

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

JANUARY/FEBRUARY 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 ARTICLE

Bridging the Urban/Rural Divide

Clearing Magazine published this article describing a program conducted by the Oregon State University Extension 4-H Program, allowing students from urban and rural areas of Oregon to get a glimpse of what life is like on the other side.

<http://clearingmagazine.org/archives/12544>

REQUESTS

Looking for presenters for Advancing Trails Webinar Series

American Trails is looking for presenters to serve on a panel in the 2016 Advancing Trails Webinar Series. They are looking for success stories, lessons learned, and topic experts.

Contact Candace Mitchell at candace@americantrails.org

NOAA Climate Stewards Education Project Needs Assessment

The NOAA Climate Stewards Education Project is requesting interested parties to contribute to the 2016 Demographic Survey and Needs Assessment survey, to better serve you in planning or relaying information about professional development opportunities, educational resources, and more. The survey will be open through January 29, 2016.

https://docs.google.com/a/noaa.gov/forms/d/1I8HXKRwLEIYhm0UgGrzf8RaUDzVDWSxEsOb_AK15kwA/viewform

GRANTS AND OPPORTUNITIES

Action for Nature Young Eco-Hero Awards

Action for Nature seeks applications from students ages 8-16 for its International Young Eco-Hero Awards Program. The awards program recognizes the accomplishments of young people whose personal actions have significantly improved the environment. Projects must concern advocacy, environmental health, research, or protection of the natural world. The deadline for application is February 28, 2016.

http://www.actionfornature.org/award_guidelines.aspx

American Honda Foundation Grants

The American Honda Foundation makes grants to K–12 schools, colleges, universities, trade schools, and others for programs that benefit youth and scientific education, and programs pertaining to academic or curriculum development that emphasize innovative educational methods and techniques. Grants are awarded on a quarterly basis, with the next deadlines for application February 1 and May 1, 2016.

<http://corporate.honda.com/america/philanthropy.aspx?id=ahf>

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 19, 2016.

<http://audubonphotoawards.org/>

Clif Bar Family Foundation's Small Grants

The Clif Bar Family Foundation Small Grants are awarded to projects that protect earth's beauty and bounty; increase opportunities for outdoor activity; and more. The deadlines for applications are February 1, June 1, and October 1 each year.

<http://clifbarfamilyfoundation.org/Grants-Programs>

Coral Reef Conservation Fund

The National Fish and Wildlife Foundation announces the Coral Reef Conservation Fund 2016 Request for Proposals. Proposals should address negative impacts to coral reefs and resources that improve coral reef management effectiveness. Grants will be awarded to reduce land-based sources of pollution, advance coral reef fisheries management, support recovery of Endangered Species Act-listed coral species, and improve watershed management planning. The deadline for pre-proposals is March 8, 2016.

<http://www.nfwf.org/coralreef/Pages/crcf2016rfp.aspx>

Craig Tufts Environmental Education Fund

Family Summits, Inc. and partners offer the annual Craig Tufts Educational Scholarship Award, given to a young person 8-18 years old to attend a week-long, summer outdoor educational adventure camp with a parent or guardian. The deadline for application is March 25, 2016.

<http://www.nwf.org/What-We-Do/Kids-and-Nature/Programs/Craig-Tufts-Scholarship.aspx>

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, "outside the box," and more. The work must be recognized as an outstanding accomplishment by experts in the field and have the potential to benefit society. The deadline for submission is February 10, 2016.

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

DuPont Challenge

The 2015 DuPont Challenge is a competition for K–12 grade students to research and write a science essay. See the website for complete details. The deadline for submission is February 5, 2016.

<http://thechallenge.dupont.com/essay/>

Eco-Comedy 2016

The Spring 2016 Eco-Comedy theme is Clean Water. Participants produce a short (3 minutes maximum) video which communicate a clear, humorous message tackling this year's theme, Connect the drops between clean water and life. The deadline for submission is March 1, 2016.

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

Ecosystem-Based Adaptation Planning Tool

This call for proposals is for the development of a user-friendly and innovative tool to assist effective planning of ecosystem-based adaptation interventions in developing countries. The tool could be standalone software or internet-based. The deadline for proposals is February 5, 2016.

<http://ebasouth.org/news/call-proposals-eba-planning-tool>

EcoTech Grants

The Captain Planet Foundation in partnership with the Ray C. Anderson Foundation will award grants to schools or non-profit 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 deadline for application is March 15, 2016 (as funds allow).

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

Everyday Young Hero Award

The Everyday Young Hero program is awarded weekly to a young person, age 5-25, who exemplifies an extraordinary commitment to service. Nominations must come from a parent, teacher, or other adult mentor. This year, with support from Newman's Own Foundation, one winner each month will receive a grant to continue and expand their project

http://www.ysa.org/eyh_nomination

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 31, 2016.

<http://www.ezra-jack-keats.org/section/ezra-jack-keats-mini-grant-program-for-public-libraries-public-schools/>

Fund for Teachers Professional Development Grants

The Fund for Teachers Grant awards preK-12 teachers with funds to support professional development activities during the summer. Check the website for complete details. The deadline for application is January 28, 2016.

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

Geothermal Design Challenge

The U.S. Department of Energy and partners are looking for student teams to design an infographic that will illustrate how geothermal energy is clean, safe, reliable, and sustainable. Prizes are available for the winning teams in each category.

<https://caesenergy.org/geothermaldesign/>

Grants for Alaska Schools

Alaska Sea Grant offers grants to support professional development in the use of the Alaska Seas and Watersheds curriculum and thematic instruction to meet education standards, and the development of a Sea Week, River Week, Watershed Week or other compatible event that fits your community best. Teacher teams (representing at least three K-8 grade levels) in a single school or community may submit proposals with the approval of their principal. The deadline for application is January 31, 2016.

<http://aswc.seagrant.uaf.edu/call-for-grant-proposals-from-alaska-schools.html>

Hutton Junior Fisheries Biology Program

The goal of the Hutton Junior Fisheries Biology Program is to stimulate interest in pursuing careers in fisheries science and aquatic resource management among high school students from groups underrepresented in the fisheries professions. Students are required to work full time for eight weeks. The deadline for application is February 27, 2016.

<http://hutton.fisheries.org/hutton-j-f-b-program-411/>

International Youth Nature Photography Contest

The Windland Smith Rice Photography competition is open. The deadline for submission is March 8, 2016. Note that there may be an entry fee for submission.

http://www.naturesbestphotography.com/enter_guidelines.php

Junior Duck Stamp Art Contest

The U.S. Fish and Wildlife Service oversees the Federal Junior Duck Stamp Program. Students are invited to create duck stamp drawings to show what they have learned about wetlands habitat and waterfowl conservation. Check the website for details and information about new curriculum guides. The deadline for submission is March 15, 2016.

<http://www.fws.gov/birds/education/junior-duck-stamp-conservation-program/junior-duck-stamp-contest-information.php>

Lemelson-MIT InvenTeam Grants

Lemelson-MIT InvenTeams is a national grant initiative to foster inventiveness among high school students. Teams composed of high school students, teachers, and mentors are asked to collaboratively identify a problem that they want to solve, research the problem, and then develop a prototype invention as an in-class or extracurricular project. The deadline for early feedback is March 7, 2016.

<http://lemelson.mit.edu/>

Living on the Ocean Planet Video Competition

The National Ocean Sciences Bowl, in partnership with NMEA, is sponsoring the Living on the Ocean Planet video contest. High school students can submit a one- to three-minute video on the theme, Our Changing Ocean: Science for Strong Coastal Communities. The deadline for submission is March 18, 2016.

<http://nosb.org/compete/nosb-video-contest/>

National Trust Preservation Funds

Each year the National Trust for Historic Preservation funds are intended to encourage preservation at the local level by providing seed money for preservation projects. Check the website for the different issues of interest. The deadlines for application are February 1, June 1, and October 1, 2016.

<http://www.preservationnation.org/resources/find-funding/preservation-funds-guidelines-eligibility.html>

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
- 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.

The deadline for nominations is February 15, 2016.

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

NOAA Fisheries Sea Grant Fellowship

Funds for the NOAA National Marine Fisheries Service 2016 Sea Grant Fellowship in Population and Ecosystem Dynamics and Sea Grant Fellowship in Marine Resources Economics is available. Check your local Sea Grant Program for availability and details. The deadline for application is January 29, 2016.

<http://seagrant.noaa.gov/FundingFellowships/NMFSSGFellowship/Application.aspx>

North American Native Fishes Association Grant

The North American Native Fishes Association's Gerald C. Corcoran Education Grant funds projects to educate the general public about native North American fishes and their environments. The deadline for proposals is March 31, 2016.

<http://www.nanfa.org/corcoran.shtml>

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. See the website for complete details and deadlines. The next deadline for application is February 26, 2016 for U.S. Standard Grants, Cycle 1.

<http://www.fws.gov/birds/grants/north-american-wetland-conservation-act.php>

Northwest Fund for the Environment - Washington

Grants by the Northwest Fund for the Environment are designated to be spent promoting change in the uses of natural resources which will increase their protection and preservation in the State of Washington. Projects may address aquatic ecosystems, community response, and more. Check the website for details; the deadline for accepted proposals is February 11, 2016.

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

Pacific Northwest B-WET Funding

The NOAA Pacific Northwest Bay Watershed Education and Training (B-WET) Program is an environmental education program that promotes locally relevant, experiential learning in the K-12 environment. Funded projects provide meaningful watershed educational experiences for students, related professional development for teachers, and help to support regional education and environmental priorities in the watersheds of the Pacific Northwest. The deadline for application is February 11, 2016.

<http://www.grants.gov/web/grants/search-grants.html?keywords=NOAA-NOS-ONMS-2016-2004700>

Patagonia Environmental Grants

Patagonia offers grants to organizations that work on root causes of problems and approach issues with a commitment to long-term change, with a focus on organizations that build a strong base of citizen support. Applications are accepted year round at retail stores and twice yearly at the headquarters, with the next deadline for application of April 30, 2016.

<http://www.patagonia.com/us/patagonia.go?assetid=2942>

President's Environmental Youth Awards

Sponsored by the EPA, the President's Environmental Youth Awards (PEYA) program recognizes young people for projects which demonstrate their commitment to the environment. Note that the deadline for submission has been extended to January 31, 2016.

<http://www2.epa.gov/education/presidents-environmental-youth-award>

Seawall Interpretive Trail Request for Proposals

Artist Boat's Seawall Interpretive Trail (Project S.I.T.) public art residency program is a beautification project to transform 70 Galveston Seawall benches into educational works of art that depict the coastal and ocean heritage of Galveston Island and the Gulf of Mexico. Artist Boat is issuing a call for design proposals for the next five benches. See the website for bench topics and details of the project. The deadline for proposals is January 29, 2016.

<http://www.artistboat.org/project-s-i-t.html>

Treasures of the Texas Coast Children's Art Contest

The Treasures of the Texas Coast Children's Art Contest is designed to draw attention to the negative effects of trashing Texas beaches. The contest is open to Texas K-6 students. The deadline for entry is March 2, 2016..

<http://www.glo.texas.gov/adopt-a-beach/educate/art-contest/index.html>

Ultimate Cool School Sweepstakes

Enter daily for a chance to win free access to Discovery Education Science for your school for a year. The deadline for entry is February 25, 2016.

http://www.siemensscienceday.com/enter_sweepstakes.cfm

Visualizing My Earth Challenge

This contest, from the American Geosciences Institute and the Center for Geoscience and Society, challenges students ages 14 and up to submit visual representations of natural phenomena from a geoscience perspective. The deadline for submission is January 29, 2016.

<http://www.earthsciweek.org/visualizing-my-earth>

Young Reporters for the Environment Competition

The Young Reporters for the Environment Competition is hosted by the National Wildlife Federation. Students aged 13-21 investigate an environmental issue in their community and report on it in writing, photos, or video. The deadline for U.S. submissions is March 15, 2016.

<http://www.nwf.org/Young-Reporters-for-the-Environment/About-Young-Reporters/Join-the-Competition.aspx>

FELLOWSHIPS, INTERNSHIPS, AND TEMPORARY OPPORTUNITIES

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://safariclubfoundation.org/education/american-wilderness-school>

Aquaculture Internship - Virginia

Ballard Fish & Oyster Co. is accepting applications for its paid Aquaculture Internship, with experience in field aquaculture and husbandry. Internship dates are flexible, from a summer position to a year-long experience.

<http://www.cbfieldstation.org/blog/aquaculture-internship-through-ballard-fish-oyster-co>

Artist in Residence Program - Texas

The Center for Coastal Studies at Texas A&M University Corpus Christi offers an Artist in Residence Program at their Laguna Madre Field Station in Texas. The program invites artists working in all media to immerse themselves in unique environments for artistic inspiration. Applications are taken year-round; please apply at least two months prior to your desired visit date desired.

<http://ccs.tamucc.edu/programs-2/artist-in-residence-program/>

Coastal Studies for Girls - Maine

Coastal Studies for Girls is a residential marine science and leadership semester school just for girls, located on the coast of Freeport, Maine. The program offers hands-on marine and environmental science and outdoor leadership adventures in the classroom, laboratory, and along the coast. Spring semester begins February 7, 2016. Financial aid may be available.

<https://www.coastalstudiesforgirls.org/admissions/how-to-apply/>

Conservancy Summer Internships – North Carolina

Bald Head Island is located at the mouth of the Cape Fear River in southeastern North Carolina. The Conservancy's mission is to foster community-based barrier island conservation, preservation, and education. The paid internship program is open to rising juniors, seniors, or recent graduates from an accredited college or university. The deadline for application is February 1, 2016.

https://www.bhic.org/Images/bhiconservancy/site/PDFs/Summer_Position_Descriptions_2016_application.pdf

Deepwater Horizon REU Opportunities - Louisiana

Two Research Experience for Undergraduates (REU) positions are available at the Louisiana Universities Marine Consortium (LUMCON) for the summer of 2016. The students will design and conduct studies that contribute to the larger Coastal Waters Consortium collaborative effort studying the effects of the Deepwater Horizon oil spill on Louisiana salt marshes and coastal environments. The deadline for application is April 1, 2016.

http://cwc.lumcon.edu/?page_id=1926

Research Experience for Undergraduates - Panama

The Central Caribbean Marine Institute invites undergraduate students to apply to the Research Experience for Undergraduates (REU) program in Coral Reef Biodiversity and Resilience on Little Cayman, May 28-June 22, 2016. The deadline for application is February 15, 2016.

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

Underwater Archeology Internship - Florida

Biscayne National Park seeks an who will serve as a member of the archeological dive and field team during the summer of 2016. The intern's primary duties will be as field staff and as a dive buddy to the park archeologist and/or archeological technician. The internship is supported by the Latino Heritage Internship Program. The deadline for application is February 6, 2016.

<https://hispanicaccess.org/biscayne-national-park-homestead-fl-0>

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Arctic in the Classroom – Alaska

The Arctic in the Classroom program offers the free Make an Impact workshop, March 13-15, 2016 in Fairbanks, Alaska. The program is for educators that currently teach in Alaskan Arctic communities, with experience or interest in incorporating local Arctic research into their teaching through citizen science and community based monitoring; and researchers who conduct funded research in the Alaskan Arctic with experience or

interest using citizen science practices as a method to expose teachers, students, and local communities to local Arctic research. The deadline for application is February 1, 2016; around 15 openings are available.

<https://www.arcus.org/tac>

Down Under, Out Yonder Teacher Training Expedition - Texas

The Down Under, Out Yonder coral reef workshop and scuba trip will take place July 9-13, 2016, 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 5, 2016.

<http://flowergarden.noaa.gov/education/workshops.html>

GET Wet! Teacher Workshop - Texas

Join the Galveston Bay Foundation for a free two-day educator workshop, April 2 and 9, 2016. This workshop is geared towards middle school and high school level educators. Participants who complete both days will receive a stipend and continuing education credit hours. The deadline for registration is April 1, 2016.

<http://www.galvbay.org/how-we-protect-the-bay/in-our-schools/getwet/>

Green Schools, Blue Waters - Pennsylvania

Green Schools, Blue Waters STEM Investigations for Sustainable Schools is offered through Lebanon Valley College's Master of Science Education program. The for-credit hybrid course includes online coursework along with the field workshop. Educators and community members can attend the field workshops for free. See the website for complete details.

<http://www.lvc.edu/mse/documents/greenschoolsbluwaters.pdf>

High School Marine Science Symposia - Massachusetts

Join local experts as they share their knowledge, skills, and passion for marine science-related research, education, and practice, March 9 in Boston (sharks) and March 16, 2016 in Salem, Massachusetts (penguins).

<http://ma-marine-ed.org/mmeevents/high-school-marine-science-symposium>

Introduction to the Natural Capital Approach - Online

Stanford University Online is offering a free, 4-module self-paced course, Introduction to the Natural Capital Approach, beginning January, 12, 2016. Mapping and modeling ecosystem services can help highlight the diverse benefits provided to people by nature (what and where) and explore how those benefits might change under different management options--thus bringing information about nature's values into decisions in practical ways.

https://lagunita.stanford.edu/courses/HumanitiesSciences/NCP_101/SelfPaced/about

Marine Debris Summit – Virginia

Early Bird registration is open for the 2nd Virginia Marine Debris Summit, March 7-9, 2016 in Gloucester, Virginia. While the summit's audience will be mostly from Virginia, it will also include stakeholders from other mid-Atlantic states.

<http://events.r20.constantcontact.com/register/event?oeidk=a07ec35sin6cf9efe12&llr=nyolw7cab>

Marine Mammals in Coastal Georgia Teacher Workshop - Georgia

Join experts in the marine mammal field for this teacher workshop, April 22, 2016 in Brunswick, Georgia. Topics will include current research, conservation and management strategies, and more, along with curriculum and classroom activities. The deadline for registration is March 31, 2016.

Contact Georgia Graves at georgiabeachwalk@bellsouth.net

Natural Disasters - Online

In this free edX MOOC from McGill University, students will learn the science behind different types of natural disasters and our ability, or inability, to control and predict these events. Note: the 12-week course started January 13, 2016.

<https://www.edx.org/course/natural-disasters-mcgillx-atoc185x-1>

Ocean Exploration Workshops – Various

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

- April 9, 2016 with the Texas State Aquarium, Corpus Christi, Texas. How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is March 21, 2016. Contact Kristin Evans at kevans@txstate.org
- April 16, 2016 with the John G. Shedd Aquarium in Chicago, Illinois. How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is March 25, 2016. Contact Laura Lytle at llytle@shedd Aquarium.org
- April 30, 2016 with the Aquarium of the Pacific in Long Beach, California. How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is April 8, 2016. Contact Staci Wong at swong@lbaop.org
- April 30, 2016 with the New England Aquarium in Boston, Massachusetts. How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is April 8, 2016. Contact Tania Slywinskyj at tslywinskyj@neaq.org
- April 30, 2016 with the University of South Florida College of Marine Science in St. Pete Beach, Florida. How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is April 8, 2016. Contact Teresa Greely at greely@marine.usf.edu

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

Ocean Sciences Meeting and K-12 Youth Symposium

The 2016 Ocean Sciences Meeting will be held February 21-26, 2016 in New Orleans, Louisiana, cosponsored by the Association for the Sciences of Limnology and Oceanography, The Oceanography Society, and the American Geophysical Union. The K-12 Youth Ocean Science Symposium will take place February 23, 2016. They are not only accepting scientific research posters, but also art; additionally, teachers can create a poster demonstrating projects that they have done with students.

<http://osm.agu.org/2016/>

Contact Elizabeth Eubanks at 561 313-2465

OceansOnline

The International Marine Conservation Congress will take place July 30-August 3, 2016 in St. John's, Newfoundland and Labrador. OceansOnline is a full day add-on to IMCC4, August 4, 2016, with a theme of Making Marine Science Matter through communication and online resources. While the IMCC proposal deadline has passed, the deadline for abstract submission for the OceansOnline facilitated discussion is March 7, 2016.

<http://conbio.org/mini-sites/imcc-2016/registration-participation/call-for-abstracts>

SciREN – North Carolina

Scientific Research and Education Network (SciREN), February 18, 2016 in Pine Knoll Shores, North Carolina, is an annual workshop that aims to connect marine and environmental researchers with K-12 teachers. This networking event allows teachers to obtain classroom-ready exercises from scientists that help bring local research to the classroom. The deadline for registration is January 29, 2016.

<http://sciren.web.unc.edu/>

Sea Turtle Conservation Teacher Workshop - Georgia

Join educators at the Sapelo Island National Estuarine Research Reserve, June 6-8, 2016 on Sapelo Island, Georgia, for the Georgia Sea Turtle and Conservation Teacher Workshop. The deadline for registration is May 10, 2016.

Contact Georgia Graves at georgiabeachwalk@bellsouth.net

Sensing Planet Earth – Online

Deepen your understanding of global change by learning about the techniques and tools used to study the Earth through this free MOOC from Chalmers University of Technology. Sensing Planet Earth – From Core to Outer Space, a five-week course, starts February 1, 2016.

<https://www.edx.org/course/sensing-planet-earth-core-outer-space-chalmersx-chm003x#!>

Summer Institute for Climate Change - Minnesota

Climate Generation's 2016 Summer Institute, June 21-24, 2016 in St. Paul, Minnesota, will focus on their newest middle school curriculum resource: Next Generation Climate.

<http://www.climategen.org/what-we-do/education/professional-development/summer-institute/summer-institute-2016/>

Summer Programs – Alabama

Dauphin Island Sea Lab Discovery Hall Programs promote conservation through education, research, and outreach. Through hands-on activities in marine habitats, people can see the impact of science on their daily lives. Many programs are available for both students and teachers. Teachers, check out Fins, Fishes, and Fisheries, Technology in Marine Science – ROVs, and more. Workshop registrations are refunded upon completion.

<http://www.disl.org/educational-programs/>

Zoo Math and Science - Minnesota

The Minnesota Zoo is hosting an education workshop for informal educators, April 25-27, 2016 in Apple Valley, Minnesota. Educators will receive training to implement the ZooMS (Zoo Math and Science) STEM program model in their institution. Be sure to

check out the other resources on the website, including curriculum, teacher workshops, and much more.

<http://mnzoo.org/education/schools-teachers/stem-programs/>

EDUCATIONAL RESOURCES

Alaska Seas and Watersheds Curriculum

This online Alaska Seas and Watersheds curriculum, developed by Alaska teachers, provides units for use by teachers, homeschoolers, and anyone seeking content on marine and associated watershed science topics. The standards-based lesson plans and units for grades K–8 are complete and ready to use.

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

Alaskan Arctic National Parks Landscape Viewer

This interactive feature from the National Park Service provides a birds-eye view of five national parks in northern Alaska. It features satellite images and aerial photographs draped over topography to simulate a 3-D view from above. Users can fly to points of interest by selecting them from a menu that also provides a written narrative, in addition to exploring with interactive pan, zoom, and tilt.

<http://science.nature.nps.gov/im/units/arcn/owg/>

Aquarium Webcam Resource Kits

The Aquarium of the Pacific offers inquiry-based curriculum kits based on its live animal webcams. The online kits contain lesson plans, activities, online resources, and educational videos. The kits encourage students to make observations using one of the aquarium's live-streaming webcams, including Tropical Pacific, Shark Lagoon, Sea Dragon Habitat, Penguin Habitat, and Blue Cavern Kelp Forest.

<http://www.aquariumofpacific.org/teachers/webcamkits>

Atlas of Community-Based Monitoring and Traditional Knowledge in a Changing Arctic

The online atlas serves as an interactive inventory of community-based monitoring initiatives in the circumpolar Arctic. Initially developed with a focus on environmental monitoring programs, it also includes environmental and social initiatives as many communities take a holistic view on change and emphasize connections between society and the environment.

<http://www.arcticcbm.org/index.html#>

BEETLES

The BEETLES (Better Environmental Education Teaching, Learning & Expertise Sharing) project offers this suite of resources for outdoor science field instructors, including outdoor environmental educators, naturalists, and others. The resources help infuse outdoor science programs with research-based approaches and tools to improve science teaching and learning. Resources include student activities for use in the field, videos, professional learning materials, and more.

<http://beetlesproject.org/>

Bigger Picture

This blog from the Smithsonian Institution Archives explores the various people, research, programs, and wonders of the Smithsonian's holdings. The Bigger Picture

invites readers into the Smithsonian Archives. Entries vary in scope, highlighting interesting artifacts, detailing the challenges and benefits of working with the Institution's collections, and more.

<http://siarchives.si.edu/blog>

Carbon Adventures: A Game to Teach the Carbon Cycle

Arizona State University GK-12 offers this lesson plan designed to introduce the complexity of the carbon cycle to students. By the end of the game, students should understand that carbon can take many forms throughout the carbon cycle, and that no set pathway exists in the cycle.

<http://gk12.asu.edu/node/45>

Climate Change

The National Science Foundation offers this website, NSF Climate Change Special Report, summarizing the current state of knowledge about climate change. Chapters include sky, sea, ice, and more. Chapter links offer background information, major projects, slideshows, and more.

http://www.nsf.gov/news/special_reports/climate/

Climate Education Resources

PBS LearningMedia™ offers this collection of video and interactive climate education resources. Check out Ancient Ice and Future Climate, Climate Models, and more.

<http://www.pbslearningmedia.org/shared/31931/4409882/>

Climate Stewards Webinar Archives

If you miss any NOAA Climate Stewards Education Project webinars, you can watch an archive of the broadcast. Resources include links to the video, presentation slides, and more. Note that the post-viewing polls are reviewed and important to the program. Also note that free Google account registration is required.

<https://sites.google.com/a/noaa.gov/noaa-climate-stewards/home/stuff>

Coral Triangle

The Coral Triangle website, supported by the World Wildlife Fund, tells the story of the world's epicenter of marine biodiversity through words, pictures, and video. The website features photo stories, features by journalists and experts, short narrative films, and underwater video. While it has a strong emphasis on travel, there's plenty of background information here.

<http://thecoraltriangle.com/>

Creep into the DEEPEND

Participate in Creep into the DEEPEND, a WhaleTimes' Virtual Research Mission, February 29-March 11, 2016. Designed for 3-6th grade classrooms, WhaleTimes' Creep into the DEEPEND creates a connection between scientists and students. It also lets you bring deep-sea animals, exploration, and science into your classrooms. Note: space is limited.

Contact deepend@whaletimes.org

Cross-Referenced Learner Resources

Check out the You May Have Missed chart with links to Learner series, student interactives, and more, related to additional Annenberg Learner resources. For example, if you've been interested in Habitable Planet, the chart cross-references

resources, interactives, lesson plans, and more including Essential Lens, Earth's Plates, Energy Flow in Communities, and more. Be sure to check out the indexed, online catalog of all Annenberg Learner resources.

<http://www.learner.org/resources/ymhm.html>

<http://www.learner.org/catalog/catalog.html>

Dream Trails

National Geographic asked 20 outdoor activists about their dream trails. From a trail that runs through France, Italy, and Switzerland, to a wild and diverse trail in Australia, these picks display a wide array of scenery from across the world.

<http://adventure.nationalgeographic.com/adventure/trips/best-trails/worlds-best-hikes-dream-trails/>

Exploring Ocean Data with Google Earth

This exercise uses geospatial data, video clips, and more to explore olive ridley turtles. It is part of the Eyes in the Sky II professional development program. Check these resources out.

http://serc.carleton.edu/eyesinthesky2/week12/ocean_data_google_earth.html

Exploring the Pacific

Join EarthEcho International and the Schmidt Ocean Institute as they explore a world without oxygen in the South Pacific. The Schmidt Ocean Institute's R/V *Falkor* will travel from Honolulu to Tahiti to explore low-oxygen areas of the ocean called oxygen deficient zones (ODZ). Students can talk with scientists onboard the ship as they explore the biogeochemistry of ODZs and how human actions are contributing to their growth throughout the world.

<http://earthecho.org/news/exploring-the-pacific-with-schmidt-ocean-institute>

Facilitating a Writing Workshop

This article in Clearing Magazine offers tips for creative writing for field-based education. Follow along to help facilitate your own personal creative writing workshop.

<http://clearingmagazine.org/archives/1601>

FlowingData

This website from statistician Nathan Yau offers a myriad of data visualizations. Visitors may scout the site by Categories, such as Visualization (Seeing data), Statistics (Analyzing data), and Maps (Seeing geographic data), among others. Be sure to check out the guides.

<http://flowingdata.com/>

Games Planet Arcade

NOAA's Games website is a portal to games and interactive activities focused on ocean and air themes. It highlights the science and the activities of NOAA and other agencies and organizations promoting environmental stewardship. Check out Water Life: Rivers meet the sea, Severe Weather Preparedness Adventure, and more.

<http://games.noaa.gov/>

GEODE Earth Science

This older website from Pearson Education offers Flash driven units in Earth Science. Topics include The Global Ocean, Earth's Dynamic Atmosphere, and much more.

http://wps.prenhall.com/esm_tarbuck_appinvest_7/182/46820/11986047.cw/index.html

Marine Science

McGraw-Hill Education has developed a new marine science textbook for the high school classroom. The website hosts a sample chapter, table of contents, and more. Educators requesting a sample have online access to the full student edition ebook for 30-45 days. For a print copy to preview, contact Megan Musheno.

<http://info.mheducation.com/2016.AP.Marine.Science.SampleRequest.html>

Contact Megan Musheno at megan.musheno@mheducation.com

National Biodiversity Teach-In

The students and teachers of the Environmental Science classes at Elgin High School's class project is a series of biodiversity webinars. Their goal is to raise awareness about the importance of biodiversity and inspire participants to take action in its protection. The webinars will take place each Friday in February, 2016. Registration is required and space is limited.

<http://nationalbiodiversityteachin.com/>

Nature

This PBS LearningMedia collection of science videos and media-enhanced lesson plans draws upon the PBS series, Nature. The video segments have been selected to engage students with key curriculum concepts. The lesson plans incorporate hands-on activities, online resources, and video. Topics include earth science, life cycles, human impact, and more.

http://www.pbslearningmedia.org/collection/nat/?topic_id=2185

Nature Cat

The Nature Cat series from PBS LearninMedia follows an animated house cat with dreams of outdoor exploration. Designed for kids ages 3-8, Nature Cat is an early-elementary science education resource that is meant to help children develop connections with the natural world while learning age-appropriate reasoning skills such as classifying, counting, and measuring.

http://www.pbslearningmedia.org/collection/nature-cat/?topic_id=2397

Next Generation Climate

Next Generation Climate is a six lesson, interdisciplinary, middle school climate change curriculum that has students investigate the cause of the global temperature change, research the major repercussions of climate change, and find out how they can monitor and minimize those repercussions. Students investigate graphs and data and practice the skills of argumentation and engineering design. The curriculum uses the Next Generation Science Standards as a framework and is also aligned to Climate and Energy Literacy standards. Download for free or purchase a hard copy.

<http://www.climategen.org/what-we-do/education/climate-change-and-energy-curricula/curriculum-guides/next-generation-climate-for-grades-6-8/>

NOAA Ship Okeanos Explorer's 2016 Field Season

NOAA's Office of Ocean Exploration and Research NOAA Ship *Okeanos Explorer's* 2016 Field Season will launch with a continuation of 2015's Hohonu Moana: Expedition, with Papahānaumokuākea Marine National Monument, February 23–March 18, 2016. Planned as a three-year effort, the Campaign to Address Pacific monument Science, Technology, and Ocean NEeds (CAPSTONE), will focus on systematically collecting baseline information to support science and management needs within and around the

U.S. Marine National Monuments and other protected places in the Pacific Ocean. Check the website and mark your calendars for the upcoming expeditions.

<http://oceanexplorer.noaa.gov/oceanos/explorations/2016-overview/welcome.html>

NOAA in Your Backyard

Find NOAA guest speakers, field trips, and professional development in your area. Connect with National Weather Service offices for school visits, student and educator resources, and more; with the National Estuarine Research Reserve System for field trips, professional development, and educator resources; and with the Integrated Ocean Observing System for curriculum, real-world data, and multimedia. Other organizations include NOAA National Marine Sanctuaries and the National Sea Grant Program.

http://www.education.noaa.gov/Special_Topics/NOAA_in_Your_Backyard.html

Ocean Today Videos

The short Ocean Today videos are available for free download in two different sizes, depending on your needs. Be sure to check back periodically as new videos are added. Current videos explore El Nino and La Nina, Fuel for the Storm, and more.

<http://oceantoday.noaa.gov/>

Our Climate Our Future

Our Climate Our Future, from the Alliance for Climate Education, is a multimedia resource to educate young people about the science of climate change and empower them to take action. Registration (currently free) is required.

<https://ourclimateourfuture.org/>

Physics Toolbox

The Physics Toolbox is a suite of apps that use the built-in sensors inside smartphones to replace expensive probeware. The suite of apps uses 11 device sensor inputs to collect, record, and export data. The website also offers links to lessons and lesson ideas, along with additional resources.

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

Power of Parks

National Geographic will examine the state of the 408 U.S. national parks as well as parks around the globe. Using photography, digital storytelling, and more, reporters will explore everything from parks threatened by development and climate change to whether millennials will unplug long enough to connect with nature.

<http://www.nationalgeographic.com/power-of-parks/>

Public Lecture Series - Texas

The University of Texas at Austin Marine Science Institute in Port Aransas, Texas, offers free public lectures. Upcoming lectures include Three Oceans One Sea, Something Fishy, and more.

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

Practical Uses of Math And Science

PUMAS (Practical Uses of Math And Science) is a collection of brief examples illustrating how math and science topics taught in K-12 classes can be used in interesting settings and everyday life.

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

Science Underground

Science Underground is a new two-minute podcast that delivers a science topic in an easy to understand fashion.

<http://scienceunderground.org/>

Sea Level Rise

This learning module from NASA's Jet Propulsion Laboratory and NOAA's National Ocean Service reviews sea level rise, its causes, and impacts. The module features an integrated educational package of grade level-appropriate (6-12) instruction and activities centered on a 23-minute video along with teacher background information and activities.

<http://oceanservice.noaa.gov/education/sea-level-rise/welcome.html>

Seaside Chats - Texas

Flower Garden Banks National Marine Sanctuaries will host a series of free Seaside Chats each Wednesday in February. The presentations will take place at Sea Scout Base in Galveston, Texas.

<http://flowergarden.noaa.gov/newsevents/calendar.html>

Semester of Service Toolkit

Youth Service America offers youth and their adult mentors the tools to make a difference with high-impact service and service-learning projects. Check out the free, downloadable Semester of Service Toolkit.

<http://www.ysa.org/resources#!/Semester-of-Service-Teacher-Toolkit/c/12508544/offset=0&sort=normal>

Shark Byte

The Khaled bin Sultan Living Oceans Foundation and the National Aquarium will host a Google Hangout called Shark Byte: Feeding Strategies of Reef Sharks, February 3, 2016. Talk to leading shark experts above and below the water to learn how reef sharks feed in the wild and in captivity. You can watch the video, Sharks of the Coral Canyon, prior to the hangout.

<https://plus.google.com/u/0/events/cn826v19t1bd76nst5e9ejtmo5s>

Shark Tracking Curriculum

The OCEARCH STEM Curriculum enables students to learn STEM skills while following the real-time data on the movements of sharks. The curriculum for grades K-8 is based on the Global Shark Tracker and Next Generation Science Standards. Check back later, as the OCEARCH STEM Education Curriculum is expected to be available for grades K-12 by the end of 2016.

<http://www.ocearch.org/#curriculum>

South African Climates Live

Follow along with the Consortium for Ocean Leadership's Deep Earth Academy and the Integrated Ocean Drilling Program Expedition 361: South African Climates, January 31 through March 2016. Sign-ups are now open (first-come, first-served) for 45-minute live interactive broadcasts from the ship for your class, museum, camp group, professional development group, or special event.

https://docs.google.com/a/noaa.gov/forms/d/17ljaN9PTmXSRi6YoDpSRJ1MmhMKYgDsX3tPo_PQsU8s/viewform

Teach Online Safety

This website from the National Cyber Security Alliance offers resources for educators who would like to train their students to stay safe online. The resources are divided by age group, with sections designed for K-2, 3-5, Middle & High School, Higher Education, and Administrators.

<https://www.staysafeonline.org/teach-online-safety/>

Thinkport and STEM Collaborative

Thinkport's mission supports effective teaching and meaningful learning while building bridges between schools and families. Check out Envirohealth Connections, which features Interactive Investigations where students can Meet the Experts in environmental health through online videos. The STEM Collaborative features Scale City, Roadtrip, and more. Be sure to check out the Additional Resources links.

<http://www.thinkport.org/Classroom/stem.tp>

Through the Lens of the Gulf of Mexico

Artist Boat and FotoFest International have developed a companion curriculum for this year's FotoFest International Exhibitions, Changing Circumstances. It is a free download for teachers in grades 5-8. The curriculum looks at global changing circumstances through art, science, photography, and stewardship. The curriculum culminates in a student-driven capstone service project.

<https://fotofest.wufoo.com/forms/download-the-fotofest-2016-biennial-curriculum/>

Trails Conference Presentations

The 2015 Massachusetts Trails Conference took place in November 2015 and was centered on the theme, Sustainable Trails for a Sustainable Future. The presentations are now available online. Note that the presentations are not annotated.

<http://www.mass.gov/eea/agencies/dcr/services-and-assistance/grants-and-technical-assistance/2015-massachusetts-trails-conference.html>

INITIATIVES, JOURNALS, and MORE

Connected Science Learning

Connected Science Learning is an online journal that highlights STEM education experiences that bridge the gap between formal and informal science education settings. The inaugural issue of Connected Science Learning will be published in spring 2016, focusing on the theme Successful Formal–Informal Science Education Collaborations. Sign up for a free issue.

<http://www.nsta.org/publications/csl/>

Gray's Reef Ocean Film Festival - Georgia

Explore the Wonders of the Ocean through film, January 29-30, 2016 in Savannah, Georgia. Watch 3D films, listen to a whale rescuer and cinematographers, and more.

http://graysreef.noaa.gov/news/features/2016/film_festival_2016/welcome.html

Great Backyard Bird Count

The 2016 Great Backyard Bird Count is February 12–15, 2016. This annual event engages bird watchers of all ages in counting birds to create a real-time snapshot of where the birds are. Everyone is welcome--from beginning bird watchers to experts. It

takes as little as 15 minutes on one day, or you can count for as long as you like each day of the event. Check out the bird apps to help with your identification.

<http://gbbc.birdcount.org/>

NASA CORAL Mission

A three-year NASA field expedition will get underway this year that will use advanced instruments on airplanes and in the water to survey more of the world's coral reefs. The CORal Reef Airborne Laboratory (CORAL) will measure the condition of these ecosystems and create a unique database of uniform scale and quality.

<http://www.jpl.nasa.gov/news/news.php?release=2016-005>

Nature Rx

Tired of the pharmaceutical commercials on TV? Check out the Nature Rx commercials, dedicated to entertaining and informing people about the healing and humorous aspects of nature. Stay tuned for future offerings.

<http://www.nature-rx.org/>