NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION INFORMATION EXCHANGE FOR MARINE EDUCATORS APRIL 2016

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

Attributions of Extreme Weather in the Context of Climate Change

The science of extreme event attribution seeks to tease out the influence of human-caused climate change from other factors, such as natural sources of variability like El Niño, as contributors to individual extreme events. This report from the National Academies Press examines the current state of the science of extreme weather attribution, and identifies ways to move the science forward to improve attribution capabilities.

http://www.nap.edu/catalog/21852/attribution-of-extreme-weather-events-in-the-context-of-climate-change

Deepwater Horizon Oil Spill Documents

The Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement are now available for the Deepwater Horizon oil spill. The documents assess the impact of the oil spill on natural resources and determine the restoration needed to compensate the public. http://www.gulfspillrestoration.noaa.gov/restoration-planning/gulf-plan/

Digital Library, Southern Gulf of Mexico and Mexican Caribbean

Dr. Wes Tunnell offers this digital library as an outgrowth of the book, "Coral Reefs of the Southern Gulf of Mexico." The book reviews hundreds of papers in several different languages covering over 100 years, and the library links to these papers. http://www.westunnellcorallibrary.org/library

Guide to Improving the Budget and Funding of National Protected Area Systems

This UNDP publication's main objective is to strengthen the capabilities of protected area authorities to negotiate and secure increased annual budgets for their protected area systems. The guide uses lessons learned from three pilot countries: Chile, Guatemala, and Peru. It is available in English and Spanish.

http://www.latinamerica.undp.org/content/rblac/en/home/library/poverty/guide-to-improving-the-budget-and-funding-of-national-protected-/

INITIATIVE OF THE MONTH

EE Week

National Environmental Education Week (EE Week), April 17-23, 2016, is a celebration of environmental education, aimed at inspiring environmental learning and stewardship among K-12 students. This year's theme is Greening STEM: Rooted in Math. Register your events, check out the blogs and news feeds, view archived webinars, and more. http://eeweek.org/

WEBSITE OF THE MONTH

eePRO

NAAEE promotes excellence in environmental education and is dedicated to strengthening the field of environmental education and increasing the visibility and efficacy of the profession. eePRO is offered as a hub for environmental education professional development. It offers group discussion platforms, links to professional development, jobs, and much more. Check out the monthly webinar series, Bringing New Ideas and Innovation to the Field of EE, with free registration for live webinars and archives of previous webinars. Groups include Climate Change Education, Connecting to Nature, EE in Urban Settings, Guidelines for Excellence, and much more. Check out the great resource links in each group.

https://naaee.org/eepro

REQUESTS

Citizen Science Survey

The aim of the survey, Can Anyone be a Scientist? The Role of Citizen Science in Coral Reef Research, is to identify challenges with citizen science participation in coral reef research, and opportunities that, if addressed, could optimize the use and effectiveness

of citizen science programming and resulting outreach. The survey should take no more than 5-10 minutes to complete.

https://www.surveymonkey.com/r/675MX2G

Dolphin-Safe Label Requirements

The revisions to implementation of the Dolphin Protection Consumer Information Act are open for comment. The deadline for submission is April 22, 2016.

https://www.federalregister.gov/articles/2016/03/23/2016-06450/enhanced-document-requirements-and-captain-training-requirements-to-support-use-of-the-dolphin-safe

Seeking World Oceans Day Youth Advisory Council Members

Seeking youth ages 16-21, who have demonstrated leadership and creativity, a passion for the ocean and a commitment to conservation and sustainability, and the ability to communicate ideas effectively. The deadline for application is April 20, 2016. http://www.worldoceansday.org/world-oceans-day-youth-advisory-council-call-for-applications/

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 pre-application is April 15, 2016.

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

Best Buy Community Grants

The Best Buy Foundation helps provide teens with places and opportunities to develop technology skills that will inspire future education and career choices through Community Grants to local and regional nonprofits organizations. See the website for complete details, along with national grants criteria. The deadline for application is June 29, 2016.

https://corporate.bestbuy.com/community-grants-page/

Brimstone Award for Applied Storytelling

The National Storytelling Network's annual Brimstone Award for Applied Storytelling is awarded for a project that focuses on the transformational properties of storytelling, to increase understanding of the ways storytelling can promote change in individuals and communities. Educators are invited to submit a storytelling project that is service-oriented, based in a community or organization, and replicable in other places and situations. The preliminary proposal deadline is April 28, 2016. http://www.storynet.org/grants/brimstone.html

Brower Youth Awards

The Earth Island Institute's New Leaders Initiative offers the Brower Youth Awards, recognizing young people (ages 13-22) for their outstanding youth leadership and project impact in conservation, preservation, and restoration. The deadline for application is May 16, 2016.

http://www.broweryouthawards.org/apply/

Butler-Cooley Excellence in Teaching Award

The Turnaround Management Association and the John William Butler Foundation honor exceptional teachers who have changed the outcome of students' lives and the communities in which they live with the Butler-Cooley Excellence in Teaching Awards. The deadline for applications is May 2, 2016.

https://turnaround.org/sites/default/files/2016TMA-ButlerCooley_Awards_ACTIVE.pdf

ECO Classroom Teacher Workshop - Costa Rica

Middle and high school life sciences teachers are invited to apply for this two-week field experience at the La Selva Biological Station in Costa Rica. The program, sponsored by the Northrop Grumman Foundation and Conservation International, offers 16 teachers the opportunity to spend time in the field and classroom gaining first-hand experience in data collection protocols, using camera traps, satellite imaging data, and other advanced field technologies. They will conduct teacher team-initiated research projects that will be replicable at their schools. Hurry – the deadline for application is April 8, 2016. http://www.northropgrumman.com/CorporateResponsibility/CorporateCitizenship/Education/ECOClassroom/Pages/default.aspx

Engineering for You Video Contest

The National Academy of Engineering's annual Engineering for You Video Contest accepts one- to two-minute videos that introduce a particular mega-engineering project, highlight its contribution to people and society, and suggest contributions to its development. See the website for details. The deadline for submission is May 31, 2016. http://www.nae.edu/e4u3/

Every Day Capacity Building Grants

With support from Toyota Motor Sales USA, Inc., the National Environmental Educational Foundation (NEEF) offers Every Day Grants to public land organizations or Friends Groups, to engage their community on a public land site. The events can be educational, recreational, and/or volunteering-based. The deadline for application is May 2, 2016.

https://www.neefusa.org/every-day-capacity-building-grants

From the Bow Seat Ocean Awareness Student Contest

The goal of this contest is to challenge high school students to think critically about challenges facing the ocean. This year's contest theme is Making Meaning out of Ocean Pollution. The website offers links to scientific literature, pollution websites, resources on artists and writing, and much more. The deadline for entry is June 13, 2016. http://www.fromthebowseat.org/contest.php

G4C Climate Challenge

The PoLAR Partnership, Autodesk, and Games for Change (G4C) offer this challenge to create a digital game that engages players to understand their role in addressing climate change. The design challenge invites game designers, educators, students, and scientists to propose a game that encourages diverse audiences (including college students, decision makers, and others) to understand and respond to climate change in their everyday lives. The deadline for submission is May 6, 2016. http://www.gamesforchange.org/climatechallenge/

Goddard Prize for Environmental Conservancy

The New Leaders Initiative, a program dedicated to identifying, supporting and sustaining young environmental leaders, administers the Goddard Prize for Environmental Conservancy. The prize is awarded multiple times a year to young people who are pursuing environmental projects, and who are looking for funding to bring their ideas to the next level.

https://docs.google.com/a/noaa.gov/forms/d/1YST9wgyWZO1MQ-fMmq7y5wZdlZq_jCraj-Nnil6ceUs/viewform

Google Science Fair

Google and partners offer the annual Google Science Fair, an international competition which encourages students ages of 13-18 to ask questions and perform science experiments to answer those questions. The deadline for submission is May 18, 2016. https://www.googlesciencefair.com/en/

Greening STEM Integration Grant for Educators

NEEF, with support from the Mitsubishi Corporation Foundation for the Americas, is offering funding for teachers, after-school programs, and nature organizations for projects that support the integration of Greening STEM into current or new programming or curriculum. Hurry – the deadline for application is April 5, 2016. https://www.neefusa.org/greening-stem-integration-grant-educators

Keen Effect Grants

Projects funded by Keen Footwear increase responsible outdoor participation as a way to work towards building a strong community. Projects that introduce new audiences to the outdoors through responsible outdoor participation will receive special consideration. The deadline for application is August 1, 2016.

http://www.keenfootwear.com/keen-effect.aspx

Lois Lenski Covey Foundation Library Grants

The Lois Lenski Covey Foundation awards grants to libraries or organizations that serve economically or socially at-risk children, have limited book budgets, and demonstrate need, to purchase books published for young people through grade 8. The deadline for application is May 13, 2016.

http://www.loislenskicovey.org/6.html

Marisla Environmental Program

The Marisla Foundation offers Environmental Program Grants for activities which promote the conservation of biological diversity and advance sustainable ecosystem management. Primary emphasis is on marine resources conservation with a geographic focus on western North America, Chile, and the western Pacific. The next deadlines for application are April and July 15, 2016.

https://online.foundationsource.com/public/home/marisla

National Association of Biology Teachers Awards

The National Association of Biology Teachers recognizes excellence in teaching with a variety of awards. Check the website for information about the different awards, along with their deadlines for nomination.

http://www.nabt.org/websites/institution/index.php?p=132

National Environmental Education Training Program Grant

The U.S. EPA is accepting proposals for a multi-year cooperative agreement to operate the National Environmental Education and Training Program. The purpose of the program is to provide EE training and long-term support to the EE field. The deadline for submission is May 9, 2016

https://www.epa.gov/education/national-environmental-education-and-training-program-request-proposals

North Face Explore Fund

The North Face Explore Fund grant program supports non-profit organizations that encourage youth outdoor participation, focusing primarily on creating more connections between children and nature, increasing access to both front and back country recreation, as well as providing education for both personal and environmental health. To celebrate the National Park Service Centennial, The North Face is encouraging and giving special consideration to nonprofits that choose to activate their programs in national parks. Hurry - the deadline for application is April 5, 2016. https://www.thenorthface.com/about-us/outdoor-exploration/explore-fund.html

Ocean Drilling Science Workshop Funding

The U.S. Science Support Program in association with the International Ocean Discovery Program (IODP), is currently accepting workshop proposals for funding. Proposed workshops should promote the development of new ideas and strategies to study the Earth's processes and history using scientific ocean drilling. The deadline for submission is June 1, 2016.

http://usoceandiscovery.org/workshops/

Ocean Guardian School Grants - California

Ocean Guardian School Grant funds are available for schools to create a school- or community-based conservation project that focuses on current issues affecting local watersheds and the ocean while promoting best environmental practices. Check the website for eligible counties in California, Oregon, and Washington. The deadline for application is May 1, 2016.

http://sanctuaries.noaa.gov/education/ocean_guardian/

Outstanding Earth Science Teacher Award

The National Association of Geoscience Teachers presents its Outstanding Earth Science Teacher Award to K-12 educators who have made exceptional contributions to the stimulation of interest in the earth sciences. The deadline for nomination is May 1, 2016.

http://nagt.org/nagt/awards/oest.html

Paddle Nation Project Grant

Outdoor Nation is accepting applications from non-profit organizations who are interested in connecting youth with their waterways through recreational paddling. This funding opportunity supports projects and initiatives that are youth-developed and that result in increased paddling participation. The deadline for application is April 22, 2016. http://www.cybergrants.com/pls/cybergrants/quiz.display_question?x_gm_id=4494&x_quiz_id=5170&x_order_by=1

Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring

The Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring recognize citizens and organizations that have demonstrated excellence in mentoring individuals from underrepresented groups in STEM education and career paths. The deadline for nomination is June 17, 2016. http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5473

Presidential Innovation Award for Environmental Educators

The Presidential Innovation Award for Environmental Educators Program recognizes outstanding K-12 teachers who employ innovative approaches to environmental education and use the environment as a context for learning for their students. Teachers from each EPA region will be selected to receive the award. The deadline for application is May 16, 2016.

https://www.epa.gov/education/presidential-innovation-award-environmental-educators

Roots & Shoots Community Campaign Mini-Grants

Roots & Shoots offers mini-grant for service campaigns. Grants are issued on a first-come, first-served basis. The deadlines for application are April 15 and May 13, 2016. http://www.rootsandshoots.org/minigrant

Science & SciLifeLab Prize for Young Scientists.

Doctoral graduates may submit an essay based on their thesis work for this international award. There are four categories, including Ecology and Environment. The deadline for application is August 1, 2016.

http://www.sciencemag.org/prizes/scilifelab?et_rid=79840790&et_cid=302211

SeaWorld & Busch Gardens Conservation Fund

The SeaWorld & Busch Gardens Conservation Fund supports projects in species research, habitat protection, animal rescue and rehabilitation, and conservation education. The deadline for application is April 30, 2016. http://swbg-conservationfund.org/en/grant-seekers/

Sol Hirsch Education Fund Grants

The National Weather Association awards grants to K-12 teachers to improve the study of meteorology. Selected teachers can use the funds to take accredited courses, attend workshops and conferences, or purchase materials for the classroom. The deadline for application is June 3, 2016.

http://www.nwas.org/grants/solhirsch.php

State Farm Youth Advisory Board Service-Learning Grants

The State Farm Youth Advisory Board Grant Program funds student-led service-learning projects throughout the U.S. and Canada. Specific areas of interest include arts and culture, environmental responsibility, and more. Educators interacting with students in public K-12 schools are eligible to apply. The deadline for application is April 29, 2016. http://www.statefarmyab.com/apply/national-grants/

FELLOWSHIPS, INTERNSHIPS, AND TEMPORARY OPPORTUNITIES

Bringing the Universe to America's Classrooms

Apply to join a WGBH initiative to design digital learning resources for STEM learning. Produced by WGBH in collaboration with NASA, these resources will be distributed free of charge. K-12 science teachers will work with leading media producers and educational researchers to design new ways to engage students around topics in Earth, space, and physical sciences; the main activity will center on the evaluation and testing of instructional modules. The deadline for application is April 11, 2016. http://www.wgbhteacheradvisors.org/

Digital Coast Fellowships

The NOAA Office for Coastal Management is recruiting candidates for three Digital Coast Fellowships. The program is modeled after the Coastal Management fellowship program and provides on-the-job education and training opportunities in coastal resource management and policy for postgraduate students. The deadline for application is May 6, 2016.

https://coast.noaa.gov/fellowship/digitalcoast.html

Dive In & Save Our Seas - Florida

MarineLab offers a summer service learning program for high school students who are SCUBA certified. Individual students can Dive In and Save Our Seas, July 16–20, 2016 in Key Largo, Florida. Led by biologist/divemasters, and supervised by a certified high school teacher who is also a SCUBA instructor, students aged 16 and up will learn about the marine world, participate in data collection, and earn community service hours. Evening lectures and labs prepare the students for their field experiences the following day.

http://marinelab.org/DiveIn.html

Texas Environmental Internships

Several environmental organizations have received grants through Shell and ExxonMobil to offer paid internships. Organizations include Galveston Bay Foundation, Wildlife Center of Texas, and many more; see the website for details. http://volunteerhouston.org/

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

America's Great Outdoors

Subscribe to the U.S. Department of the Interior's Tumblr Updates to have beautiful captioned pictures sent to your inbox daily. For less crowded inboxes, visit the website and view the archives' spectacular scenes. http://americasgreatoutdoors.tumblr.com/

Blue Carbon Workshops - Various

Blue carbon refers to the carbon and other greenhouse gases captured, stored, and emitted by tidal wetlands, salt marshes, and other coastal ecosystems. At the free workshops, learn how blue carbon ecosystem services can increase prioritization of and investment in coastal wetlands. Participants will learn the basic concepts of blue carbon and its importance to conservation and restoration efforts; applications of blue carbon as

a management tool; opportunities for coastal wetlands to earn carbon finance; and, how to assess regional opportunities to implement projects. https://www.estuaries.org/bluecarbon-events

Bringing Climate Science Into the Classroom - Online

The Science Friday Live Online Discussion: Bringing Climate Science Into the Classroom will take place April 5, 2016, online. The web panel will discuss challenges and approaches to teaching climate change science in the classroom. http://www.sciencefriday.com/educational-resources/science-friday-discussion-beyondthe-debate-climate-change-in-the-classroom/

Climate Science Workshops – Various

NOAA's Climate Stewards Education Project is collaborating with Federal, State, and NGO partners to convene six free climate-science workshops for formal and informal educators. Participants will interact with climate science education and communication experts, and visit facilities to explore innovations in climate research, mitigation, and/or adaptation. Each workshop will focus on regional and/or topical impacts of climate change. Contact the local educator for details.

Long Beach, California - Alie LeBeau at ALebeau@lbaop.org Boulder, Colorado - Teri Eastburn at eastburn@ucar.edu New Orleans, Louisiana - Tricia LeBlanc at tleblanc@auduboninstitute.org Detroit, Michigan - Claire Lannoye-Hall at clannoyehall@dzs.org Charleston, South Carolina - Evie Bell at EV.Bell@scseagrant.org Salt Lake City, Utah - Chris Schmitz at cschmitz@hoglezoo.org

Coastal Ecology Teacher Workshop - Georgia

Join educators at the Sapelo Island National Estuarine Research Reserve, June 23-26, 2016 on Sapelo Island, Georgia, for the Georgia Coastal Ecology Teacher Workshop. The deadline for registration is May 15, 2016.

Contact Georgia Graves at georgiabeachwalk@bellsouth.net

Coral Identification Workshop – Hawai'i

This Coral Identification Workshop will be held June 18-19, 2016 in Honolulu, Hawaii, just prior to the ICRS 2016. The workshop will be held at the Waikiki Aquarium with access to living displays, the teaching collection, and a behind the scenes tour. http://www.byoguides.com/product/coral-identification-workshop-honolulu-hawaii-usa/

Cultivating Community Change - Online

The University of Florida, with support from the Florida Energy Systems Consortium, offers this Cultivating Community Change Certificate Program in Social Marketing, a free online certificate program designed to provide an overview of social marketing as applied to extension and outreach programming. Florida-based participants who successfully earn this certificate will be eligible to apply for mini-grants to jump start energy-related social marketing initiatives.

http://gardeningsolutions.ifas.ufl.edu/clce/socialmarketing/

Education Summit - Maryland

The Education Summit, April 6, 2016 in Baltimore, Maryland, is day three of the Local Solutions: Eastern Regional Climate Preparedness Conference. Speakers will discuss how to build community resilience through education. Be sure to check out the agenda for the full conference.

http://www.communityresilience-center.org/conference-2016/education-summit/

Environmental Courses - Online

The University of Wisconsin-Stevens Point offers summer online courses. Check the website for offerings, deadlines for registration (May and June), and course dates. http://www.uwsp.edu/cnr/AMP/Pages/Course%20Info/Registration.aspx

From Science to Stewardship in the Sanctuary - California

Hosted by Channel Islands National Marine Sanctuary, the free secondary teacher workshop, Science to Stewardship in the Channel Island National Marine Sanctuary, April 16, 2016 in Santa Barbara, California, weaves NGSS three-dimensional teaching into the EEI Curriculum, a proven curricular tool, with support from NOAA's Principles of Ocean Literacy.

http://creec.org/events/3508

Geospatial Academy - Tennessee

The Tennessee Geographic Alliance Knoxville will host this workshop, May 14, June 6-9, and October 1, 2016 in Knoxville, Tennessee. Participants will develop geospatial science and technology background knowledge and skills and learn how to incorporate geospatial technologies activities into their curriculum. Stipends may be available. The deadline for application is April 18, 2016.

http://www.tngeographicalliance.org/upcoming-events.html

Global Ocean Science Education Workshop – Paris

The focus of the Global Ocean Science Education Workshop, June 13-15, 2016 in Paris, France, includes climate change, fisheries and biodiversity, and oceans and human health.

https://www.regonline.com/Register/Checkin.aspx?EventId=1823867

International Pacific Marine Educators Network Conference

The mission of International Pacific Marine Educators Network (IPMEN) is to foster collaborative relationships that will create the resources, programs, training, and leadership necessary to build ocean literacy at every level of society in the Pacific region. The 2016 IPMEN conference will be held August 10-13 in Manado, North Sulawesi. The conference theme is Making a Splash: Moving education into action. Registration is now open; see the website ("conference" pull-down menu) for details. The deadline for presentation submission is April 15, 2016. http://ipmen.net/ipmen-indonesia-2016/call-for-presenters

Introduction to Ocean Science - Massachusetts

The New England Aquarium will host this educator workshop for educators of grades 3-5, April 19–20, 2016 in Boston, Massachusetts. Participants will explore essential scientific concepts in the context of ocean science through hands-on investigations. Be sure to check out other upcoming workshops.

http://www.neaq.org/education_and_activities/teacher_resources/professional_development/workshops/index.php

JASON National Educators Conference

The JASON National Conference, June 23-25, 2016 in Ashburn, Virginia, provides an opportunity to obtain resources and develop skills for bringing Science, Technology, Engineering, and Mathematics education to your teachers and students.

https://www.eventbrite.com/e/jason-learning-2016-national-educators-conference-registration-22425346816

Marine Debris Teacher Workshop - California

The Algalita Marine Research & Education group offers this free marine debris teacher workshop April 20, 2016 in Newport Beach, California. Contact marineeduation@newportbeachca.gov

NAAEE Annual Conference

Register for the North American Association for Environmental Education Annual Conference 2016, From Inspiration to Impact, October 19-22, 2016 in Madison, Wisconsin, with the 13th Annual Research Symposium, October 18-19, 2016. Join environmental educators from North America and abroad, take advantage of the field experiences offered, and more.

https://naaee.org/our-work/programs/conference

NSTA Conferences on Science Education - Various

National Science Teachers Association conferences offer science content, teaching strategy, and more. Each year NSTA hosts a national conference on science education, a STEM Forum & Expo, and three area conferences. The deadline for submission to the Los Angeles National Conference is April 15, 2016; see the website for full details. The following upcoming conferences will take place:

- Nashville National Conference, March 31–April 3, 2016
- 5th Annual STEM Forum & Expo, July 27–29, 2016
- Minneapolis Area Conference, October 27–29, 2016
- Portland Area Conference, November 10–12, 2016
- Columbus Area Conference, December 1–3, 2016
- Los Angeles National Conference, March 30-April 2, 2017

http://www.nsta.org/conferences/sessions.aspx

RAE-TCS Summit Call for Proposals

The 8th National Summit on Coastal and Estuarine Restoration and the 25th Biennial Meeting of The Coastal Society will hold the RAE-TCS Summit, December 10-15, 2016 in New Orleans, Louisiana. Cross-disciplinary proposals are encouraged. As a reminder, the proposal deadline for submission is May 2, 2016. https://www.estuaries.org/Summit

Science for Citizens Seminar Series - Maryland

The University of Maryland Center for Environmental Science's Chesapeake Biological Laboratory hosts free evening seminars, Thursdays, in Solomons, Maryland. The 2016 Science for Citizens Seminar Series can engage formal or informal educators who wish to learn more about the Chesapeake Bay and current research efforts. http://www.umces.edu/cbl/outreach-seminars

Sea-Level Rise Summit

The Center for Environmental Studies at Florida Atlantic University will host the 3rd Sea-Level Rise Summit May 3-5, 2016 in Fort Lauderdale, Florida. http://www.ces.fau.edu/arctic-florida/registration.php

Social Media for Environmental Communication - Online

The Duke Environmental Leadership Program's Social Media for Environmental Communication will take place April 4-May 13, 2016. Scholarship funding for the course may be available for teachers and educators who reach a K-12 audience through the Coca-Cola Advancement in Teaching in the Environment Scholarship (CATES). Check the website for complete details, including additional courses in environmental communication and behavioral change.

https://nicholas.duke.edu/programs/execed/courseshttps://nicholas.duke.edu/programs/execed/cateshttps://nicholas.duke.e

Student Climate & Conservation Congress

The mission of the Student Climate & Conservation Congress (Sc3), June 26-July 2, 2016 in Shepherdstown, West Virginia, is to empower outstanding student environmental leaders with the skills, knowledge, and tools to address climate change and natural resource conservation challenges to better serve their schools and communities. Financial aid may be available. The deadline for application is May 15, 2016.

http://www.greenschoolsalliance.org/students/student-climate-conservation-congresssc3

Talking Trash: Marine Debris Workshop – New Jersey

The Jacques Cousteau National Estuarine Research Reserve (JCNERR) will host this free workshop focused on marine debris, July 20-21, 2016 in Tuckerton, New Jersey. Educators will use NOAA's curriculum Turning the Tide on Trash and An Educators Guide to Marine Debris to blend research, STEM, stewardship, and art. Attendees will be eligible to receive a stewardship stipend to use for a class marine debris project. The deadline for registration is July 8, 2016.

http://jcnerr.org/education/educators.html

Teachers on the Estuary - Maine

The Wells National Estuarine Research Reserve is hosting a free Teachers on the Estuary (TOTE) workshop July 11-14, 2016 in Wells, Maine. The field and research-based workshop is geared towards middle and high school teachers and will focus on sea level rise, climate change, blue carbon, watersheds, and estuaries. Apply by May 31, 2016.

http://www.wellsreserve.org/blog/742teaching about coastal impacts of climate change

Teachers on the Estuary – New Jersey

http://jcnerr.org/education/educators.html

The JCNERR in partnership with the National Park Service, is offering Teachers on the Estuary: Benthic Habitats and Advanced Technologies Workshop, August 9-12, 2016 in Tuckerton, New Jersey. Key topics include bathymetry, benthic biological communities, advanced technologies, and more. CE credits and a stipend may be available. The deadline for registration is July 30, 2016.

Teachers on the Estuary and the Wampanoag Circle of Life - Massachusetts
Join educators at the Waquoit Bay National Estuarine Research Reserve and the
Mashpee Wampanoag Indian Museum April 19-20, May 1, and June 27, 2016 in East
Falmouth and Mashpee, Massachusetts for an interdisciplinary workshop for elementary
teachers in collaboration with the Mashpee Wampanoag Indian Museum. The course

includes classroom and field activities, traditional Wampanoag crafts, trade book literature, discussions, and mini presentations by experts that focus on animal and plant life cycles and adaptations, coastal processes. and modern and traditional Wampanoag culture.

http://www.waquoitbayreserve.org/education-training/education-programs/teachertraining/

Teachers on the Estuary – Rhode Island

The Narragansett Bay National Estuarine Research Reserve is hosting a free Teachers on the Estuary workshop, August 15-18, 2016 on Prudence Island, Rhode Island. This field and research-based workshop is geared towards middle and high school teachers and will focus on sea level rise, climate change, estuaries, and more. http://www.nbnerr.org/tote.htm

Visualizing Change - Various

Learn ways you can engage audiences with topics of climate and ocean change in various locations. The free educator workshops discuss storyboards that can be used for climate change interpretation, helping to effectively communicate climate change in a positive way that leads the listener to action.

http://climateinterpreter.org/resource/visualizing-change-training-dates

Wastewater in Watersheds – Massachusetts

Wastewater in Watersheds, a free workshop for middle and high school educators, April 8-9, 2016 in East Falmouth, Massachusetts, is co-taught by WHOI researchers and educators at the Waquoit Bay National Estuarine Research Reserve. The course includes field, lab, and on-line activities as well as field trips.

http://www.waquoitbayreserve.org/education-training/education-programs/teacher-training/

World Water Monitoring Challenge Workshop - South Carolina

Join the staff of EarthEcho International and Patriots Point staff for a professional learning workshop for elementary, middle, and informal educators on April 16, 2016, in Mt. Pleasant, South Carolina. A stipend may be available.

http://www.patriotspointblendedlearning.com/upcoming-teacher-events--check-themout.html

Bridge e-Update

Ocean Acidification and Coral Bleaching

This month, the Bridge looks at two issues facing marine organisms: ocean acidification and coral bleaching. The featured K-12 resource, Understanding Ocean Acidification, provides links to lesson plans created by Channel Islands National Marine Sanctuaries in conjunction with NOAA's Ocean Acidification Program. The highlighted Bridge DATA Exercise, Coral Bleaching: A White-Hot Problem, investigates how rising water temperatures influence coral health in the waters off Puerto Rico.

http://www.cisanctuary.org/ocean-acidification/hands_on_activities.php http://www2.vims.edu/bridge/DATA.cfm?Bridge_Location=archive0406.html

EDUCATIONAL RESOURCES

"Ask US" Educator Professional Development - Online

NASA's ESTEEM (Earth Systems, Technology, and Energy Education for MUREP) Project offers this series of online educator professional development where they'll bring the content and you bring the questions. Check out previously broadcast webinars and check back for future opportunities.

http://esteem.larc.nasa.gov/ask-us/

Adapting to Climate Change

This short course has been adapted for land managers, summarizing state-of-the-art science for natural resource managers and decision makers regarding climate variability, change, projections, and ecological and management responses.

http://www.fs.usda.gov/ccrc/sites/default/files/hjar/index.html http://www.fs.usda.gov/ccrc/sites/default/files/hjar/index_st.html

Baseline Caribbean

Follow the O'Dea lab live on their expedition around the Dominican Republic to collect fossil and modern reef samples for the Baseline Caribbean project. Follow the blog for pictures and expedition news.

https://baselinecaribbean.wordpress.com/category/blog/

BioBlitz Skillbuilders

These BioBlitz Skillbuilders from the Encyclopedia of Life are a collection of short activities that target development of observation, identification, and classification skills and build a foundation for understanding and appreciating biodiversity. The activities are linked to NGSS Standards for grades 3-8. Be sure to check out the other lessons and activities.

http://eol.org/info/ed_resources#citsci

Biodiversity Toolbox

While NetBiome CSA's Biodiversity Management Toolbox focuses on European overseas territories it offers resources useful for all regions. The toolbox provides lists of case studies for biodiversity valuation, good practices for biodiversity conservation, and more

http://www.netbiomedata.org/

Bird Identifier Reference Guide

This handy, free, downloadable Bird Identifier reference guide from the National Wildlife Federation offers easy-to-recognize illustrations of 25 kinds of birds often seen around home feeders and local communities.

http://www.nwf.org/~/media/PDFs/Eco-

schools/bird_identifier01hi.ashx?s_email_id=20160309_ECO_ENG_March|STEdu

CarbonScapes

This website provides web mapping resources and background information about the U.S. Department of Agriculture inventory, modeling, and mapping of terrestrial biosphere carbon across the United States.

http://carbonscapes.org/

Climate Change Education

The National Center for Science Education's report on climate change education, Mixed Messages: How climate change is taught in America's public schools, is available for downloading.

https://naaee.org/eepro/resources/ncse-report-climate-change-education

Climate Game Jam Water

Join the Climate Game Water Jam, April 15-24, 2016, for a new game jam designed for students in grades K-16. Help others learn about climate and water issues. Teams will dedicate up to 48 hours of game design within the 10-day time period. Four age categories and five game categories have been established. Be sure to check out the resources for links to games and materials. http://climategamejam.org/

COSEE Webinars

The Consortium for Ocean Science Exploration and Engagement (COSEE) 2016 Webinar Series will engage participants with experts to discuss examples of COSEE's effective practices and activities. Check the website for upcoming events. http://www.cosee.net/

COSEE-West Curricula

COSEE-West now hosts links to OceanGLOBE guides, classroom exercises, and Powerpoint presentations previously available from other websites. Resources include a high school marine biology curriculum, teacher-created lesson plans, and more. http://www.cosee-west.org/curricula.html

Deepwater Exploration of Glacier Bay National Park

From March 17-30, 2016, a University of Maine-led team conducted a deepwater exploration of Glacier Bay National Park using both diver-based surveys and a remotely operated vehicle. Follow along with mission logs, educator resources, and more. http://oceanexplorer.noaa.gov/explorations/16glacierbay/welcome.html

Deepwater Exploration of the Marianas

NOAA's Office of Ocean Exploration and Research will offer resources following along the upcoming 2016 Deepwater Exploration of the Marianas on the NOAA Ship *Okeanos Explorer*. This cruise will continue west from the 2016 Hohonu Moana Expedition's exploration of deep-water habitats in and around Papah naumoku kea Marine National Monument to explore the deep water of the Commonwealth of the Northern Marianas Islands and the Marianas Trench Marine National Monument through mid-July. It will then continue on to Wake Island late July through mid-August. Sign up for an introductory webinar, April 12, 2016, and watch the Ocean Explorer website to follow along with the expedition.

http://oceanexplorer.noaa.gov/explorations/explorations.html https://attendee.gotowebinar.com/register/1227859093041173761

Earth Day

Earth Day Network, the global organizer behind Earth Day, has created tools, resources and opportunities for teachers and students to get involved. The theme for 2016 is Trees for the Earth. Celebrate on and around April 22,2016 and plan a service project. Check out the resources, including toolkits, local campaigns, and more. http://www.earthday.org/earth-day/

Earth Science Resources in Spanish

The SEED Earth Science Week Online Toolkit is a partnership of Schlumberger Excellence in Educational Development (SEED) and The American Geosciences Institute to provide educational materials, activities, and other resources for Spanish-speaking students and teachers. Visitors can view more than 70 lessons, fact sheets, and other materials in both Spanish and English. http://www.earthsciweek.org/seed/

Get Your Feet Wet - Alaska

Alaska Sea Grant is sponsoring the first annual "Get Your Feet Wet" event online to provide an opportunity for students all across Alaska to share what they learn. Participants can teach about Alaska's seas and watersheds by leading a school field trip to a beach, stream, or wetland in April or May. Register your class and find resources for using field trips to teach STEM and other subjects. Be sure to check out the Alaska Seas and Watersheds Curriculum.

http://aswc.seagrant.uaf.edu/

Gulf of Mexico Alliance Webinar Series

The Gulf of Mexico Alliance is beginning a new webinar series to share the team's projects and successes. Check out upcoming webinars and all the scheduled events. http://www.gulfofmexicoalliance.org/announcements/events/

Inquiring Minds!

Dr. Mare Timmons offers the article in NSTA's The Science Teacher, Inquiring Minds! It offers a model of inquiry-based research to teachers in an effort to help them disseminate successful inquiry research in their own classrooms. The activity's scope was broadened and is offered to high school students. The exercises include guided inquiry, coupled inquiry, and open inquiry components. http://www.nsta.org/publications/news/story.aspx?id=48659

InTeGrate

The Science Education Resource Center (SERC) at Carleton College offers workshops and webinars. Check out upcoming opportunities, and review archived webinars. http://serc.carleton.edu/integrate/workshops/index.html

Intellectual Property Rights

Educators, researchers, and students are continually on the lookout for the best ways to share and build upon curriculum components and other educational materials. This may entail nuanced, and often complicated, legal protections, doctrines, and practices that support Intellectual Property rights. The Scout Report offers this special edition discussing these issues.

https://scout.wisc.edu/report/2016/0318

Let It Snow

Now that winter's past, check out this website from the National Science Foundation on snow. Articles address the wonders of snowpack, what's happening to winter, snowwords of the Alaskan Inuit, and much more.

http://www.nsf.gov/news/special reports/snow/

MorphoSource

MorphoSource.org is a database of hundreds of digital scans of fossils that are available for free to download and 3D-print. The website allows users to zoom in or rotate on an image of a specimen to view it from all angles, or to download the data, which can be used in a 3D printer to generate an exact model. Nearly 9,000 images have been uploaded from more than 70 institutions around the world. A number of fossil scans also come with lesson plans for teachers through an initiative called PaleoTEACH. http://morphosource.org/index.php

Ocean Exploration and MPAs - Online

Join the free webinar, Ocean Exploration and MPAs: Priorities, Technological Advances, and Partnerships, April 14, 2016 to learn about the interface between ocean exploration and the MPA community, and how ocean exploration can support the research and policy decisions surrounding the nation's system of marine protected areas. https://attendee.gotowebinar.com/register/1376518561719910145

Ocean Observatories Video

This YouTube video on Ocean Observatories from the Fixed Point Open Ocean Observatories project can be a good introduction to marine research and other educational activities. Contact Aurora if you prefer the downloadable file. https://www.youtube.com/watch?v=EQFWz3clW1s
Contact Aurora Ribeiro at abreasasas@gmail.com

Polar Explorer: Sea Level

The free app, Polar Explorer: Sea Level, explores ice and sea level change through time. Users can see how ice, the oceans, precipitation, and temperatures have changed over time and listen as scientists explain what they're seeing and why. Polar Explorer is also available online as a web-based tool For more information, attend the free webinar, Diving in to Sea Level Change: It's 'App'ropriate, April 11, 2016. https://attendee.gotowebinar.com/register/4637432555946149636 https://thepolarhub.org/project/polar-explorer

Project BudBurst

Project BudBurst is designed to engage the public in the collection of climate change data based on the timing of leafing and flowering of trees and flowers. Website features include classroom resources, phenology background information, and more. http://budburst.org/

Rip Current Survival Guide

This video series from NOAA offers scientific and practical information about rip tides. Check out the series before heading to the beach. http://oceantodav.noaa.gov/ripcurrentfeature/

Rooted in Math

NEEF and the Mitsubishi Corporation Foundation for the Americas offer the free Rooted in Math educator toolkit with lesson plans, activities, and more to help you to bridge the gap between mathematics and the natural world.

https://www.neefusa.org/resource/rooted-math-educator-toolkit

Schmidt Ocean Institute

Schmidt Ocean Institute is a seagoing research facility operator, supporting oceanographic research and technology development. It operates the R/V Falkor as a scientific platform supporting multidisciplinary oceanographic research. Explore the diverse research expeditions that have taken place with collaborators on-board, and follow along with future cruises to the Western Pacific, South China Sea, and more. Students can map at-sea locations through the status dashboard, view the extensive gallery, and more. Watch live streams of underwater robotic dives on the website and connect to scientists on board; sign up for the Ship-to-Shore program. Students, researchers, educators, and others can submit an Expression of Interest for future access to the vessel.

Contact <u>outreach@schmidtocean.org</u> http://schmidtocean.org/

Sensing Planet Earth – Water and Ice - Online

This free MOOC energy and earth science course from Chalmers University of Technology reviews how to measure and monitor the Earth's water and ice masses. Participants will learn how continental water and ice masses are measured and monitored through remote sensing, trace water and mass transport, discuss global change and its indicators, and more. While the five-week course started March 21, 2016, check out the possibility of late enrollment.

https://www.edx.org/course/sensing-planet-earth-water-ice-chalmersx-chm004x

SOARCE Webinars

Sharing Ocean Acidification Resources for Communicators and Educators (SOARCE) is a series of free webinars jointly sponsored by NOAA's National Marine Sanctuaries and the Ocean Acidification Program. The webinars provide ocean acidification communication tools. Check out the 2016 line-up of webinars and review archived presentations.

http://oceanacidification.noaa.gov/AreasofFocus/EducationandOutreach/WebinarSeries/ Tabld/2295/PgrID/13162/PageID/2/Default.aspx

State of the Climate

NOAA's National Centers for Environmental Information publishes The State of the Climate, a collection of monthly summaries recapping climate-related occurrences on both a global and national scale. On a national scale, summaries include snow and ice, storms, wildfires, and more. Global reviews include regional analysis, hazards, and more.

http://www.ncdc.noaa.gov/sotc/

Surrounded by Science Educator Toolkit

NEEF offers this collection of lesson plans and curriculum guides to help educators introduce students to the science around them, both within the classroom and in the field. Each section includes related citizen science opportunities. https://www.neefusa.org/resource/surrounded-science-educator-toolkit

United Nations Environment Programme: Resources and Data

The United Nations Environment Programme encourages sustainable development through sound environmental practices and offers an array of resources and data about a range of ecologically-related topics. Contents include Spatial Data/Maps, Books, Reports, Journal Papers, and Online Tools. Visitors can find tools as diverse as An

introduction to environmental assessment, Guidelines for standardised global butterfly monitoring, The Global Coral Disease Database, and much more. http://www.unep-wcmc.org/resources-and-data

Using the Very, Very Simple Climate Model in the Classroom

Using this simple online model, students learn about the relationship between carbon dioxide emissions, carbon dioxide concentration, and average global temperatures. http://www.windows2universe.org/teacher_resources/teach_climatemodel.html

Virtual Sea Turtle Hospital Field Trip

Loggerhead Marinelife Center has received grant funding that will support a number of free Virtual Field Trips scheduled through December 31, 2016. The Field Trips allow students to journey through the sea turtle hospital, learn about sea turtle ecology, and more.

Contact Demi Fox at dfox@marinelife.org

Wall of Birds

Explore Cornell Lab's bird mural online. Zoom and scan the mural; click on any of the 270 species to uncover each bird's way of life, voice, and range. The sounds are from the Macaulay Library and the dynamically updated maps are from eBird. https://academy.allaboutbirds.org/features/wallofbirds/

Water Resources Dashboard

This dashboard provides access to maps and data that can help you monitor the potential for extreme precipitation and drought in your region. The scope and content of dashboard entries are driven by input from users. Follow weather service forecasts, storm prediction, hazards, and more.

http://toolkit.climate.gov/topics/water-resources/water-resources-dashboard

Watershed Experience Curriculum

The LabVenture Watershed Experience curriculum was co-developed by the Gulf of Maine Research Institute, Maine Sea Grant, and Maine middle-level teachers. Topics include biodiversity, non-point source pollution, and more. Check these out. http://labventure.gmri.org/teachers/lvclassroom.aspx

World Water Monitoring Challenge

The World Water Monitoring Challenge™ is an international education and outreach program that builds public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local water bodies. Check out the guides and lesson plans. The challenge runs March 22-December 31, 2016. Be sure to order your water monitoring kit by April 6, 2016 to receive it in time for EE Week activities.

http://www.monitorwater.org/

Young Meteorologist Program

Developed in partnership with the National Weather Service and the National Education Association, the Young Meteorologist Program shows young people how to prepare for severe weather. The game takes students on a severe weather preparedness adventure where they encounter lightning, hurricanes, tornadoes, floods, and winter storms - all while learning about severe weather science and safety. http://youngmeteorologist.org/

INITIATIVES, JOURNALS, and MORE

Cocktails with the Critters - Alabama

The Dauphin Island Sea Lab Foundation will host Cocktails with the Critters, May 5, 2016 in Spanish Fort, Alabama. Be sure to heck out the opportunity to donate and bid on silent auction items.

http://sealabfoundation.org/cocktails_with_the_critters

Discovery Day at the Dauphin Island Sea Lab - Alabama

This family event, April 9, 2016 on Dauphin Island, Alabama, includes a variety of environmentally-themed children's activities; an open house at the research facilities of the lab where the public can interact with scientists and graduate students to explore their ongoing research projects; and free children's admission to the Estuarium, the aquarium at the Sea Lab.

http://www.disl.org/estuarium/discoveryday/

FeatherFest & Nature PhotoFest - Texas

The Galveston Island Nature Tourism Council hosts FeatherFest 2016, April 14-17, 2016 on Galveston Island, Texas. There are over 100 field trips, workshops, and special events, from a dedicated nature photography track, to an Artist Boat Eco-Art Adventure by kayak, to a turtle research station tour.

http://www.galvestonfeatherfest.com/

Global Youth Service Day

Global Youth Service Day is April 15-17, 2016. Spread the word about your service day event, join in one of the many GYSD Partner Days of Service, and see what others in your area are planning.

http://www.gysd.org/

New England Right Whale Festival - Massachusetts

The New England Right Whale Festival is a celebration of efforts to save North Atlantic right whales from extinction, May 1, 2016 in Boston, Massachusetts. http://news.neaq.org/2016/03/the-new-england-right-whale-festival.html

National Parks BioBlitz

This BioBlitz will be co-hosted by the National Park Service and the National Geographic Society at national park sites in and around Washington, D. C., and will include a Biodiversity Festival on the National Mall, May 20-21, 2016. In addition, BioBlitzes of different sizes and scopes will take place in parks across the country. https://www.nps.gov/subjects/biodiversity/national-parks-bioblitz.htm