NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION INFORMATION EXCHANGE FOR MARINE EDUCATORS AUGUST 2013

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 <u>http://mpa.gov/resources/education/#exchange</u>.

Notable References

Indigenous Peoples and Marine Protected Areas

The MPA Center's July 2013 issue of MPA Connections focuses on tribal and indigenous peoples and marine protected areas. Articles include Indigenous Cultural Landscapes, the Voyage of the H k le'a Voyaging Canoe, and more. http://marineprotectedareas.noaa.gov/pdf/helpfulresources/connections/connections_jul13.pdf

National Marine Sanctuary System Condition Report

The National Marine Sanctuary System Condition Report 2013 describes priority issues and challenges facing the 14 sites within the system and discusses actions to address them. Both natural and archaeological resource concerns are identified in the report, including marine debris entanglement, loss of biodiversity, invasive species, and more. http://sanctuaries.noaa.gov/library/pdfs/ncr2013.pdf

What Will Adaptation Cost?

The report, What Will Adaptation Cost? An Economic Framework for Coastal Community Infrastructure, provides a framework that community leaders and planners can use to make more economically informed decisions about adapting to sea level rise and storm flooding. The four-step framework can be used to perform an assessment of costs and benefits of different adaptation approaches across a community, or to focus in on select infrastructure. The report also discusses the expertise needed at each step in the process.

http://www.csc.noaa.gov/digitalcoast/publications/adaptation

PROGRAM OF THE MONTH

R.J. Dunlap Marine Conservation Program Education

The mission of R.J. Dunlap Marine Conservation Program is to foster STEM literacy and advance marine conservation by conducting cutting edge scientific research and involve graduate, undergraduate, and high school students through hands-on field and virtual learning experiences. The website includes virtual learning resources and high school curriculum.

http://rjd.miami.edu/education

WEBSITE OF THE MONTH

Sea Turtle Conservancy

The mission of the nonprofit Sea Turtle Conservancy, formerly known as the Caribbean Conservation Corporation, is to ensure the survival of sea turtles within the Caribbean, Atlantic, and Pacific through research, education, training, advocacy, and protection of the natural habitats upon which they depend. The website offers many resources for educators, including background information, turtle tracking, cool stuff for kids, an educators' guide and lessons, and much more. Check out the downloadable posters, volunteer opportunities, and more.

http://www.conserveturtles.org/

GRANTS AND OPPORTUNITIES

ABC Summer of Service Awards

The ABC Summer of Service Awards recognize young people who are creating positive change through volunteering and service. Applicants, ages 5-18, must live in or around ABC-affiliate communities and must have implemented their service project; see the website for details. The deadline for application is September 1, 2013. http://www.ysa.org/ABC

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

The Ben & Jerry's Foundation offers competitive grants to not-for-profit, grassroots community organizations working to bring about progressive social change by addressing the underlying conditions of societal and environmental problems. The next deadline for application is September 13, 2013

http://www.benandjerrysfoundation.org/the-grassroots-organizing-for-social-changeprogram.html

Captain Planet Foundation Grants

The Captain Planet Foundation provides grants to school and community groups to support hands-on environmental projects for youth in grades K-12. The objective of the foundation is to encourage innovative programs that empower youth to work individually and collectively to solve environmental problems in their neighborhoods and communities. The next deadline for application is September 30, 2013. http://captainplanetfoundation.org/apply-for-grants/

The Caribbean Islands Biodiversity Hotspot Critical Ecosystem Partnership Fund

The Caribbean Natural Resources Institute, in its role as the Regional Implementation Team for the Critical Ecosystem Partnership Fund (CEPF) in the Caribbean Islands Biodiversity Hotspot, announces the 2013 call for small and large grant proposals under the CEPF Caribbean Islands initiative. The call for proposals will open August 15, 2013, at which time all details will be posted on the website. The deadline for submission is September 30, 2013.

http://www.cepf.net/Pages/default.aspx

Environmental Education Mini-Grant Program - Southeast

The Office of Environmental Education of Florida's Department of Environmental Protection offers the Environmental Education Mini-grant Program for regional entities. Projects should promote a strong partnership between formal educators and non-formal educators from public conservation lands that can lead to a sustained environmental education program with meaningful educational experiences in the environment. A conference call for applicants will be held August 16, 2013 to answer questions regarding the application. The deadline for application is August 30, 2013. http://www.dep.state.fl.us/secretary/ed/grants.htm

Faces of Biology Photo Contest

The Faces of Biology: Broader Impacts Photo Contest seeks photographs which demonstrate how biological research is transforming our society and the world. Examples include, but are not limited to, informing natural resources management, addressing climate change, improving science education, and more. The deadline for entry is September 30, 2013.

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

Lowe's Toolbox for Education Grants

The Lowe's Toolbox for Education offers grants to schools and parent/teacher groups. School projects should encourage parent involvement and build stronger community ties; this grant cycle will focus on basic necessities. The next deadline for application is October 15, 2013.

http://www.toolboxforeducation.com/

North Coast MPA Baseline Program RFP

The North Coast Marine Protected Areas Baseline Program Request for Proposals is a collaborative effort among the California Ocean Protection Council, the MPA Monitoring Enterprise, and partners. Projects should offer a baseline characterization and assessment of initial socioeconomic and ecological changes. The deadline for submission is August 14, 2013.

http://www.csgc.ucsd.edu/FUNDING/APPLYING/NorthCoastMPA2014-15.html

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 1, 2013. http://www.nsta.org/academy/

Recycle-Bowl

Keep America Beautiful offers the 2013 Recycle-Bowl, a competition for elementary, middle, and high schools which runs October 21-November 15, 2013. The deadline for registration is October 15, 2013.

http://recycle-bowl.org/

Spirit of Innovation Challenge

The Conrad Foundation challenges youth ages 13-18 from around the globe to Get Their Genius On to develop innovative products to help solve global and local problems while supporting global sustainability. The challenge matches participants with scientists, engineers, and entrepreneurs as mentors to assist with advanced academic and business principles. The deadline for entry is October 24, 2013. http://conradawards.org/pages/soic-challenge

Toshiba K-5 Math & Science Grants

K-5 grade teachers are invited to apply for a Toshiba America Foundation grant to help bring an innovative hands-on project into their classrooms. The deadline for entry is October 1, 2013.

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

Zayed Future Energy Prize

The Zayed Future Energy Prize celebrates achievements that reflect impact, innovation, long-term vision, and leadership in renewable energy and sustainability. Categories include Large Corporation, SME, NGO, or Global High School, and Lifetime Achievement. The deadline for application is August 5, 2013. https://www.zayedfutureenergyprize.com/en/

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Marine Education Fellowship

Ecology Project International offers Marine Education Fellowships, 8-day ecologyfocused fellowships in Baja, Mexico and Costa Rica, in March 2014. All expenses for the fellowship are covered except airfare and a program fee. The deadline for application is September 15, 2013.

http://www.ecologyproject.org/promo/fellowship

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

American Geophysical Union Fall Meeting

The fall AGU meeting, December 9-13, 2013 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. If you are interested in submitting an abstract about current climate change or global change education and

outreach projects that connect people nationally or across borders internationally, please submit an abstract to ED011, Literacy: International Climate Education Activities, no later than August 6, 2013. Check out other topics through the comprehensive Session Search function.

https://fallmeeting.agu.org/2013/scientific-program/abstract-submission-policies/

Cornell Ornithology Lab Distance Learning - Online

The Cornell Lab of Ornithology offers a variety of distance learning opportunities, including a 5-week online course; a self-paced college-level study of bird biology; live one-hour webinars; and more.

http://www.birds.cornell.edu/courses/home/

DataStreme Courses - Various

The American Meteorological Society's DataStreme Project is an expenses-paid professional development program for in-service K-12 educators. Graduate-level courses in meteorology, oceanography, and climate science are offered each fall and spring semester by Local Implementation Teams across the country. To register, please contact your nearest LIT leader. Fall courses start with a preview September 2, 2013. http://www.ametsoc.org/amsedu/ECS/index.html

GAME 2013 Annual Conference - Georgia

The theme of the Georgia Association of Marine Educators (GAME) annual Fall Conference, September 27-28, 2013 on Jekyll Island, Georgia, is Coastal Collaborations: Working Together for Marine Education. The conference will focus on how members are using limited-to-no funds for projects and programs, forging new partnerships, and utilizing networks and collaborations. http://gamarineeducation.org/?g=AnnualConference

GCFI Conference

The theme for the 66th Gulf and Caribbean Fisheries Institute Conference, November 4-8, 2013 in Corpus Christi, Texas, is Natural and Artificial Reef Fisheries, Research, and Conservation. The focus highlights the importance of this segment of fisheries, research, and conservation in the Gulf of Mexico and Caribbean. The deadline for abstract submission is September 1, 2013.

http://www.gcfi.org/Conferences/66th/CorpusChristi en.html

International Conference on Island Biology

An International Conference on Island Biology will be held July 7-11, 2013 in Honolulu, Hawai'i. The conference will focus on evolution, ecology, biogeography, and conservation. This will be the first in a regular series of meetings to be held on different islands around the world every four years. https://sites.google.com/a/hawaii.edu/islandbiologv2014/

NAAEE Conference

The North American Association for Environmental Education will hold the 42nd Annual Conference and 10th Annual Research Symposium, October 9-12, 2013 in Baltimore, Maryland. The conference theme is Rising Tides: Riding the Waves of Change. Earlybird registration ends August 30, 2013; the deadline for exhibits and ads is August 5.2013.

http://www.naaee.net/conference

Ocean Exploration Workshops – Various

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

How Do We Explore?

- August 9, 2013 with Mystic Aquarium in Mystic, Connecticut. The deadline for application has passed; call to see if space is still available. Contact Zachary Zeilman at (860) 572-5955
- October 11, 2013 with Hatfield Marine Science Center in Newport, Oregon. The deadline for application is September 20, 2013. Contact Tracy Crews at tracy.crews@oregonstate.edu

Why Do We Explore?

- September 21, 2013 with Dauphin Island Sea Lab on Dauphin Island, Alabama. The deadline for application is August 30, 2013. Contact Sara Johnson at <u>sejohnson@disl.org</u>
- September 28, 2013 with National Aquarium in Baltimore, Maryland. The deadline for application is September 6, 2013. Contact David Christopher at <u>dchristopher@aqua.org</u>
- October 5, 2013 with Nauticus, the National Maritime Center in Norfolk, Virginia. The deadline for application is September 13, 2013. Contact Tammie Weitzman at <u>Tammie.weitzmann@norfolk.gov</u>
- October 12, 2013 with Audubon Aquarium of the Americas in New Orleans, Louisiana. The deadline for application is September 20, 2013. Contact Tricia LeBlanc at <u>tleblanc@AudubonInstitute.org</u>
- October 19, 2013 with Georgia Aquarium in Atlanta, Georgia. The deadline for application is September 27, 2013. Contact Kim Morris-Zarneke at kzarneke@georgiaaquarium.org
- October 19, 2013 with New England Aquarium in Boston, Massachusetts. The deadline for application is September 27, 2013. Contact Tania Slywynskyj at tslywynskyj@neaq.org

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

Shedd Aquarium's Digital Learning - Online

Shedd Aquarium is piloting an online professional development badging program. The program will explore topics surrounding Great Lakes science along with ideas for classroom connections and opportunities to share with other teachers. Participants complete a series of mini-lessons and activities in environmental literacy, science literacy, and 21st century skills.

http://shedd.badgestack.net/

Smithsonian-Mason School of Conservation Courses - Virginia

The Smithsonian-Mason School of Conservation offers courses focused on training in different aspects of biodiversity conservation in Front Royal, Virginia. Upcoming courses include the Ecology and Conservation of Migratory Birds, Spatial Ecology, Geospatial Analysis and Remote Sensing for Conservation, and more. http://smconservation.gmu.edu/

EDUCATIONAL RESOURCES

Animals Inc

The Association of Zoos & Aquariums has launched this website offering news, photos, videos, and more. Check out the live cams featuring otters, a kelp forest, and more. <u>http://animalsinc.net/</u>

BioInteractive

The Howard Hughes Medical Institute Cool Science portal has been retired; materials are now linked from this website, including interactive teaching tools, teacher's guides, animations, and more. Topics include biodiversity, environmental science, careers, and much more. Materials include Earthview, lecture series, an AP Biology Guide, the HHMI bulletin and archives, and more.

http://www.hhmi.org/educational-materials

Boating Materials

NOAA's Office of Coast Survey offers a one-stop-shop website with materials for boaters to increase their boating safety and enjoyment. Downloadable materials include BookletCharts, educational activities, the Coast Pilot, and more. http://noaacoastsurvey.wordpress.com/2013/07/19/free-noaa-nautical-products-for-boaters/

Call Me Coral

This short musical video addresses coral's symbiosis with algae and parrotfish, as well as some of the issues facing coral survival. http://www.youtube.com/watch?y=35ilnGM9EnU&feature=em-share video user

Community EE

This website has been set up to support Community EE, the process of intentional relationship development with communities with the goal of environmental awareness and action through the lens of community health and neighborhood wellness. They seek feedback on the website to help develop a listing of best practices, needs, and resources for building sustainable relationships with communities. The third draft of the Community EE Guidelines is also available for review and comment. http://communityee.net/

Coral Ecosystem Connectivity Expedition 2013: Pulley Ridge to the Florida Keys

From August 13-27, 2013, ocean explorers will be investigating relationships between shallow water coral reefs and deeper, twilight zone (mesophotic) coral reef ecosystems of the southwest coast of Florida. Follow along with the expedition on the Ocean Explorer website, to be posted prior to the expedition launch. **NOTE**: Join NOAA's Office of Ocean Exploration and Research for a free webinar, August 8, 2013, which will introduce educational resources developed for the ocean exploration of the coral reef ecosystems off of southwest Florida.

https://www2.gotomeeting.com/register/407548522 http://oceanexplorer.noaa.gov/explorations/explorations.html

Designing a Resilient Community

With these project resources, students participate in project-based learning over several days as they assess their community's ability to respond to crises that threaten both natural and human systems. Then they develop ideas for redesigning their community to

be more resilient. Downloadable materials include instructions and discussion questions, links to resources about resilient communities, and more. http://www.ecoliteracy.org/downloads/designing-resilient-community

Digital Explorer Collections

Digital Explorer and the insurance group, Catlin Group Ltd., have created a series of teaching resources that utilize content collected by Catlin's sponsorship of ocean science and exploration. Resources include Frozen Oceans, Coral Oceans, and Ocean Experiments. Check these out.

http://oceans.digitalexplorer.com/

Earth Science Week 2013 Toolkits

The American Geosciences Institute Earth Science Week 2013 Toolkit contains educational materials that support this year's theme, *Mapping Our World*. Earth Science Week 2013 will be celebrated October 13-19, 2013. Plan an event, check out the resources, sign up for the newsletter, and more in preparation for this yearly educational celebration.

http://www.earthsciweek.org/

Environmental Posters

The Loxahatchee River District offers a series of environmental poster series, including Lionfish, Coral Reefs, Seagrasses, and more. The posters can be downloaded from the website.

http://www.loxahatcheeriver.org/resources.php

EOL Memory Games

Check out the Encyclopedia of Life Species Matching Games. Users first match pictures of different highlighted species, and then connect them with their names. Play Barataria, Invertebrates, Amanita, and more. A fun place to spend time while learning something about each species.

http://fieldguides.eol.org/memory/index.php

EPA Student Resources

The EPA student website offers links to many useful resources for students and teachers. Categories include games and quizzes, teacher resources, homework help, and more.

http://www.epa.gov/students/

Field Museum: Insects, Arachnids and Myriapods Collections

The Field Museum in Chicago has over 4.1 million preserved insects in its collection along with 8.3 million specimens preserved in alcohol or on microscopic slides. On this website, visitors can search these vast holdings, which are divided into six separate areas: all arthropods, ants, arachnids & myriapoda, bulk arthropod samples, coleoptera, lepidoptera, and vertebrate ectoparasites. The museum also hosts collections of fishes and more – check out the full website.

http://fieldmuseum.org/explore/department/zoology/insects/collections

FishAlerts!

Great Outdoors Mobile offers this app for iPhone and Android users which informs recreational anglers about the locations and regulations of MPAs throughout the United States.

http://fishalerts.com/

Frontier Scientists

The Frontier Scientists website allows visitors to observe breaking scientific news from leading Arctic scientists in archaeology, marine biology, ecology, and more in order to excite the general public about ongoing science in Alaska and the Arctic. Check out the extensive list of videos covering archaeology, climate change, and much more. http://frontierscientists.com/

Gather: The Art and Science of Effective Convening

The Rockefeller Foundation, along with the Monitor Institute and Monitor Deloitte, provides this guidebook for the purpose of assisting groups who are in the beginning stages of planning a convening, an event which asks groups of people to come together for a short time to accomplish a shared goal for an organization or for the greater good. The downloadable guidebook outlines the detailed thought processes and planning that should be done before deciding to organize such an event, along with how to organize one.

http://www.rockefellerfoundation.org/bellagio-center/gather-art-science-effective

GeoTech

The GeoTech Center is a collaborative effort between colleges, universities, and industry to expand the geospatial workforce. The resources website offers link to best practices, textbooks, curriculum, and more. Check out the Earthquake Hazards Module, Environmental & Culture Module, and more.

http://www.geotechcenter.org/Resources/Resource-Center

Island Ecosystem Game

The Western Pacific Regional Fishery Management Council is one of eight regional fishery management councils. Their Education Corner offers the online Island Ecosystem game, focusing on fish habitat and targeting grades 5 to 8. Be sure to check out the rest of the resources while on the website.

http://www.wpcouncil.org/island-ecosystem-game/

Knight Science Journalism Program at MIT

Based at MIT, the Knight Science Journalism program offers fellowships and workshops to journalists seeking to increase their understanding of science, technology, medicine, and related fields. This website offers science journalism. The Tracker section offers peer review within science journalism via daily commentary on items dealing with health and medicine reporting, environmental issues, and related matters. http://ksi.mit.edu/

Lessons learned from Sharknado

HK Strategies offers this blog post dissecting why Sharknado became a social media phenomenon. A useful posting if you are interested in creating your own social media stir about a subject of environmental urgency.

http://www.hkstrategies.com/Lessons_Learned_from_Sharknado

MIT OpenCourseWare Global Warming Science

MIT's OpenCourseWare offers free college-level curricula online to the public. This course looks at the science behind global warming, and was originally offered to

undergraduate students in the spring of 2012. Content includes lecture notes, assignments, and student projects.

http://ocw.mit.edu/courses/earth-atmospheric-and-planetary-sciences/12-340-globalwarming-science-spring-2012/index.htm

Nai'a Guide

The Nai'a Guide is a free mobile iPad app featuring Hawaiian spinner dolphin ecology and conservation. Within the app, you can watch a video of dolphins herding their prey, listen to spinner dolphin whistles, and more.

http://www.naiaguide.org/

NOVA Labs

NOVA Labs is a new digital platform where students explore the scientific process by visualizing, analyzing, and sharing the same data that scientists use. The website currently has three labs available about clouds, energy, and the sun lab, and more will be added in the future.

http://www.pbs.org/wgbh/nova/labs/

Pedagogy in Action

The Science Education Resource Center (SERC) at Carleton College offers many classroom resources, including lesson plans on science, technology, engineering, mathematics, and more. This module looks at the undergraduate research experience. Instructors looking to more deeply engage their undergrads are using collaborative research projects to advance student knowledge and allow students hands-on, experiential learning. This website provides information about this teaching method, several examples of classroom projects, and a bibliography of references and resources on undergraduate research.

http://serc.carleton.edu/sp/librarv/studentresearch/index.html

Shark Ed at NGOpolis

Shark Ed is a new group on the NGOpolis website whose focus is on education and awareness for shark conservation. It offers an online space for people and organizations working on education and public awareness for shark conservation to share resources, coordinate activities, and more. Check out the links to articles on thresher shark tails, sawfish saws, and more,

http://ngopolis.com/groups/profile/2477/shark-ed

Shark Hangout

Discovery Channel will be hosting an underwater Google Hangout for the 26th anniversary of Shark Week from the National Aquarium in Baltimore, Sunday, August 4, 2013 at 11 p.m. ET. This will be an opportunity for shark experts, fish junkies, and others to engage in a live discussion about sharks and will be integrated into the premiere episode of Discovery's Shark After Dark.

http://mashable.com/2013/07/25/shark-tank-google-hangout/

Shark Week

One World One Ocean (OWOO) is teaming up with Discovery in an effort to use Shark Week as the ultimate teaching moment about why sharks matter. To do this, OWOO will be harnessing the power of social communities and new original content to educate audiences about the positive benefits sharks provide to the planet and humanity and the

threats currently facing this keystone species and its habitat. Watch shark week starting August 4, 2013.

http://dsc.discovery.com/tv-shows/shark-week http://www.oneworldoneocean.com/

USGS Education Resources

The United States Geological Survey offers a myriad of resources for teachers and students. Discover curricular ideas, scientific data, maps, and other resources to support biology, geology, hydrology, climate change, and much more. The website has been updated to make resources even easier to find. Check out the education resources by grade level (K-6, 7-12, undergraduate). review archived online lectures, download maps, and much more.

http://education.usgs.gov/index.html

INITIATIVES, JOURNALS, and MORE

Chris Jordan Photographic Arts

Chris Jordan depicts mass consumption in his artwork. He makes large-format, longzoom artwork from data about the items we make and consume every day. He takes factoids and gives them visual life, such as "60,000 plastic bags, the number used in the US every five seconds". Check out Running the Numbers; Midway: Message from the Gyre; and much more.

http://www.chrisjordan.com/gallery/rtn/#cig-butts

Environmental Education Research Bulletins

Environmental Education Research Bulletins aim to help bridge the gap between research and practice with an emphasis on field science, stewardship behavior, residential settings, and more. The bulletin can help educators keep up with current EE research.

http://eelinked.naaee.net/n/eeresearch/posts/Research-Bulletins-Help-Bridge-Researchto-Practice-Gap

Parks & Recreation Blue Issue

The *Parks & Recreation* Blue Issue, the July 2013 issue of the National Park Service's *Parks & Recreation* magazine, focuses on the wet side. Articles include Water is Life to Parks, Take it to the Bank, For the Love of Trails, and more. You can download an e-magazine or connect to individual articles.

http://www.parksandrecreation.org/ http://digital.parksandrecreation.org/

REEF Survey Data Entry Program

The free REEF Survey Data Entry Program allows REEF volunteers to enter survey data on a computer even if an Internet connection is not always available. As surveys are completed, they are marked for upload. When an Internet connection is available, the completed surveys can be uploaded all at once.

http://www.reef.org/dataentryprogram