

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

AUGUST 2014

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/>.

WEBSITE OF THE MONTH

EOL iTunes University And Life on Earth iBooks

The Encyclopedia of Life offers two free iTunes U offerings - the EOL iTunes U Collection and activities in support of E.O. Wilson's Life on Earth iBooks Textbook and the Biology: Life on Earth iTunes U course. The iTunes U Collection offers biodiversity educational materials, information, podcasts and Google Earth Tours. E. O. Wilson's Life on Earth is an iBooks Textbook for high school biology students created by the E. O. Wilson Biodiversity Foundation. Life on Earth is accompanied by an iTunes U course called Biology: Life on Earth. The iTunes U course brings together content from the Smithsonian National Museum of Natural History, National Geographic, EOL, and other institutions with content emphasizing citizen science, evolution, climate change, and the protection of biodiversity.

<http://eol.org/info/itunesu>

REQUESTS

NOSB Question Writers Needed

The National Ocean Sciences Bowl® is looking to hire science question writers during the summer of 2014 to write questions for the 2015 competitions.

<http://nosb.org/volunteers/question-writers/>

Skype Opportunity from Sea

Susan Cullum is a Teacher at Sea with the C-IMAGE program (Center for Integrated Modeling and Analysis of Gulf Ecosystems), a consortium of thirteen institutions from four countries committed to studying the impact of the Deepwater Horizon blowout on the Gulf of Mexico ecosystem. Current cruise dates are August 6-13, 2014. She would like to Skype with any science classes, camps, or programs to help further educate students and communities about the Deepwater Horizon blowout.

Contact her at scullum@pasco.k12.fl.us if interested.

<http://adventuresatsea.blog.usf.edu/>

GRANTS AND OPPORTUNITIES

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 August 1 and November 1, 2014.

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

Atomic STEaM Photography Show Competition

The National Museum of Nuclear Science & History will host a photo art exhibit that invites members of the community to share their eye for everything that is Science, Technology, Engineering, Art and Mathematics (STEaM). The deadline for submission is August 29, 2014.

<http://www.nuclearmuseum.org/see/atomic-steam-photography-show-2014/>

Beneath the Waves Youth Making Ripples Film Competition

The aim of the Beneath the Waves Youth Making Ripples film festival and competition for K-12 students is to engage students in marine science education, and to highlight the importance of scientific research related to ocean and coastal communities. Educators and students are challenged to incorporate film into their curriculum by adopting a hands-on approach to marine science education using 21st century technology.

Students should submit short films (< 5 minutes) on any marine science topic of their choice. The deadline for submission is December 5, 2014.

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

Children's Mangrove Art Calendar Contest

Primary school children are invited to participate in The Mangrove Action Project's international annual contest. The contest aims to promote appreciation and awareness of mangrove forests, and to encourage and listen to creative voices of children living in mangrove areas. The deadline for submission is August 29, 2014.

<http://mangroveactionproject.org/childrens-calendar/>

Logo and Website Development

The Caribbean Biodiversity Fund invites eligible individuals to apply for the consultancy to develop a website and logo. The deadline for application is August 10, 2014.

http://www.cpdncgo.org/cpdc/index.php?option=com_content&view=article&id=365:caribbean-biodiversity-fund&catid=41:news&Itemid=112

NSTA New Science Teacher Academy Fellowships

NSTA fellowships offer middle and high school teachers in their second through fifth years of teaching a year-long immersion in a host of science-related activities and professional development opportunities. The deadline for application is August 22, 2014.

<http://www.nsta.org/academy/>

NSTA Teacher Awards

The National Science Teachers Association sponsors numerous awards for educators. Check the website for complete details of all the awards. The deadline for application for most is November 30, 2014.

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

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 August 31, 2014.

<http://www.patagonia.com/us/patagonia.go?assetid=2927>

Resilient Communities and Economies Special Competition

The Mississippi-Alabama Sea Grant Consortium has announced a request for proposals for one- or two-year research projects that address resilient communities and economies along the Mississippi and Alabama coast. The deadline for proposal is August 7, 2014.

<http://masgc.org/funding/RCErfp2014>

Texas State Aquarium Wildlife Care, Conservation, and Research Fund

The Texas State Aquarium is accepting applications for grants for research/conservation projects that focus on conservation issues of species and/or habitats interpreted at the aquarium. The funding is intended as seed money. The deadline for application is August 12, 2014.

<http://texasstateaquarium.org/conservation/wildlife-care-conservation-and-research-fund/>

Video Game Innovation Fellowship

Leaders on Fast Track and the Entertainment Software Association offer the ESA LOFT Video Game Innovation Fellowship for minority youth ages 16-24. Participants create a video game or application that can inspire social change in their community. The deadline for submission is August 15, 2014.

<http://www.loftfellowship.org/wp-admin/#!apply/cee5>

Weyerhaeuser Giving Fund

The Weyerhaeuser Giving Fund concentrates the majority of funding in four focus areas, including Education and Youth Development and Environmental Stewardship. Hurry – the next deadline for application is August 1, 2014.

<http://www.weyerhaeuser.com/Sustainability/Communities/CommunityInvestment/GivingFund>

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Policy and Global Affairs Fellowship – Washington, D.C.

The Christine Mirzayan Science & Technology Policy Graduate Fellowship Program is designed to engage early career individuals in the processes that inform U.S. science and technology policy. Fellows obtain skills and knowledge needed to work in science and technology policy at the federal, state, or local level. The deadline for application is September 1, 2014.

<http://sites.nationalacademies.org/pga/policyfellows/>

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

American Geophysical Union Fall Meeting

The fall AGU meeting, December 15-19, 2014 in San Francisco, California, provides an opportunity for researchers, teachers, students, and consultants to present and review the latest issues affecting all areas of Earth and space sciences. The deadline for abstract submission is August 6, 2014.

<http://fallmeeting.agu.org/2014/>

EdX - Online

EdX is governed by MIT and Harvard and offers Massive Open Online Courses in a wide variety of subjects. Participants can take edX courses at their own pace, at home or anywhere, and audit the course or earn a Certificate of Achievement. The virtual classroom is open 24/7 and everyone is accepted. Courses range from science to art to technology. Introduction to Water and Climate starts August 26, 2014. They also have a series of Professor Ask Me Anythings (AMA) through reddit – use the search function for ease of exploration

<https://www.edx.org/xseries>

George Wright Society Conference on Parks, Protected Areas, and Cultural Sites

The theme for the 2015 George Wright Society Conference is Engagement, Education, and Expectations: The Future of Parks and Protected Areas. The conference, March 29-April 2, 2015 in Oakland, California, will highlight research, management practices, and the core values that motivate the parks community. New for 2015 is a results-oriented conference framework. The deadline for submission is October 1, 2014.

<http://www.georgewright.org/gws2015>

NAI National Workshop

The theme of the 2014 National Association for Interpretation's National Workshop, November 18–22, 2014 in Denver, Colorado, is Scaling Interpretive Heights. Registration for the conference is now open.

http://www.interpnet.com/nai/Events/NAI_National_Workshop/nai_events/NAI_National_Workshop.aspx

Ocean Exploration Workshops – Various

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

Why Do We Explore?

- October 4, 2014 with University of South Florida College of Marine Science in St. Pete Beach, Florida. The deadline for registration is September 12, 2014. Contact Teresa Greely at greely@marine.usf.edu
- October 4, 2014 with Georgia Aquarium in Atlanta, Georgia. The deadline for registration is September 12, 2014. Contact Kim Morris-Zarneke at kzarneke@georgiaaquarium.org
- October 4, 2014 with Dauphin Island Sea Lab in Dauphin Island, Alabama. The deadline for registration is September 12, 2014. Contact Sara Johnson at sejohnson@disl.org
- October 25, 2014 with New England Aquarium in Boston, Massachusetts. The deadline for registration is October 3, 2014. Contact Tania Slywinskyj at tslywinskyj@neaq.org
- November 1, 2014 with Aquarium of the Pacific in Long Beach, California. The deadline for registration is October 10, 2014. Contact Staci Wong at swong@lbaop.org

How Do We Explore?

- October 4, 2014 with Birch Aquarium at Scripps Institution of Oceanography in San Diego, California. The deadline for registration is September 12, 2014. Contact Audrey Evans at eadrey@ucsd.edu
- October 18, 2014 with Seattle Aquarium in Seattle, Washington. The deadline for registration is September 26, 2014. Contact Dan Newburn at d.newburn@seattleaquarium.org

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

Science of Story Webinar - Online

NOAA's Climate Connection Webinar, Using the Science of Story to Enhance Climate Writing, August 1, 2014, will feature information on Narrative Tension, Reader Engagement, and more. The webinar will be archived for future reference; check out the extensive archives in the NWS Climate Services Seminar Series.

<https://www1.gotomeeting.com/register/916585992>

<http://www.nws.noaa.gov/om/csd/index.php?section=seminar>

ZWPA InterpNET Conference – Online

The Zoo, Wildlife Parks, and Aquaria section of the National Association for Interpretation is hosting its annual InterpNET Conference, Interpretation In The Age Of Tech, September 24, 2014. This virtual conference will explore ways in which informal learning institutions utilize technology with communities, guests, staffs, and volunteers.

<http://www.interpnet.com/Core/Events/eventdetails.aspx?iKey=ZWPA-92414&TemplateType=A>

EDUCATIONAL RESOURCES

All About Birdhouses

The folks at Cornell Lab of Ornithology continue to devise useful tools for citizen scientists. All About Birdhouses offers information about birdhouses or nest boxes for more than 50 species. And check out the new blog, Citizen Science.

<http://nestwatch.org/learn/all-about-birdhouses/>

<http://www.birds.cornell.edu/citsci/>

Alvin's Animals

Alvin's Animals from Woods Hole Oceanographic Institution offers up images of various benthic-dwelling creatures that Alvin explorers have found during their deep-sea submersions. Visitors can view items by heading such as Benthic Life, Sharks & Other Fish, and more.

<http://www.whoi.edu/oceanus/feature/alvins-animals>

Arctic Climate Connections

The folks at CIRES (Cooperative Institute for Research in Environmental Sciences) have a new education program, Arctic Climate Connections: Using Authentic Climate Data in the Classroom. This suite of activities is designed to engage high school students in climate science through an ongoing Arctic research project. Educators can use the entire curriculum or select the components best suited to their audience. All activities include student materials, a teacher's guide, and assessment ideas, along with possibilities for additional exploration.

<http://cires.colorado.edu/education/outreach/ICEE/arcticclimate/index.html>

Caribbean Climate Wire

The Small Island Developing States in the Caribbean face a host of challenges, including limited infrastructure, reliance on agriculture and tourism, and high vulnerability to natural disasters. But in recent years, climate change has superimposed another layer of risk, bringing sea level rise, flooded wetlands, higher temperatures, changes in precipitation and more intense hurricanes, and threatening coral reefs and fish stocks. The Inter Press Service News Agency looks at the wide variety of local, national, and regional initiatives in the Caribbean that offer creative solutions to these problems.

<http://www.ipsnews.net/news/projects/caribbean-climate-wire/>

Climate of Change: Interactions and Feedbacks between Water, Air, and Ice

In this module from Carleton College's InTeGrate program, students explore differences between climate change and climate variability, examine the ENSO system as a pattern in time and space, and examine glacial climate records as part of a role-playing game. The goal of the module is for students to understand the climate system as a set of interacting components complicated by feedbacks, uncertainties, and human decisions.

http://serc.carleton.edu/integrate/teaching_materials/climate_change/index.html

Climate Matters

Climate Matters is a newsletter dedicated to disseminating information on current activities in the USGS Climate Research & Development Program. The semi-annual newsletter is intended to highlight recent research findings from the program and their relevance to societal needs and issues of interest to resource managers, policy makers, and the general public. The current issue includes articles on Studying arctic sea ice ecosystem change, Sea level rise and nutrient cycling in coastal wetlands, and more.

http://www.usgs.gov/climate_landuse/clubrd/newsletter/default.asp

How to Talk to Fish

Digg reveals some secrets of fish communication, along with original animations and a rap video.

<http://digg.com/2014/how-to-talk-to-fish>

Hurricane Development

Climate.gov offers a review of the reasons for a calm 2013 hurricane season, and factors that go into hurricane development for the United States.

<http://www.climate.gov/news-features/featured-images/what-happened-last-year%E2%80%99s-atlantic-hurricane-season>

Leaf Pack Network

The Leaf Pack Network is a network of teachers and students investigating their local stream ecosystems. Participants create an artificial leaf pack and place it in a stream for three to four weeks then collect and examine the packs in the classroom and share their data. Students can discover aquatic insects that indicate stream health and learn more about the connection between trees and streams. Check out the links in the Learning Center, look into the resources, and more.

<http://www.stroudcenter.org/lpn/>

MPA Community News

The National Marine Protected Areas Center offers a variety of sources to keep up to date with MPA news, including blogs, a newsletter, and more. Subscribe to the newsletter, check out their facebook page, and keep up with the latest partnerships and tools.

<http://openchannels.org/community/national-marine-protected-areas-center>

<http://marineprotectedareas.noaa.gov/subscription/>

<https://www.facebook.com/usmarineprotectiongov>

National Climate Assessment Videos

The Story Group has produced a series of short (2-4 min) videos to accompany the National Climate Assessments. You can watch all nine videos back to back, or select individual chapters, including water, oceans, and more from the right side of the page.

https://www.youtube.com/watch?v=VC9T50WL8rM&list=PLYmuc_StVH6Fz4Ulgpu5gRhTrpGSfA6JI&index=1

Orbiting Carbon Observatory

The Orbiting Carbon Observatory-2 will map carbon dioxide in Earth's atmosphere. NASA Wavelength has created a list of educational resources on this greenhouse gas, along with mission background information and links to articles and activities for students.

http://www.nasa.gov/mission_pages/oco2/#.U8v7x7EzPo4

Sharks

Shark Week is coming on August 10, 2014 to the Discovery channel, and you need to be ready with the real facts. Check out Upwell's Sharkinar, Kidzone's Sharks, Shark Guardian's 100 Awesome Shark Facts, and Nauticus' shark resources. And don't forget the lighter side, at Sherman's Lagoon.

<http://www.discovery.com/tv-shows/shark-week/#/>
<http://us5.campaign-archive2.com/?u=c880da0c24096213459a64f11&id=24d19aaf24>
<http://www.kidzone.ws/sharks/>
<http://www.sharkguardian.org/shark-facts-top-100-shark-guardian/>
<http://www.nauticus.org/education/online-teacher-resources>
<http://shermanslagoon.com/>

Spanish Language Marine Science Resources

A multi-year effort to promote more marine science education at the high school and college level has now been completed and offers full course materials, from homework to labs and assessments, in English and Spanish, spearheaded by teacher Mark Friedman and hosted by Pearson Publishers. The Marine Biology course, available online, correlates to NGSS and Common Core standards. Miller and Levine, authors of a biology book with material on marine science and evolution, will also link their materials to the Pearson site of bilingual marine science resources; check out the online book on their website. (Pearson suggests that the long ocas weblink will be useful for international readers).

<http://ocas.pearsonschool.com/ph/cd/0-13-166433-6/Resources/index.htm>
<http://ocas.pearsonschool.com/ph/cd/0-13-166433-6/Resources/index.htm?token=53616c7465645f5f986cd037d810d5d3ffbd60f06d0f9ab88810f1229be7f6c9646106ae1fd7356b77b4436a53666d9e120f486e6b9311e3f1b22b0c24edf875ae7e4ca42477b3f8>
<http://millerandlevine.com/marine/>

SPLASSH

SPLASSH (Student Programs Like Aquatic Science Sampling Headquarters) is a socially driven network that crowdsources the condition of our waterways. It serves as a platform where students, teachers, researchers, and others can post their water projects, connect with other water investigators, and more.

<http://splashdata.meteor.com/>

State of the Climate in 2013

NOAA and the American Meteorological Society released the 2013 State of the Climate report. The report uses dozens of climate indicators to track patterns, changes, and trends of the global climate system. It also details cases of unusual and extreme regional events, such as Super Typhoon Haiyan. Topics include Ocean salinity, Stratospheric temperature, and more.

<http://www.climate.gov/news-features/understanding-climate/state-climate-2013-highlights>

Teaching in the Field

This website from the National Association of Geoscience Teachers helps promote models for effective educational field trips, along with an archive of field guides for future reference.

http://nagt.org/nagt/teaching_resources/field/index.html

Virtual Squid Dissection

This page from The Biology Corner can be used as a substitute for a hands-on squid dissection. Students without access to squid, or who were absent the day of the dissection, can view photos of the squid and complete the lab guide.

http://www.biologycorner.com/worksheets/squid_virtual.html

Water-CAT

The Florida Water Resources Monitoring Catalog is a searchable database of Florida water monitoring activity that answers "who, what, where, when and why?" for water resource managers, researchers, and others. The website allows a search by a wide variety of variables, and an interactive map allows a geographical search.

<http://water-cat.usf.edu/>

INITIATIVES, JOURNALS, and MORE**Protected Planet News**

IUCN's Protected Planet offers a monthly newsletter. The July newsletter, which will be posted online soon, focuses on marine issues. The June 2014 issue focused on World Heritage and Oceania, while previous ones explored Europe and wetlands, Meso America, and more.

http://www.iucn.org/about/work/programmes/gpap_home/gpap_news/wcpa_gpapnewsletters/