

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

JULY 2010

This update is funded by the National Marine Sanctuaries Foundation in partnership with NOAA's Ocean Exploration and Research Program, with additional support from NOAA's Office of Education and 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, edinfo at FREE, 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.

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Collected archives of the information presented in past newsletters are available at <http://mpa.gov/resources/education/#exchange>. Contact the editor directly at phyllis.dermer@noaa.gov, or by phone at (865) 932-5074, to discuss further enhancements or to contribute information for future issues.

Notable References

Dead Planet, Living Planet

The report, *Dead planet, living planet: Biodiversity and ecosystem restoration for sustainable development*, is a contribution to the UN's International Year of Biodiversity and is a complement to the UNEP-hosted Economics of Ecosystems and Biodiversity which is bringing visibility to the wealth of the world's natural capital. The report documents successful case studies referencing thousands of restoration projects ranging from deserts and rainforests to rivers and coasts. The report provides recommendations on how to avoid pitfalls and how to minimize risks to ensure successful restoration. It is downloadable from the website and can be read online as an interactive e-book.

<http://www.grida.no/publications/rr/dead-planet/>

Important Bird Areas Americas

The Americas Important Bird Area book provides a concise summary of 2,345 priority sites for biodiversity conservation in 40 national and overseas territory chapters. It may be downloaded from the website.

http://www.birdlife.org/action/science/sites/american_ibas/americas-ibas-downloads.html

Ocean Acidification: A National Strategy

Requested by Congress, this report, *Ocean Acidification: A National Strategy to Meet the Challenges of a Changing Ocean*, reviews the current state of knowledge, identifies gaps in understanding, and provides scientific advice to help guide the national ocean acidification research program. The report can be read online on the National Academies Press website.

http://dels.nas.edu/Report/report/12904?utm_medium=email&utm_source=The%20National%20Academies&utm_campaign=Aetos-Report_v1

http://www.nap.edu/catalog.php?record_id=12904

PROGRAM OF THE MONTH

Nautilus Live

You can experience the next generation of deep ocean exploration from your desktop. With the opening of the Nautilus Live Theater and launch of the Nautilus Live website, visitors can virtually join Sea Research Foundation's Dr. Robert Ballard and his team aboard his new ship of exploration, the *E/V Nautilus*. The current expedition will visit the Black Sea and Aegean Sea. Scientists will map the sea floor, study underwater volcanoes, investigate unusual life forms, explore shipwrecks, and more.

<http://nautiluslive.org/>

CONFERENCE OF THE MONTH

NMEA Annual Conference

NMEA 2010: From the Mountains to the Sea will offer something for everyone through speakers, concurrent sessions, and evening events for networking. The Tennessee Educators of Aquatic and Marine Science (TEAMS) invites you to Gatlinburg, Tennessee, July 19-23, 2010 at the foothills of the great Smoky Mountains. Visit these ancient mountains thrust up underwater by the collision of two super continents and worn down through the eons by weather, water, and time. Check out the great presentations; enjoy an evening at Ripley's Aquarium of the Smokies; and have a great time looking at fossils and gardens, tubing down rivers, or fishing for trout with the field trips.

- Oil Spill Special Event Session: Dr. Jessi Kastler will moderate a Special Event Session to provide information about the spill. Providing Credible Science Outreach Regarding the Gulf of Mexico Oil Spill - A Discussion – July 22, 12:45-1:30pm
- Ocean Exploration: NOAA Office of Ocean Exploration and Research staff will highlight the education vision of the NOAA ship *Okeanos Explorer*. The reasons for ocean exploration and the technologies used in exploring will be discussed, along with the professional development opportunities NOAA OER is currently offering to educators. Hands-on activities from the *Okeanos Explorer* Materials

Collection will be presented. America's Ship for Ocean Exploration – July 21, 1:45-2:45pm

- Coastal Storms: Chris Petrone from the Bridge explores coastal storms using ocean observing system data. This activity was featured on the COSEE-NOW Ocean Gazing podcast CD-ROM, which will also be discussed and distributed. Satellites, Sounds & Storms: Using satellite data and podcasts to study coastal storms - July 21, 2:15-3:15pm
- Sea Level Rise: Lisa Ayers Lawrence from the Bridge will highlight a classroom-ready activity based on actual ocean science data focusing on sea level rise, the implications it has already had, and how it will affect people in the future. Sea Level Trends: A Bridge/EARTH Classroom Activity - July 20, 3-4pm

<http://www.nmeaweb.org/gatlinburg2010/>

DEEPWATER HORIZON OIL SPILL WEBSITES

Alaska Oil Spill Curriculum

An oil spill curriculum was developed for the Exxon Valdez oil spill. It is available online.

<http://www.pwsrcac.org/outreach/education.html>

Bridge Blog on Oil Spill

The Bridge, NMEA, and Sea Grant have set up a blog to allow in-depth discussion of the Deepwater Horizon Oil Spill. The blogs include links to information from other sources.

<http://bridge.blogs.wm.edu/oil-spill/>

Deepwater Horizon Response – Latest News

This website offers updates on the status of NOAA's response to the Deepwater Horizon incident. Explore the links at the top of the page for fact sheets, NOAA roles, and visuals.

http://response.restoration.noaa.gov/dwh.php?entry_id=809

Deepwater Horizon Incident

Many offices within NOAA's National Ocean Service are contributing existing expertise to response efforts for the Deepwater Horizon Oil Spill. This website offers background information and links to websites about this incident and oil spills in general.

<http://oceanservice.noaa.gov/deepwaterhorizon/>

Deepwater Horizon Oil Spill

The Encyclopedia of Earth offers a webpage with a comprehensive overview of the spill, from the ecological concerns to the government response. In addition, the sources for the information are available and offer active links.

http://www.eoearth.org/article/Deepwater_Horizon_oil_spill

DeepWater Horizon Oil Spill Portal

Rutgers University Coastal Ocean Observation Lab is working with partners from federal agencies, companies, universities, and non-profits to develop a portal that consolidates many data streams to help response efforts for the Deepwater Horizon Oil Spill. The portal offers a blog, real-time IOOS glider positioning and links to visualization web pages, links to other response sites, and much more.

<http://rucool.marine.rutgers.edu/deepwater/>

EPA Response to BP Spill in the Gulf of Mexico

This website from the EPA offers links to information about the EPA's response to the BP spill in the Gulf of Mexico, including data on air and water sampling, dispersants, waste management, and more.

<http://www.epa.gov/bpspill/>

GeoPlatform

This newly launched website, produced by NOAA, Department of the Interior, EPA and the U.S. Coast Guard, offers map-based real-time spill response information, with timely, accurate information about local shoreline areas impacted by oil. The website integrates the latest data about the oil spill's trajectory with fishery closures, wildlife data, and place-based Gulf Coast resources into an interactive map.

<http://www.geoplatform.gov/gulfresponse/>

Gulf of Mexico Oil Spill 2010

The Encyclopedia of Life has an oil spill resource page links to Gulf of Mexico Biodiversity (species and habitats) and Information About the Oil Spill and its Effects (government and non-government websites, news and blogs, videos, and books and scientific articles).

http://www.eol.org/content/page/oil_spill_2010

Oil on the Water: The Physics of Oil Spills

This interactive feature on MSNBC's website provides an overview of the physics behind an oil spill. The feature illustrates the physical and chemical processes, known as weathering, that change the oil's properties and behavior after it is spilled into the ocean.

http://www.msnbc.msn.com/id/37517080/ns/disaster_in_the_gulf#BPs

Resources for Teaching About Oil Spills

Windows to the Universe offers links to resources for teaching about oil spills, including Mixing Oil and Water from The Why Files, Bird Baths from National Geographic, and more.

http://www.windows2universe.org/teacher_resources/main/teach_oil_spill.html

MESSAGE FROM THE BRIDGE

Bridge Data Analysis Teaching Activities

Bridge-authored Data Analysis Teaching Activities (DATAs) utilize real online scientific data from research projects all over the country. They present data in an organized, controlled format, which allows for easier analysis and comprehension. By working with real data, students better understand basic scientific concepts and learn about the issues most prevalent in today's lakes, rivers and oceans. All DATAs are aligned with National Science Education Standards and include an introduction that sets up the purpose of the research/data followed by an online data set and directions on how to analyze them. Most DATAs incorporate graphing by hand or Excel, basic math and statistics, and critical thinking skills via discussion questions. Currently, the DATA series contains over 65 activities in the following disciplines: biology; human activities; ecology; physics; chemistry; climate; and geology.

The Bridge will be exhibiting at NMEA, so be sure to visit them in the exhibit hall!

<http://www2.vims.edu/bridge/search/archives.cfm>

REQUESTS

Ask Voyager

Scripps Institution of Oceanography at UC San Diego is inviting questions from K-12 students for the next few issues of the magazine, *explorations*. The questions selected will relate to each issue's feature; upcoming issues will cover how scientists are creating medicines from compounds found in the oceans and a special issue focused on the impact of the Gulf oil spill. Questions on these topics will be put to the scientists taking part in this research. Off-topic questions may be archived for future issues.

http://explorations.ucsd.edu/Voyager/Voyager_QA/Submit/

Climate Literacy & Energy Awareness Network (CLEAN) Pathway Project Survey

Inverness Research, a national research and evaluation group, is managing a project to identify the needs and best practices of educators related to climate science and energy, and is assembling a consultant network of 100-200 teachers and instructors of grades 6-16 to inform the project and gauge its reach and utility over time. Participants in this consultant network should be representative of teachers and instructors nationwide (by geographic location, subjects taught, experience levels, etc.) who have an interest in teaching about climate science and energy awareness. The study will last approximately three years. Whether you are interested in participating in the consultant network or not, they are asking educators to complete a brief survey. There is also a call for teaching materials on the website.

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

<http://www.surveymonkey.com/s/GWZYGQ3>

Field Guide Feedback Request

The Encyclopedia of Life is looking for your feedback and ideas on this new tool that will enable anyone to build a custom field guide. Check out the prototype field guides and contribute to the design process by completing the short survey (the link to the survey is at the right of the page).

<http://education.eol.org/ideas/tools/fieldguide>

Science Education Field Trip Survey

Erika Poarch is a graduate student at Louisiana State University, interested in measuring learning outcomes from science education field trips. She has posted a short survey that elicits information regarding informal science education field trips, applicable to both classroom teachers and informal educators. Please consider sharing your experiences; responses will be discussed at the 2010 NMEA conference in Gatlinburg, during the presentation "Successful Aquarium Field Trips: Partnerships Between Teachers and Informal Educators."

<https://spreadsheets.google.com/viewform?formkey=dFBRNV9nNmhVWFpdTEyZ2t5LVlhNkE6MQ>

GRANTS AND OPPORTUNITIES

Alaska Native-Serving and Native Hawaiian-Serving Institutions

The Alaska Native-Serving and Native Hawaiian-Serving Institutions Programs provide grants to eligible institutions of higher education to help them become self sufficient and expand their capacity to serve low-income students, by providing funds to improve and

strengthen the institution's academic quality, institutional management, and fiscal stability. The deadline for application is July 14, 2010.

<http://www2.ed.gov/legislation/FedRegister/announcements/2010-2/061410c.html>

Angela Award

The Angela Award is a new NSTA award for middle school girls, honoring one young woman who is involved in or has a strong connection to science. The deadline for application is November 30, 2010. Check out the other awards while you're on the website.

<http://www.nsta.org/about/awards.aspx?lid=exp>

Aquarius Reef Base Request for Proposals

The NOAA Aquarius Reef Base at the University of North Carolina Wilmington is soliciting proposals for undersea research projects to be conducted in 2011 at Conch Reef and related sites in the Florida Keys. Research priorities include coral reef recruitment, coral resiliency, ocean acidification impacts, and more. Projects proposing to use Aquarius as a test-bed facility for technology that supports ocean science or exploration are also encouraged. Letters of intent were strongly suggested, but the deadline for proposals is August 13, 2010.

<http://aquarius.uncw.edu/rfp2011>

Bank of the West Community Grants

Bank of the West's Charitable Investments Program provides grants to local nonprofit organizations dedicated to improving quality of life, particularly for low- and moderate-income individuals and communities. Grant categories include Education and Job Training, Civic and Cultural, and more.

<https://www.bankofthewest.com/about-us/community-support/charitable-investments.html>

Birds in Focus Contest

Audubon Magazine, in association with Nature's Best Photography, offers the Audubon Magazine Photography Awards: Birds In Focus Contest. The contest encourages participants to submit photographs that depict birdlife in any form. Note that there is an entry fee for electronic submission, but none for print. The deadline for submission is September 7, 2010.

<http://audubonmagazinephotoawards.org/>

Change for the Children Grants

DoSomething.org has teamed up with the Jonas Brothers Change for the Children Foundation to award project grants to individuals who are taking action in their communities across the U.S. and Canada. One area of focus is Volunteerism. The deadline for submission is July 15, 2010.

<http://www.dosomething.org/grants/changeforthechildren>

Classroom Earth Professional Development Grants

Classroom Earth's 2010 Professional Development Grants enable applicants to take two online courses, creating a strong foundation in environmental education. These courses are offered by the University of Wisconsin, Stevens Point through the Environmental Education and Training Partnership. The deadline for application is July 9, 2010.

<http://classroomearth.org/professional-development-grant-2010>

Disney Friends for Change Grants

Disney's Friends for Change Grants fund youth-led service projects, occurring between September and November, that focus on making environmentally friendly changes and engaging youth, ages 5-18 (and especially the younger ages), as leaders in their community. Grants are open to schools, organizations, and individuals planning service projects which inspire children to work with their families, friends, schools, and communities to address critical needs in their local, national, and global communities. The deadline for entry is July 15, 2010.

<http://www.ysa.org/grants/announcements/friendsforchange2010>

Environmental Short Film Competition

The EcoFocus Film Festival aims to screen diverse, high-quality films that promote discussion and inspire audiences into awareness and action on behalf of the environment. Films may be any genre or style and a maximum of 20 minutes. Film subjects may include, but are not limited to, climate, water, human impacts, natural history, and more. The deadline for entry is August 1, 2010.

<http://www.ecofocusfilmfest.org/submission.htm>

Fund for the Improvement of Postsecondary Education

The Comprehensive Program supports innovative grants and cooperative agreements to improve postsecondary education. It supports reforms, innovations, and significant improvements of postsecondary education that respond to problems of national significance and serve as national models. Check the website for priority areas. The deadline for application is July 29, 2010.

<http://www2.ed.gov/legislation/FedRegister/announcements/2010-2/061410d.html>

Global Youth Service Day Lead Agency Grants

Lead Agencies are local, regional, or statewide organizations that increase the scale, visibility, and impact of Global Youth Service Day in their city, region, or state. Lead Agencies convene a planning coalition of at least 10 partner organizations that collectively engage at least 600 youth volunteers in service, engage local media and elected officials, and plan a high profile signature project or celebration of service. The deadline for application is July 15, 2010.

<http://www.gysd.org/content/2011GYSDleadagency>

Great American Teachers Awards

The Ron Clark Academy celebrates exemplary teaching that is challenging, innovative, and creative. They are accepting nominations for the Great American Teacher Awards, honoring teachers who best demonstrate these qualities. The deadline for nomination is September 1, 2010.

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

Green Across America Grant

The National Education Association is offering these grants to help inspire your K-12 students to increase sustainable, earth-friendly behavior in their neighborhoods and communities through an innovative education program, activity, lesson, or event. The deadline for application is July 30, 2010.

<http://neagreenschools.groupsites.com/link/go/71883534>

LEGO Smart Creativity Contest

LEGO® Education invites K-12 teachers and home educators to register as contestants for the 2010 LEGO® Smart™ Creativity Contest. Information about the 2010 contest will be emailed to all pre-registered contestants. Free kits are available. Note that activities do not necessarily involve actually building with LEGOs.

<http://www.legoeducation.us/about/item.aspx?art=3465&bhcp=1>

MATE International ROV Competition

The MATE (Marine Advanced Technology Education) Center coordinates an international student ROV competition and a network of 19 regional ROV contests. Student teams participate in the events, which consist of different “classes” that vary depending on the sophistication of the ROVs and the mission requirements. The competitions connect students and educators with employers and working professionals from marine industries, highlight marine-related career opportunities, and promote the development of technical, problem solving, critical thinking, and teamwork skills.

http://www.marinetech.org/rov_competition/index.php

Melinda Gray Ardia Environmental Foundation Grants

K-12 teachers are invited to apply for grants to develop or implement environmental curricula that integrate hands-on ecology exercises into the classroom. To facilitate learning and student empowerment, environmental curricula should be holistic and strive to synthesize multiple levels of learning (facts, concepts, and principles), often including experiential integrated learning and problem solving. The deadline for pre-proposals is September 20, 2010.

<http://www.mgaef.org/grants.html>

Smaller Learning Communities Program

The Smaller Learning Communities program awards discretionary grants to local educational agencies to support the restructuring of large public high schools into smaller units for the purpose of improving academic achievement in large public high schools. These smaller units include multi-grade academies organized around career interests or other themes, autonomous schools-within-a-school, and more. The deadline for Notice of Intent to Apply is July 15, 2010.

<http://www.ed.gov/programs/slcp/index.html>

STEMester of Service Grants

Youth Service America will implement the STEMester of Service program, a semester-long service-learning framework to engage educators and students in addressing critical environmental needs and connecting them to STEM (science, technology, engineering, and math) curricula, specifically science and technology. The grant is for middle schools with large populations of disadvantaged youth, located in one of the 19 states with the highest dropout rates. The deadline for application is July 15, 2010.

<http://www.ysa.org/grants/stem>

Tom's of Maine 50 States for Good Grant

Tom's of Maine 50 States for Good is a national initiative to support the goodness behind grassroots community projects. The deadline for entry is July 2, 2010.

<http://www.tomsofmaine.com/community-involvement/living-well/project-sponsorships>

Trash to Treasure Competition

PBS's Design Squad invites kids ages 5-19 to recycle, reuse, and re-engineer everyday materials into an out-of-the box invention. The deadline for submission is September 5, 2010.

<http://pbskids.org/designsquad/contest/index.html>

Wildlife Habitat Council's Certification and Awards Program

Wildlife Habitat Council's Corporate Wildlife Habitat Certification/International Accreditation Program recognizes meaningful wildlife habitat management programs, including environmental education programs. Accreditation provides third-party credibility and an objective evaluation of projects. Accredited parties are eligible for a variety of awards, including Corporate Lands for Learning, Wings over Wetlands, and more. The deadline for certification and awards application submission is July 31, 2010.

<http://www.wildlifehc.org/apply/index.cfm>

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

TIDAL Quest - Massachusetts

The Waquoit Bay National Estuarine Research Reserve is now accepting applications for TIDAL Quest, July 19-23, 2010 from Waquoit, Massachusetts, field-based research program for high school students. Scholarships may be available.

<http://www.waquoitbayreserve.org/HotLinks/Tidal%20Quest%20poster%20and%20registration.pdf>

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Capitol Hill Ocean Week – Online

The theme of the 2010 Capitol Hill Ocean Week was *Clean Energy and a Healthy Ocean: Navigating the Future*. The symposium highlighted the intersection between ocean and energy issues. Webcasts of the presentations are available online.

<http://www.ustream.tv/channel/capitol-hill-ocean-week-2010>

Education in a Changing Climate Workshop - Maine

Education in a Changing Climate, August 1 - 4, 2010 in Unity, Maine, is an annual workshop jointly sponsored by the Orion Magazine and Unity College. The workshop offers a primer on basic climate science; likely effects on ecosystems and people; ethical, literary, and artistic responses; and a sampling of potential solutions that range from political to personal, technological to philosophical.

<http://www.unity.edu/Visitors/SummerPrograms/Orion/Welcome.aspx>

EETAP Fall Courses - Online

The University of Wisconsin-Stevens Point and the Environmental Education and Training Partnership (EETAP) offer the following online summer courses:

- Fundamentals of Environmental Education, September 13-December 3, 2010
- Making EE Relevant for Culturally Diverse Audiences, September 13-December 3, 2010
- Applied EE Program Evaluation, September 13-December 10, 2010
- Leadership Development in EE: Strategic Planning and Implementation, September 20-November 19, 2010.

Scholarships may be available. The deadline for registration is August 16, 2010.

<http://www.uwsp.edu/natres/eetap/index.aspx>

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

The 2011 George Wright Society Conference on Parks, Protected Areas, and Cultural Sites, *Rethinking Protected Areas in a Changing World*, will take place March 14-18, 2011 in New Orleans, Louisiana. The deadline for proposals is September 30, 2010.

<http://www.georgewright.org/gws2011>

International Marine Debris Conference

The theme of the Fifth International Marine Debris Conference, which will take place March 20-25, 2011, in Honolulu, Hawai'i, is *Waves of Change: Global lessons to inspire local action*. Organized by NOAA and UNEP, the conference will highlight research advances; allow sharing of strategies and best practices to assess, reduce, and prevent the impacts of marine debris; and provide an opportunity for the development of specific bilateral or multi-country strategies. The deadline for the call for workshop proposals is July 30, 2010. The call for presentations and posters will open July 26, 2010 with a deadline for submission of September 20, 2010.

<http://www.5imdc.org/>

IPMEN Conference - Online

The International Pacific Marine Educators Network Conference in Fiji will take place July 6-10, 2010. Those not able to travel to Fiji are invited to participate in the asynchronous webconference on the College of Exploration Online Campus that will mirror the face to face event. Register to express your interest in real time participation. Most of the presentations will be video recorded and available on the website after the conference. This is a wonderful networking opportunity.

<http://www.coexploration.org/ipmen/>

Learning Ocean Science through Ocean Exploration - Various

NOAA's Ocean Exploration Program and partners will offer introductory Learning Ocean Science through Ocean Exploration professional development workshops for science teachers. Participants will receive the curriculum with CD-ROM's, certificates of participation, and more. Contact the noted educator for registration and more information.

- September 18, 2010 with Georgia Aquarium in Atlanta, Georgia. The deadline for registration is September 3, 2010. Contact Kim Morris-Zarneke at kzarneke@georgiaaquarium.org
- September 25, 2010 with Dauphin Island Sea Lab on Dauphin Island, Alabama. The deadline for registration is September 10, 2010. Contact Sara Johnson at sejohnson@disl.org
- October 2, 2010 with Audubon Aquarium of the Americas in New Orleans, Louisiana. The deadline for registration is September 17, 2010. Contact Tricia LeBlanc at tleblanc@AudubonInstitute.org
- October 9, 2010 with the University of South Florida College of Marine Science in St. Petersburg, Florida. The deadline for registration is September 24, 2010. Contact Teresa Greely at greely@marine.usf.edu

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

MAEOE Conference - Maryland

The 26th annual Maryland Association for Environmental and Outdoor Education (MAEOE) conference, *Educating for Sustainability*, will take place February 10-13, 2011 in College Park, Maryland. The deadline for presentations is September 10, 2010.

<http://www.maeoe.org/conference/>

Marine Aquarium Conference of North America

The Marine Aquarium Conference of North America (MACNA), September 3-5, 2010 in Orlando, Florida, offers aquarium enthusiasts and avid reef keepers the opportunity to learn from leading researchers in the fields of aquaculture, marine biology, diving, and oceanography.

<http://www.macna2010.com/>

Meaningful Watershed Education Experiences - Massachusetts

The Gulf of Maine watershed program is a field- and classroom-based program that will provide Massachusetts middle school science teachers with the knowledge and skills to teach students about local watersheds and show how climate change affects watersheds. The program, July 15-17, 2010 in Boston, Massachusetts, offers a three-day summer workshop, two call-back/follow-up sessions, and a teacher-lead meaningful watershed education experience in the field and classroom for students in grades 5-8.

<http://neosec.wordpress.com/2010/06/21/pd-at-ne-aquarium-meaningful-watershed-education-experiences/>

NAAEE Conference

Registration for the North American Association for Environmental Education (NAAEE) Annual Conference and Research Symposium, *Environmental Education: Building Connections - Bridging Gaps*, September 29-October 2, 2010 in Buffalo-Niagara, New York, is now open. Conference strands include place-based education, conservation education, and more. The deadline for earlybird registration is August 11, 2010.

<http://www.naaee.org/conference>

Oceans, Coasts and Climate for Teachers - Massachusetts

This course for teachers in grades 7 -12, August 2-5, 2010 with a follow-up session November 6, 2010, from Falmouth, Massachusetts, will present information, research, and activities on climate topics with a special focus on Massachusetts marine and coastal systems. Participants will carry out field studies, practice using marine and coastal data, and engage in lessons and activities for teaching about climate.

<http://www.waquoitbayreserve.org/eventshow.aspx?eventid=257>

Professional Development Workshops - Connecticut

Immersion Learning, Institute for Exploration and Mystic Aquarium present the following professional development workshops in Mystic, Connecticut:

- Return to Titanic, Wednesday, August 1, 2010
- Adventures to the Black Sea Thursday, August 12, 2010
- Life at the Extremes Friday, August 13, 2010

<http://neosec.wordpress.com/2010/06/11/pd-workshops-connecticut/>

Restore America's Estuaries National Conference

The National Conference and Expo on Coastal and Estuarine Habitat Restoration, Preparing for Climate Change: Science, Practice, and Policy, November 13-17, 2010 in Galveston, Texas, focuses on coastal habitat restoration.

<https://www.estuaries.org/conference/>

Using Atlas of Science Literacy Workshop – New Hampshire and Calgary

Learn about AAAS's Atlas of Science Literacy and how to put it to use to improve curriculum, instruction, and assessment. The workshop gives participants a perspective on standards-based reform based on understanding the maps, clarifying standards, changing classroom practice, and improving curriculum.

- Lebanon, New Hampshire, August 16-18 (July 9 scholarship application deadline)
- Calgary, Canada, September 8-10 (July 23 scholarship application deadline)

Check out the website for future workshops.

<http://www.project2061.org/events/workshops/default.htm>

EDUCATIONAL RESOURCES

Adopt a Microbe

Students, teachers, groups, everyone can Adopt a Microbe from the deep biosphere, an outreach project of the Juan de Fuca Hydrogeology expedition (see above). Get to know your microbe through weekly activities and submit your projects online for prizes. The website will be completed soon, but has enough information on it already to get you started.

<http://sites.google.com/site/adoptamicrobe/>

Brain-Powered Science

Brain-Powered Science is a resource for middle and high school teachers looking to stimulate students' thinking. The book offers thirty-three hands-on activities based on the science of a discrepant event—an experiment or demonstration in which the outcome is not what students expect—and can motivate students to reconsider preconceived notions and think about what has actually occurred. Teachers can also take advantage of 200 up-to-date internet resources included in the book, as well as extensions to each of the physical science, biology, and chemistry activities.

http://www.nsta.org/store/product_detail.aspx?id=10.2505/9781935155102&lid=exp

Changing Tides

Changing Tides: A Series of Ocean Discussions by Smithsonian's Museum of Natural History and the Centers for Ocean Sciences Education Excellence (COSEE), is a series of talks by ocean scientists about current research and how it is helping to change the tide in ocean science and conservation. Live webcasts can be heard online and links to recordings will be posted after the webcast footage is processed. Sign up for the Ocean Portal Newsletter for notification of future lectures. While on the website, check out the beta version of the Educators' Corner, with links to lesson plans and activities, features, and more.

<http://ocean.si.edu/ocean-videos/changingtides/>

Climate Communications and Behavior Change Guide

The Climate Communications and Behavior Change Guide, a collaboration between the Resource Innovation Group and the University of Oregon's Institute for a Sustainable Environment, focuses on mitigation and can be downloaded from the website.

<http://climlead.uoregon.edu/node/156>

Corals and Us Poster

The Corals and Us poster, from NOAA's Coral Reef Conservation Program, presents an artistic and colorful clay rendition of a coral reef, and highlights the top three threats to coral reefs addressed by the program: impacts from Climate Change, Fishing, and Pollution, along with simple steps each of us can take to reduce these threats at the individual level.

Contact Paulo Maurin at Paulo.Maurin@noaa.gov

Discovery Education Lesson Plans

Discovery Education provides digital resources to schools and homes with the goal of making educators more effective, increasing student achievement, and connecting classrooms and families to a world of learning with scientifically proven, standards-based digital resources that make a positive impact on student learning. Lesson plans are grouped by grade level and include topics in earth science, ecology, weather, and much more. Additional resources include Puzzlemaker, Science Fair Central, Professional Development, and more. There are lots of great resources here.

<http://school.discoveryeducation.com/lessonplans/>

Earth Science Week

Earth Science Week will be held October 10-16, 2010, aimed at encouraging people everywhere to explore the natural world and learn about the geosciences. The theme for 2010 is Exploring Energy. The website hosts links to a variety of educational resources, images, and more. Check out the photo, visual arts, and essay contests, with deadlines of October 15, 2010.

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

Essential Fish Habitat Mapper and Data Inventory

NOAA announces the launch of the enhanced Essential Fish Habitat (EFH) Mapper and data inventory. The new mapping tool features data on EFH areas protected from fishing, including anchoring restrictions, fishing gear modifications, and bans on certain types of gear, among others.

<http://www.habitat.noaa.gov/essential-fish-habitat-mapper.html>

Experiment to Clean Up an Oil Spill

This experiment, created by the Australian Maritime Safety Authority, is designed to give kids an idea of what it might be like to clean up an oil spill and why the task is so difficult. Using environmentally-friendly household materials, the experiment guides students through the steps of creating an oil spill and then trying to clean it. A series of observational questions are posed.

http://www.amsa.gov.au/marine_environment_protection/Educational_resources_and_information/Teachers/Classroom_Projects/Clean_up_oil_spill_exercise.asp

Explore the Sea

The Marine Education Trust website offers the downloadable *Explore the Sea* for those working on education projects with young people. The booklet offers 35 ideas for practical, hands-on sessions, which include simple science experiments, games, art, role-play scenarios, and social history projects. The materials are available in English, French, and Malagasy. Free registration may be required.

<http://www.marineeducationtrust.org/downloads>

Games at NOAA

With summer here, it's a good time to once again highlight this portal to games and interactive activities focused on ocean and air themes. The games highlight the science and the activities of the NOAA and other agencies and organizations promoting environmental stewardship. Be sure to check out WaterLife, the Humpback Whale Migration Game, Storm Tracker, and more.

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

Geodesy Tutorial

This online tutorial from the University of New Brunswick provides an introduction to the science of geodesy, the discipline that deals with the measurement and representation of the earth, in a three-dimensional time varying space. Topics include its history, the relationship between geodesy and other science disciplines, and the profession and practice of geodesy. There is also information on coordinate systems, point positioning, relative positioning, geodetic networks, and many other topics. A list of references and a glossary are included.

<http://gge.unb.ca/Resources/GeodesyTutorial.pdf>

Getting WILD About Environmental Literature

Dr. Christine Moseley at the University of Texas at San Antonio, in collaboration with the Texas Parks and Wildlife Department, has put together a compilation of literature readings with annotations for all levels that align to the Project WILD activities.

<http://www.naaee.org/photos/news-images/gettingwildaboutenvliterature.doc>

Google Fusion Tables

Google Fusion Tables is a service for data management, integration, and collaboration. Users can upload data sets from CSV, KML, and spreadsheet files, merge data from multiple tables, and visualize the data using a variety of tools including Google Maps.

<http://sites.google.com/site/fusiontablestalks/home>

ICESCAPE

Karen Romano Young will be joining an Arctic research expedition aboard the Coast Guard Cutter *Healy*. ICESCAPE - Impacts of Climate Change on the Eco-System of the Arctic Pacific Environment is a NASA mission to the air-sea-ice interface in the far north, assessing the conditions and researching climate change impacts. Follow her previous adventures through the website, also.

<http://www.karenromanoyoung.com/Pages/OceanScience.html>

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Join NOAA's Office of Ocean Exploration and Research online for the maiden voyage of the NOAA ship *Okeanos Explorer* as it explores one of the most biologically diverse areas of the world's ocean in Indonesia, through the INDEX 2010: Indonesia-USA Deep-Sea Exploration of the Sangihe Talaud Region. From June to August 2010, scientists will explore undersea ecosystems, particularly those associated with submarine volcanoes and hydrothermal vents within the 'Coral Triangle Region', the global heart of shallow-water marine biodiversity. The expedition page will post keynote addresses, logs from participating scientists, videos and images, lesson plans, podcasts, and much more.

<http://oceanexplorer.noaa.gov/okeanos/explorations/10index/welcome.html>

Juan de Fuca Hydrogeology

Join scientists, educators, and artists on the *JOIDES Resolution* - Expedition 327: Juan de Fuca Hydrogeology, July 5-September 5, 2010. Expedition 327 will install sub-seafloor observatories to monitor fluid circulation and microbial activity in the ocean's crust, using cutting edge technology to help scientists explore unanswered questions about activity and life beneath the seafloor. The expedition will carry a team of educators and artists, excited to communicate with you and answer your questions in multiple ways and multiple languages. Read the blogs, follow the expedition, send in your questions, and more.

<http://joidesresolution.org/node/1154>

MPA Networks

The MPA Center sponsored a special edition of *Current: The Journal of Marine Education* focused on networks and systems of marine protected areas. The issue includes articles written by authors who have had extensive experience in MPA network management and research. The activities and additional resources at the end of the articles can help you bring the concept of MPAs and networks of MPAs directly into your classroom. The special issue, along with some additional lesson plans, is downloadable from the website.

<http://mpa.gov/resources/education/>

Ocean Acidification

COSEE Alaska hosts an Ocean Acidification in Alaska's Seas resource page. The website offers basic background information, links to lesson plans, multimedia, news and journals, and much more.

<http://www.coseealaska.net/oceanacidification/>

OceanRep

OceanRep is the open access digital repository of the Leibniz Institute of Marine Sciences at the Christian-Albrechts Universität zu Kiel (IFM-GEOMAR). It contains research publications of staff and students including journal articles, conference papers, and more, discussing ocean circulation and climate, marine biogeochemistry, marine ecology, and more.

<http://eprints.ifm-geomar.de/>

Oceans in the News

Oceans in the News is an editorial service from COSEE-Ocean Systems populated with current ocean research and news articles, compiled monthly. The service is intended to provide a clearinghouse of ocean-related articles for teachers and students from reliable sources. The articles are categorized by key phrases listed on the website, and most can be accessed in their entirety.

<http://cosee1.umaine.edu/news.php>

Online Tools Guidebook

The COSEE Excellence in Networking Tools subgroup invites you to use the Online Tools Guidebook. The guidebook provides easily accessible information on a wide range of online tools for collaborating, teaching, promoting, and much more. The tools are grouped into function categories, including Graphics/Visual Tools, Project Management, Collaborative Editing, and more.

http://coseenow.net/ents/index.php/Main_Page

Plastics at SEA

The Sea Education Association offers this website allowing visitors to follow them as they embark on the Plastics at SEA: North Atlantic Expedition, a 35-day research cruise to study the accumulation of plastic marine debris in the North Atlantic Ocean. The website offers a daily journal, science results, biographies, and more.

<http://www.sea.edu/plastics/index.htm>

Pollinator Resources

The Pollinator Partnership celebrates the final week in June as National Pollinator Week. Pollinator Week has grown to be an international celebration of the valuable ecosystem services provided by bees, birds, butterflies, bats and beetles. The website offers links to many educational resources, including *Nature's Partners: A Comprehensive Pollinator Curriculum for Grades 3-6*, games, planting guides, and much, much more.

<http://pollinator.org/index.html>

RU COOL

Rutgers University Coastal Ocean Observation Lab focuses on the bio-physical processes of the coastal ocean. The lab is involved in research projects where operational observatories are used to collect real-time data for adaptive sampling. The website offers research data, papers, and presentations; sections for educators and students; multimedia; and much more.

<http://rucool.marine.rutgers.edu/>

SciPacks

SciPacks from the NSTA Learning Center are 10-hour online learning experiences that teachers can use to help better understand the content you teach. SciPacks are aligned with the National Science Education Standards. Select SciPacks are available at no charge, with topics including weather and climate, plate tectonics, water, and much more.

<http://learningcenter.nsta.org/products/scipacks.aspx>

Secret Life of Scientists and Engineers

The Secret Life of Scientists is a web-exclusive series from NOVA which helps the public understand how and why scientists study what they do, as well as what happens when the lab coats come off. Sixteen scientists are currently highlighted on the site, and visitors can visit each scientist's videos and blog posts, as well as ask a question of any of the scientists.

<http://www.pbs.org/wgbh/nova/secretlife/>

TED Talks

TED (Technology, Entertainment, Design) – Ideas worth spreading, offers “riveting talks by remarkable people, free to the world (in 18 minutes)”. The website offers categories including Technology, Global issues, Science, and more. Check out the newer offerings from Peter Tyack, Brian Skerry, Enric Sala, and many more.

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

Today's Green Minute

Today's Green Minute is a web-based video series which covers green innovation in science, wildlife, conservation, commerce, global warming, gizmos, and more.

<http://todaysgreenminute.com/>

Trail Resources

The American Trails online library has hundreds of articles, studies, and resources on every aspect of trails and greenways. They are also archiving presentations and award documentation from the National Trails Symposium as well as materials from other educational sessions. Topics include Trailbuilding, Planning, Education, and much more.

<http://www.americantrails.org/resources/index.html>

Web Site Resources for Environmental Education

The National Conservation Training Center's Division of Education Outreach of the U.S. Fish and Wildlife Service has updated their list of Web Site Resources for Environmental Education. The document provides listings and links to general environmental education resources, education standards and terms, newswires and FWS listservs, lists of FWS environmental educators and resources, and much more.

<http://library.fws.gov/DEO/resource.list.pdf>

INITIATIVES, JOURNALS, and MORE

Alaska Regional Resource Directory

COSEE Alaska is creating a directory to link scientists seeking outreach and education opportunities with the educators and science outreach and media specialists who are their potential partners. The resource directory will be developed as an online, searchable database and published as a hard-copy once a year for distribution at the Alaska Marine Science Symposium.

<http://www.coseealaska.net/news/index.cfm?FuseAction=ShowNews&NewsID=193>

Eat Lionfish Campaign

NOAA's National Centers for Coastal Ocean Science is promoting the Eat Lionfish Campaign with a series of events designed to introduce chefs and the public to lionfish, a delectable invasive species. NOAA scientists researching the spread and impact of this non-native predator are encouraging a seafood market as a means of mitigating the species' impacts on reef ecosystems in Southeast U.S. and Caribbean waters.

<http://www.facebook.com/pages/Mount-Pleasant-SC/Eat-the-Lionfish/283248658354>

National Parks Fee-Free Weekends

More than 100 national parks across the country will be offering fee-free days during the summer and fall this year, including August 14-15, September 25 (National Public Lands Day) and November 11, 2010. In addition, many national parks never charge an entrance fee. Check out these opportunities to get outside and share our national heritage.

<http://www.nps.gov/findapark/feefreeparks.htm>

Stream Of Dreams

Stream Of Dreams[™] is a watershed education program which helps connect students and their community through art. The program and student-generated murals help students to understand their connections to water and to make changes to protect streams, rivers, lakes, and ocean.

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

World Water Monitoring Day

World Water Monitoring Day, September 18, 2010, is an international education and outreach program that builds public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local water bodies. Participants are encouraged to register their site and report their data before December 31 to be included in the Year in Review report. Test kits can be ordered online and resources are available as free downloads.

<http://wwmd.org/index.html>