Women in Science and Technology

The White House hosts this website of a set of stories about female pioneers in the STEM fields, told by women in government.

<http://www.whitehouse.gov/women-in-stem>

Voyager for Kids

Scripps Voyager for Kids lets young people ask oceanographers questions about the Earth's seas and climate. Be sure to check out explorations now (small link in the top blue banner) for additional educational materials including Research Highlights, A Scientist's Life, and more.

<https://scripps.ucsd.edu/explorations/voyager>

Whale and Dolphin Species Guide

This website from Whale and Dolphin Conservation offers information about over 80 species of these mammals, including photos (where available), distribution maps, and more.

<http://us.whales.org/species-guide>

Wisconsin Shipwrecks

Explore Wisconsin's Great Lakes shipwrecks through underwater video, historic photographs, and archaeological discoveries on this updated website. Explore 760 Lakes Superior and Michigan shipwrecks with information about the ships' construction, service history, photos, and more. Learn about underwater archeology, the value of studying shipwrecks, and much more.

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

World Parks Congress through OpenChannels

The World Parks Congress, held November 2014 in Sydney, Australia, drew more than 6000 attendees from 170 countries. MPA News and OpenChannels.org were there providing real-time, online coverage. Their highlights blog, Everything (marine) you need to know from the 2014 World Parks Congress, collates many of the main outcomes of the WPC, from national pledges to new reports and tools, and more. In addition, MPA News, Vol. 16, No. 2 (November-December 2014) focuses on outcomes from the congress.

<http://openchannels.org/node/8097>

<http://depts.washington.edu/mpanews/issues.html#NovDec2014>

INITIATIVES, JOURNALS, and MORE

Boston Sea Rovers Clinic - Massachusetts

The Boston Sea Rovers Clinic, March 6-8, 2015 in Danvers, Massachusetts, is dedicated to education, conservation, and exploration of the underwater world. The show features seminars, a Saturday Evening Film Festival, free Sunday programs for kids, and more.

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

JournalTOCs

JournalTOCs offers tables of contents (TOCs) for the newest issues of thousands of academic journals via this free website.

<http://www.journaltocs.hw.ac.uk/>

NOAA Heritage Week Open House – Maryland

Learn how NOAA takes the pulse of the planet every day and protects and manages ocean and coastal resources. Visit NOAA's Silver Spring, Maryland, campus for a series of free activities, February 7, 2015, including talks by NOAA experts, interactive exhibits, special tours, and hands-on activities for ages 5 and up. Meet and talk with scientists, weather forecasters, hurricane hunters, and others.

<http://preserveamerica.noaa.gov/hw15.html>

Schweppe Public Lecture Series - Texas

The Laura Randall Schweppe Endowed Lecture Series in Marine Science at The University of Texas Marine Science Institute in Port Aransas, Texas, brings scientists to the institute to interact with its faculty, staff, and students. Upcoming lectures include The Marine Side of the Monarch Butterfly; Nitrogen: The Good, the Bad and the Ugly; and more.

<https://utmsi.utexas.edu/visit/public-lectures/public-lecture-series>