

**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**  
**INFORMATION EXCHANGE FOR MARINE EDUCATORS**

**JANUARY 2012**

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.

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

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**Notable Reference**

**Developing a Framework for Assessing Environmental Literacy**

NAAEE has released *Developing a Framework for Assessing Environmental Literacy*, developed by researchers, educators, and assessment specialists in social studies, science, environmental education, and others. A presentation about the framework and accompanying documents are available on this website.

<http://www.naaee.net/framework>

## **PROGRAM OF THE MONTH**

### **USGS Education Resources**

The United States Geological Survey (USGS) 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. Spend some time looking through this extensive collection of materials.

A good place to start is by clicking on the right hand section of the website, on the USGS Education Resources Handout, a pdf document that is updated yearly with websites and initial suggestions for use of the resources. Also on the right is the link to Educational Fact Sheets (current count >2700!) which can be easily searched by key word.

In the middle section of main website, Videos and Animations leads visitors to categorized links including climate change, careers, tsunamis, and more. Another useful way to browse all resources is by grade level, further broken down by biology, geography, geology, and water resources. Check out the subcategories of coastal environments, floods, ecosystems, and much more.

On the left hand side of the main website is an ever-changing Featured Topic. Select the Featured Topics Archive to see earlier selections, including invasive species, volcanoes, and more.

<http://education.usgs.gov/>

## **TOOLKIT OF THE MONTH**

### **Marine Recreation Community Workshop Online Toolkit**

National Geographic, with the support of Oracle, offered a series of workshops for the ocean recreation community to share current marine and conservation science, and discuss how the ocean recreation community can educate, motivate, and inspire the public to be stewards of the ocean in order to ensure the future of ocean recreation. This website allows visitors to download the Marine Recreation Community Workshop Online Toolkit to aid in planning and delivering their own workshop for the marine recreation community. Resources include a planning guide, invitation templates, sample presentations on a variety of subjects, facilitation guides, and much more. It can be a useful resource for all workshop planners.

<http://ocean.nationalgeographic.com/ocean/marine-recreation-workshop-toolkit>

## **WEBSITES OF THE MONTH**

### **Project Noah**

Project Noah is an online and mobile location-based application that encourages people to reconnect with nature by documenting local wildlife. The tool harnesses the power of smart phones to collect ecological data and help preserve global biodiversity.

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

### **Resources for K-12 Earth Science Educators**

This page from the Geological Society of America: provides links to educational resources for K-12 science educators with downloadable lesson plans on a myriad of topics including earth science, environmental science, water, weather and climate, and more. There are links to elementary, intermediate, secondary lesson plans, and

additional resources. Check this out; many are links to websites not previously covered in this newsletter.

<http://www.geosociety.org/educate/resources.htm>

## **MESSAGE FROM THE BRIDGE**

### **Ocean Observing Systems**

Ocean observing systems (OOS) include a wide variety of equipment designed to collect and transmit oceanographic data such as temperature, salinity, water depth, and more.

The instruments sample continuously and provide scientists with a long-term record.

These data not only reveal the current ocean conditions, but can provide critical information to aid with storm tracking and prediction, oil spill response, commercial and recreational fishing, and much more. In the Bridge's Ocean Observing system section, there is an OOS Primer, an instrument fact sheet, and links to ocean observing system websites. There are lesson plans using real-time and archived OOS data which cover topics such as sea level change, coastal storms, coral communities, and more.

[http://www2.vims.edu/bridge/search/bridge1oos\\_menu.cfm?q=oos](http://www2.vims.edu/bridge/search/bridge1oos_menu.cfm?q=oos)

## **REQUESTS**

### **Articles for General Issues of *Current***

The editors of *Current: The Journal of Marine Education* seek articles for upcoming general issues on topics related to marine education. The deadline for submission is July 1, 2012.

Contact Lisa Tooker at [ltooker@sbcglobal.net](mailto:ltooker@sbcglobal.net)

<http://www.marine-ed.org/current/CurrentGuidelines.pdf>

## **GRANTS AND OPPORTUNITIES**

### **America's Historical and Cultural Organizations Grants**

The National Endowment for the Humanities offers grants in support for planning and implementation projects for America's Historical and Cultural Organizations. The deadline for application is NEH is January 11, 2012.

<http://www.neh.gov/grants/grantsbydivision.html>

### **AmeriCorps State and National Grants**

AmeriCorps awards grants to organizations to implement programs that use AmeriCorps members to engage in evidence-based interventions to strengthen communities.

Funding areas for 2012 include education, environmental stewardship, and more. The deadline for application is January 18, 2012.

[http://www.americorps.gov/for\\_organizations/funding/nofa\\_detail.asp?tbl\\_nofa\\_id=91](http://www.americorps.gov/for_organizations/funding/nofa_detail.asp?tbl_nofa_id=91)

### **Aquaculture Research Program Grants**

The NOAA Sea Grant Aquaculture Research Program funds aquaculture research projects to support the development of environmentally and economically sustainable ocean, coastal, or Great Lakes aquaculture. The Funding Opportunity Number is NOAA-OAR-SG-2012-2003249. The deadline for receipt of preproposals is February 7, 2012.

<http://www.grants.gov/search/search.do?mode=VIEW&opId=135993>

### **Bring Back the Natives**

The National Fish and Wildlife Foundation offers grants through the program, *Bring Back the Natives: A Public-Private Partnership for Restoring, Protecting, and Enhancing Populations of Native Aquatic Species*. See the website for details of funding priorities. Non-Federal cash or in-kind match is required. The deadline for pre-proposals is January 20, 2012.

[http://www.nfwf.org/AM/Template.cfm?Section=Charter\\_Programs\\_List&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=22394](http://www.nfwf.org/AM/Template.cfm?Section=Charter_Programs_List&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=22394)

### **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 deadlines for application are January 15, May 31, and September 30, 2012.

<http://captainplanetfoundation.org/apply-for-grants/>

### **Charlotte Martin Foundation**

The Charlotte Martin Foundation supports wildlife and habitat through grants to protect and conserve vital ecosystems and their resident wildlife for the long-term with the aim of preserving biodiversity in the region in Washington, Oregon, Idaho, Montana, and Alaska. The next deadline for application is January 31, 2012.

<http://www.charlottesmartin.org/programs.htm>

### **Coastal Art and Poetry Contest - California**

The Coastal Art & Poetry Contest is open to all K-12 California students, and is a chance for students to explore coastal themes and present them creatively. By encouraging youth to reflect on the beauty and spirit of California's beaches and ocean, the hope is to inspire a greater sense of stewardship for these natural places. The deadline for entry is January 31, 2012.

<http://www.coastal.ca.gov/publiced/poster/poster.html>

### **Connecting Youth to the Outdoors Initiative**

The National Fish and Wildlife Foundation in cooperation with its federal partners offer *America's Great Outdoors: Developing the Next Generation of Conservationists*, an initiative to connect youth to the outdoors by providing financial support for youth conservation job training programs. The program brings together public and private partners to support organizations that are developing innovative conservation job opportunities for youth which expose young people, particularly urban and minority youth, to the natural world and career opportunities available in conservation. The deadline for application is January 27, 2012.

[http://www.nfwf.org/AM/Template.cfm?Section=Charter\\_Programs\\_List&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=60&ContentID=22324](http://www.nfwf.org/AM/Template.cfm?Section=Charter_Programs_List&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=60&ContentID=22324)

### **Christopher Columbus Awards**

The Christopher Columbus Awards for Middle School Students is a community-based science and technology program. Students work in teams of three to four, with an adult coach, to identify a problem in their community and apply the scientific method to create an innovative solution to that problem. The deadline for submission is February 6, 2012.

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

### **Earthwatch Educator Fellowships**

Fellowships are available to sponsor participation in International and U.S. Earthwatch Conservation Expeditions. The Earthwatch Institute and its partners offer a number of Educator Fellowships every year to elementary, middle, and high school educators and administrators. Applications are accepted on a rolling basis, but those received after February 13, 2012 are subject to fewer projects and more limited funding.

<http://www.earthwatch.org/aboutus/education/edopp>

### **Earthzine Annual Essay and Blogging Contest on Sustainability**

Earthzine invites undergraduate and graduate students to submit an essay for its Annual College and University Student Essay and Blogging Contest. This year's theme is *How Can Earth Observation Help Us to Build a More Sustainable World?* The deadline for submission is January 20, 2012.

<http://www.earthzine.org/2011/12/22/earthzine-to-hold-third-annual-essay-and-blogging-contest-on-sustainability/>

### **Echoing Green Fellowship**

This year, Echoing Green will award two-year fellowships to entrepreneurs who are creating innovative social change organizations. Fellows receive seed funding and technical support to turn their ideas into sustainable social change organizations. Hurry – the deadline for application is January 9, 2012.

<http://www.echoinggreen.org/fellowship/echoing-green-fellowship>

### **Educational Partnership Program Scholarships**

The goal of the Educational Partnership Program is to increase the number of students from underrepresented communities who are educated, trained, and graduated in fields that directly support NOAA's mission. The deadline for application is February 17, 2012.

<http://www.epp.noaa.gov/>

### **Endangered Species Day Art Contest**

In celebration of Endangered Species Day, children across the country are invited to learn about endangered species and express their knowledge and support through artwork. The deadline for submission is March 15, 2012.

<http://www.stopextinction.org/esd/194-esd-art.html>

### **Every Day Grants**

Every Day Grants from the National Environmental Education Foundation, with support from Toyota Motor Sales USA, Inc., help strengthen nonprofit public lands support groups, enabling them to do more to connect their communities to the land. Grants will be awarded to groups who make the best case for how the funds will build their capacity to better serve the lands they love. The deadline for application is January 13, 2012.

[http://www.neefusa.org/grants/every\\_day\\_grants.htm](http://www.neefusa.org/grants/every_day_grants.htm)

### **Ezra Jack Keats Public School and Public Library Minigrants**

The Ezra Jack Keats Foundation is accepting applications from public schools and libraries in the U.S. and its protectorates for program or event minigrants. The deadline for application is March 15, 2012.

[http://www.ezra-jack-keats.org/index.php?option=com\\_content&view=article&id=103&Itemid=651](http://www.ezra-jack-keats.org/index.php?option=com_content&view=article&id=103&Itemid=651)

### **Five Star Restoration Grant**

The Five Star Restoration Program brings together students, conservation corps, youth groups, citizen groups, corporations, landowners, and government agencies to provide environmental education and training through projects that restore wetlands and streams. The program provides challenge grants, technical support, and opportunities for information exchange to enable community-based restoration projects. The deadline for application is February 15, 2012.

<http://www.epa.gov/owow/wetlands/restore/5star/>

### **Fund for Teachers Professional Development Grants**

The Fund for Teachers Grant awards preK-12 teachers with funds to support professional development activities during the summer of 2012. The deadline for application is January 27, 2012. See the website for eligibility, and check out additional funding opportunities and other resources.

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

### **Garden Club of America Wetlands Scholarship**

The Garden Club of America offers an annual award for a one-year scholarship for graduate studies in coastal wetlands and support of field-based research. The goals of the Garden Club are to promote wetlands conservation through the support of young scientists in their fieldwork and research. The deadline for application is January 15, 2011.

[http://ccrm.vims.edu/education/garden\\_club/index.html](http://ccrm.vims.edu/education/garden_club/index.html)

### **Intel Schools of Distinction Program**

The Intel Schools of Distinction Program honors U.S. schools that have demonstrated excellence in math and science education. There are awards for elementary, middle, and high schools in each of two categories - math and science. The deadline for application is February 23, 2012.

<http://www.intel.com/about/corporateresponsibility/education/soda/index.htm>

### **Intelligent Use of Water Awards**

The Rain Bird Intelligent Use of Water Awards are for water conservation and environmental sustainability projects that promote green spaces. Winners will be determined by online votes, so submit your projects soon. The deadline for voting is March 15, 2012.

<http://www.iuowawards.com/HowToParticipate.aspx>

### **JASON Project Contests**

The JASON Project and its Immersion Learning Program are sponsoring three contests for young people during the 2011-2012 school year: Wrecks of the World Art Contest, Goldfish Training Contest, and JASON/Immersion Carbonally Contest. Check the website for details and deadlines for entry. Check these out.

<http://www.jason.org/contests/>

### **Kavli Science Video Contest**

The USA Science & Engineering Festival Kalvi Science Video Contest is looking for videos submitted by grades 6-12 students which explore the contest theme, *Save the World Through Science and Engineering*. Students use their imaginations and investigative skills to tackle global challenges, explore new frontiers, and discover and

discuss the inventions that help mankind and improve life on our planet. The deadline for entry is March 1, 2012.

<http://www.usasciencefestival.org/2012festival/contests/kavli-video-contest>

### **Knauss Fellowship**

The Knauss Fellowship provides experience to students who have an interest in ocean, coastal, and Great Lakes resources and in the national policy decisions affecting those resources. The program matches highly qualified graduate students with hosts in the legislative and executive branch of government located in the Washington, D.C. area, for a one year paid fellowship. The deadline for application is February 17, 2012. Contact your state Sea Grant program director.

<http://www.seagrant.noaa.gov/knauss/>

### **Knowles Science Teaching Foundation Fellowships**

Knowles Science Teaching Foundation Fellowships are available in the areas of biology, mathematics, and physical sciences to individuals who demonstrate exceptional content knowledge in the area they intend to teach, a commitment to teaching high school in U.S. schools, professional ability, and the potential for leadership. The deadline for application is January 11, 2012. See the website for eligibility.

<http://www.kstf.org/fellowships/teaching.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. The next deadline for application is February 17, 2012.

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

### **Marisla Environmental Program**

The Marisla Foundation offers Environmental Program grants for activities that promote the conservation of biological diversity and advance sustainable ecosystem management. Primary emphasis is on marine resources conservation with a geographic focus on western North America, Chile, and the western Pacific. The program also supports the search for solutions to health threats caused by toxic chemicals. The next deadlines for application are January 15, 2012 and April 15, 2012.

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

### **National Geographic Student Expeditions Scholarship Program**

The National Geographic Student Expeditions Scholarship Program provides financial support to high school students seeking educational summer experiences they otherwise could not afford. The deadline for application is March 1, 2012.

<http://ngstudentexpeditions.com/about/scholarships/>

### **Ocean Leadership Award - California**

The University of Southern California's Wrigley Institute, QuikSCience, and COSEE-West offer the Ocean Leadership Award, recognizing educators who make outstanding contributions to K-12 ocean science education. Nominations are accepted in different categories to help further marine science educational goals. The deadline for nominations is February 3, 2012.

<http://www.usc.edu/org/quikscience/oceanleadership.html>

### **Royal Bank of Canada Blue Water Leadership Grants**

The Royal Bank of Canada Blue Water Project Grants focus on watershed protection and/or access to safe drinking water. Grants are available to local, regional, national or trans-border organizations for projects in any of the countries in which the bank is located, including Canada, the United States, the Caribbean, and the United Kingdom. The deadline for application is February 3, 2012.

<http://www.rbc.com/community-sustainability/apply-for-funding/guidelines-and-eligibility/blue-water-pre.html>

### **Samsung Sustainable Energy Award**

The Samsung Sustainable Energy Award is presented to each of the top three high schools that can demonstrate how they have engaged students and teachers in school-wide energy savings through the creative and innovative use of technology. The deadline for application is February 10, 2012.

<http://neefusa.org/energyaward.htm>

### **STEM Video Game Challenge**

The annual National STEM Video Game Challenge for both students and K–12 teachers accepts submissions of original video game concepts and designs in four categories. The deadline for submission is March 12, 2012.

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

### **Thacher Environmental Research Contest**

The 2012 Thacher Environmental Research Contest, held by the Institute for Global Environmental Strategies, challenges students in grades 9-12 to conduct innovative research demonstrating the best uses of geospatial tools and data to study the Earth. The deadline for entry is April 16, 2012.

<http://www.strategies.org/education/index.aspx?sub=education&sub2=scholars&sub3=scholars2012>

### **Ultimate Cool School Science Day Assembly**

Enter daily for a chance to win an Ultimate Cool School Science Day Assembly. There will be one winner in grades K-3 and 4-6. The deadline for entry is February 28, 2012.

[http://siemensscienceday.discoveryeducation.com/enter\\_sweepstakes.cfm](http://siemensscienceday.discoveryeducation.com/enter_sweepstakes.cfm)

### **Urban Waters Grants**

The goal of these Urban Waters Small Grants is to fund research, studies, training, and demonstration projects that will advance the restoration of urban waters by improving water quality through activities that also support community revitalization and other local priorities. The funding is part of EPA's Urban Waters program, which supports communities in their efforts to access, improve, and benefit from their urban waters and the surrounding land. The deadline for proposals is January 23, 2012.

<http://www.epa.gov/urbanwaters/funding/>

### **Volvo Adventure Awards**

In collaboration with the United Nations Environmental Programme, the Volvo Adventure Award rewards environmental activities among the decision makers of the future. Environmental projects are undertaken by teams of young people, ages 13-16, to improve their local environment. The deadline for entry is January 31, 2012.

<http://www.volvoadventure.org/home.aspx>



### **Wildlife Conservation Grants**

Student Wildlife Conservation Grants are offered by the Planet Connect program, a youth engagement initiative of the National Environmental Education Foundation. These grants offer high school students the opportunity to implement wildlife conservation projects in their schools or communities, and participate in a local internship focused on wildlife conservation or natural resources. The deadline for application is February 1, 2012.

<http://planetconnect.org/2012studentgrants>

### **Young Naturalist Awards**

The American Museum of Natural History offers the Young Naturalist Awards, an inquiry-based research competition for students in grades 7-12, to promote participation and communication in science. Students investigate questions they have in the areas of ecology, biology, Earth science, and astronomy and present their findings in an essay. The deadline for entry is March 9, 2012.

<http://www.amnh.org/nationalcenter/youngnaturalistawards/>

### **Young Scientist Challenge**

The Discovery Education 3M Young Scientist Challenge is for students in grades 5-8 who are enthusiastic about science. Students are challenged to make a short video describing a new innovation or solution that could solve or impact an everyday problem. The deadline for submission is April 19, 2012.

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

### **YSA List: The 25 Most Powerful and Influential Young People**

Youth Service America is launching the *YSA List: The 25 Most Powerful and Influential Young People*. The list will recognize 25 young people, ages 5-25, who are making significant, large-scale change in health, education, human service, human rights, and the environment. The deadline for nomination is January 31, 2012.

<http://www.ysa.org/25/list>

## **INTERNSHIPS AND TEMPORARY OPPORTUNITIES**

### **Paid Internships – North Carolina**

Bald Head Island Conservancy offers four internships, May-August 2012: Wildlife Patrol, Sea Turtle Patrol, Environmental Educator, and Kayak Guide/Environmental Educator. The internship program is open to rising juniors, seniors, or recent graduates from accredited colleges or universities, with majors in biology, marine biology, environmental science, education, or a related course of study. The deadline for application is February 10, 2012.

<http://www.bhic.org/summer-intern-opportunities>

## **CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT**

### **AMS Climate Studies Diversity Project Course – Various**

The American Meteorological Society invites minority-serving institutions to offer an introductory-level climate science course, AMS Climate Studies. This course explores the scientific principals governing Earth's climate system, variability, and change, and introduces societal and sustainability challenges. Professional development training is

offered with no cost to designated climate course instructors through an *NSF Opportunities for Enhancing Diversity in the Geosciences Grant* at workshops held in Washington, D.C. and Austin, Texas. The deadline for application is March 15, 2012. <http://www.ametsoc.org/amsedu/online/climateinfo/diversity.html>

#### **CLEAN Interactive Webinars - Online**

The Climate Literacy & Energy Awareness Network (CLEAN) offers free monthly interactive webinars on topics and resources in climate change science. The series will explore current topics and resources for teaching these topics in the classroom, presented by educators and scientists active in the field. Free registration is required. <http://cleanet.org/clean/community/webinars/index.html>

#### **Climate Change Vulnerability Index Webinar - Online**

The Climate Change Vulnerability Index assesses the relative vulnerability of plant and animal species to the effects of climate change using readily available information about climate predictions and species' natural history, distributions, and landscape circumstances. A free webinar, January 19, 2012, will describe the concepts used to develop the index, the climate data sources it draws upon, and the specific assessment factors. It will also demonstrate the use of the assessment and highlight a variety of ways in which it has been applied.

<http://www.natureserve.org/prodServices/climatechange/ccvi.jsp>

Register for the webinar at <https://www1.gotomeeting.com/register/242109593>

#### **Climate Science Research for Educators and Students – New York**

The Institute for Earth Science Research and Education, in collaboration with Queens College/City University of New York, seeks participants for summer professional development workshops in the second year of its *Climate Science Research for Educators and Students* project. This project is funded under NASA's Innovations in Climate Education initiative, and focuses on improving the understanding of sun-Earth-atmosphere interactions in part by helping educators and students develop high-quality, climate-related, science fair projects.

<http://www.instesre.org/GCCE/Agenda2012.htm>

#### **Climate Stewards Education Project**

The goals of NOAA's Climate Stewards Education Project are to provide educators with sustained professional development, collaborative tools, and support to build a climate-literate public that is actively engaged in climate stewardship activities. They seek 40 new educators. Hurry - the deadline for application is January 13, 2012 and applicants are accepted on a first-come, first-served basis.

Contact Bruce Moravchik at [Bruce.Moravchik@noaa.gov](mailto:Bruce.Moravchik@noaa.gov)

#### **DataStreme Ocean - Online**

DataStreme Ocean is a free precollege teacher enhancement program of the American Meteorological Society/NOAA Cooperative Program for Earth System Education. The program explores the ocean in the Earth system with special emphasis on the flow and transformations of water and energy into and out of the ocean; the internal properties and workings of the ocean; interactions between the ocean and the other components of the Earth system; and the human/societal impacts on and response to those interactions. An upcoming course will start January 2012; contact your nearest DS-Ocean LIT (Local Implementation Team) Leader.

<http://ametsoc.org/amsedu/ECS/index.html>

### **EARTH 2012 – North Carolina**

The focus of the 2012 EARTH workshop, July 8-13 in Wilmington, North Carolina, will be on ocean observatories and South East Coastal Research. A requirement of the application process is to trial an EARTH activity and complete a rubric. Ten of the twenty participants will be from SECOORA states (North Carolina, South Carolina, Florida, Georgia). The deadline for application is March 21, 2012.

<http://www.mbari.org/earth/>

### **Environmental Communications for Behavior Change - Online**

This Duke Environmental Leadership course, January 16-February 24, 2012, provides environmental professionals with an introduction to the strategies, methods, and tools of environmental communication that lead to changes in behavior.

<http://www.nicholas.duke.edu/del/executiveeed/courses/environmental-communication-for-behavior-change>

### **Environmental Education Methods - Alaska**

U.S. Fish & Wildlife and partners offer the Environmental Education Methods workshop every 2 years; this year it will be held April 17-20, 2012 in Homer, Alaska. The course helps participants incorporate evaluation strategies into program planning and implementation. Participants also learn how to work with students, teachers, youth groups and their leaders, both on public land and private lands. The deadline for registration is February 6, 2012.

Contact Scott Owen at [Scott\\_T\\_Owen@fws.gov](mailto:Scott_T_Owen@fws.gov)

### **Environmental Education in Urban Communities - Online**

Cornell University's Civic Ecology Lab announces this online course offered through EECapacity, the EPA-funded national environmental education program, February 6-April 29, 2012. The non-credit professional development course will cover novel practices and conceptual frameworks of urban environmental education. The deadline for application is January 22, 2012.

<http://civicecology.org/course-uee.php>

### **LiMPETS Workshops - California**

Educators in the San Simeon, San Francisco, and Monterey Bay areas can learn how to involve their students in hands-on scientific investigations at their local beach or tidepool. These workshops are for teachers, grades 6–college, and educators who are interested in participating in the national marine sanctuary's LiMPETS (Long-term Monitoring and Experiential Training for Students) programs. See the website for workshops, dates, and registration details.

[http://limpetsmonitoring.org/resources\\_workshops.php](http://limpetsmonitoring.org/resources_workshops.php)

### **NASA's Aquarius Educator Webinar Series – Online**

NASA will host a two-part webinar series on the Aquarius/SAC-D Satellite and the science behind what it takes to measure the salinity of the world's oceans, January 17 and 24, 2012.

<http://cosee.umaine.edu/programs/webinars/aquarius/aqwebinarsjan2012/>

### **NMEA 2012 – Call for Proposals**

The deadline for submission of proposals for the 2012 National Marine Educators Conference, *North to Alaska's Seas: a Confluence of Science and Culture*, June 24-28,

2012 in Anchorage, Alaska is February 17, 2012. Conference themes include Science and Art, Science and Culture, Science and Technology, and Large Marine Ecosystem Science and Education.

<http://www.coseealaska.net/nmeaconference2012/>

### **Ocean Awareness Training – Hawai'i**

The Oahu Winter 2012 Ocean Awareness Training Program provides multidisciplinary knowledge of Hawaii's unique marine environment. Workshops will be held on five consecutive Tuesdays, starting January 31, 2012.

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

### **Ocean Exploration Workshops - Various**

NOAA's Ocean Exploration Program and partners offer the Okeanos Explorer Education Materials Collection, Volume 1: Why Do We Explore? Professional Development Workshop 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.

- February 25, 2012 with Dauphin Island Sea Lab on Dauphin Island, Alabama. The deadline for registration is February 10, 2012. Contact Sara Johnson at [sejohnson@disl.org](mailto:sejohnson@disl.org)
- February 25, 2012 with South Carolina Aquarium in Charleston, South Carolina. The deadline for registration is February 10, 2012. Contact Jaime Thom at [jthom@scaquarium.org](mailto:jthom@scaquarium.org)
- March 3, 2012 with Georgia Aquarium, Atlanta, Georgia. The deadline for registration is February 17, 2012. Contact Kim Morris-Zarneke at [kzarneke@georgiaaquarium.org](mailto:kzarneke@georgiaaquarium.org)
- March 10, 2012 with University of South Florida College of Marine Science in St. Petersburg, Florida. The deadline for registration is February 24, 2012. Contact Teresa Greely at [greely@marine.usf.edu](mailto:greely@marine.usf.edu)
- March 17, 2012 with Aquarium of the Pacific in Los Angeles, California. The deadline for registration is March 2, 2012. Contact Alie Lebeau at [alebeau@lbaop.org](mailto:alebeau@lbaop.org)

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

### **Restore America's Estuaries National Conference - Call for Proposals**

Restore America's Estuaries National Conference on Coastal and Estuarine Habitat Restoration, *Restoring Ecosystems, Strengthening Communities*, will take place October 20-24, 2012 in Tampa, Florida. The deadline for submission is February 1, 2012.

<http://program.estuaries.org/>

### **Student Climate Research Campaign Workshop Series – Washington, D.C.**

NASA Langley Research Center, in partnership with the Virginia Air and Space Center, is offering a series of GLOBE Teacher Training Workshops supporting the Student Climate Research Campaign. These free workshops will cover Atmosphere and Climate, Phenology and Climate, and Land Cover and Climate.

<http://science-edu.larc.nasa.gov/GLOBE/training-1.php>

### **Ways of Whales – Washington**

The Orca Network's annual Ways of Whales Workshop, January 28th, 2012 in Coupeville, Washington, addresses a variety of topics important to whale education and conservation.

<http://orcaneetwork.org/news/events.html>

## **EDUCATIONAL RESOURCES**

### **Biodiversity on the Move**

Atlantic Public Media and Eduardo Garcia Milagros offer *One Species at a Time: Stories of Biodiversity on the Move, with the Encyclopedia of Life*, in Google Earth narrated tours. Current podcasts highlight Arctic Terns, invasive Sea Grapes, Bluefin Tuna, and more.

<http://eol.org/collections/14013>

### **The Blu**

The Blu is a new geosocial web application where people connect across the Internet and explore the ocean on the web.

<http://theblu.com/>

### **Carbon Dioxide Aquariums Greenhouse Gas Lesson**

This classroom activity from Portland Community College looks at carbon dioxide and its role in climate change. Students perform an in-class experiment using aquariums; the lesson includes step by step instructions.

<http://www.pcc.edu/about/events/sustainability-training/documents/co2-aquariums-greenhouse.pdf>

### **Discover Water**

The Project WET Foundation offers this educational website for teachers and students. *Discover Water: The Role of Water in Our Lives* is an interactive resource about water and water related topics including the water cycle, ocean, watersheds, water conservation and protection, and more. Educator resources include printable science notebooking pages, classroom activities, assessments, and more.

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

### **Dynamic Earth Resources**

NSTA's Science Class offers a web page with a list of resources for studying The Dynamic Earth.

[http://science.nsta.org/enewsletter/2011-12/web\\_high.htm?utm\\_source=enewsletter&utm\\_medium=email&utm\\_campaign=HSSciClassDecember2011](http://science.nsta.org/enewsletter/2011-12/web_high.htm?utm_source=enewsletter&utm_medium=email&utm_campaign=HSSciClassDecember2011)

### **Geography 4 Kids**

This interactive website from the American Geological Society offers younger learners a chance to discover topics in earth science, meteorology, and general science including earth structure, climates, and more.

<http://www.geography4kids.com/>

### **Global Climate Change Education Resources**

NASA's Challenger Center's Global Climate Change Education project offers five units for classroom teachers, grades 6-9, with a climate-focused event as seen through the lens of four of Earth's interconnected spheres: Lithosphere, Hydrosphere, Biosphere and Atmosphere. Other resources in the lesson plan database include Encounter Earth, Elementary Science, and more.

<http://www.challenger.org/gcce/>

### **Great Science for Girls**

Funded by the National Science Foundation, Great Science for Girls has seven programs operated by intermediary organizations to provide informal opportunities for elementary to high school grade girls to explore science. The website offers sample activities, links to other resources, and more.

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

### **Hurricanes: Science and Society**

The Hurricanes: Science and Society website provides information on the science of hurricanes and their impacts on people, buildings, and the environment. The website has been updated with new, inquiry-based activities about wind in a hurricane, building a coastal home, and utilizing hurricane imagery. In addition, there is a new and updated list of hurricane links for educators. A five-part webinar series will provide participants with an opportunity to listen to top hurricane scientists and will introduce a range of hurricane topics from the basics of hurricane science to advances in forecasting hurricanes to preparing for an approaching hurricane. Check the Resources link for more information about the webinars.

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

### **Investigating the Marine Environment in the 21st Century**

This 13-part resource is designed to help students become more knowledgeable about the marine environment and its resources through emphasis on the Texas coastal zone and the Gulf of Mexico. The activities are designed for both traditional and integrated science courses, but also provide marine activities for social studies, language arts, and mathematics courses or for interdisciplinary thematic units. For a discounted offer, email [sgpublications@seagrants.tamu.edu](mailto:sgpublications@seagrants.tamu.edu).

<http://texas-sea-grant.tamu.edu/online%20publications/marinate.html>

### **Journey of the Butterflies**

The team at PBS's NOVA created this documentary on monarch butterflies migration to a sanctuary in the highlands of Mexico, using a helicopter, ultralight, and hot-air balloon to capture some aerial views along the route. The website offers the complete documentary, transcript, and links for more information.

<http://www.pbs.org/wgbh/nova/nature/journey-butterflies.html>

### **Keely's Mountain**

WGBH Educational Foundation, through Teachers' Domain, offers this self-paced literacy lesson about the power of place for grades 5-12. Students learn about the use of symbolism in literature and examine how places can have symbolic meaning.

<http://www.teachersdomain.org/resource/midlit1.ela.splhope/>

### **Key Concepts in Geomorphology**

With funding from the National Science Foundation and other organizations, a group of geomorphologists based at the University of Vermont are working on a new type of geomorphology textbook. There will be 14 chapters, with additional electronic supplements, images, and more.

<http://www.uvm.edu/~geomorph/textbook/>

### **Louisiana Public Broadcasting Education Website**

Louisiana Public Broadcasting has just launched LPB LearningMedia, an educational website. The website offers links to electronic field trips, streaming videos, webinars, and more, with additional content to be added in the future.

<http://beta.lpb.org/index.php/education/>

### **Many Learning Pathways in the Ocean Science**

This series highlighted ocean scientists sharing strategies for increasing diversity in their community. The archived webinars are available online, in addition to interactive concept maps, related resources, and more.

<http://cosee.umaine.edu/programs/webinars/mlpios/>

### **Marine Debris**

MarineDebris.Info is an online community for sharing knowledge on research, management, and prevention of marine debris. MarineDebris.Info consists of the MarineDebris.Info listserv, an online discussion forum, along with webinars on subjects of interest to the marine debris community.

<http://marineaffairs.org/marinedebris.html>

### **Math in Video Games**

Teachers' Domain offers many STEM resources, including Math in Video Games. After watching a video about using algebra to develop online games, students must use algebraic reasoning to complete videogame challenges involving spaceships and submarines.

<http://www.teachersdomain.org/resource/GTM11.math.algebra.var.splmathvid/>

### **myRefuge App**

This iTunes app from the National Fish and Wildlife Foundation gives users access to maps and information on bird watching, special events, trails, and historic sites in National Wildlife Refuges. It is free for an introductory period.

<http://itunes.apple.com/us/app/id482928719?mt=8>

### **National Geologic Map Database**

This portal provides links to online map indexes of the USGS and other organizations, which can be used to locate, view, or create maps. The maps are available in a wide variety of scales and themes, and cover the United States, many countries, and more.

[http://ngmdb.usgs.gov/ngmdb/ngmdb\\_home.html](http://ngmdb.usgs.gov/ngmdb/ngmdb_home.html)

### **Oil Spill Simulation**

This curriculum was developed by Pacific Education Institute in partnership with the Olympic Coast National Marine Sanctuary, funded through Pacific NorthWest B-WET. The website includes the *Olympic Coast Oil Spill Simulation: An Introduction to Geospatial Analysis through Google Earth* with the .kmz link, in addition to the teaching curriculum.

<https://pacifeducationinstitute.box.com/s/6v4z8pkxs7bfkzr21lvq>

### **Orcas in our Midst**

The Orca Network offers *Volume 3 of Orcas in Our Midst*, focusing on orcas, salmon, and research about the different ecotypes of orcas in the Pacific Northwest and world-wide. They offer special prices for educational organizations and for quantity orders. Orca Network also offers free downloads of the accompanying Student Activity Guide and Volumes 1 and 2.

<http://www.orcanetwork.org/nathist/OIOM1smallest.pdf>

<http://www.orcanetwork.org/nathist/OIOM2006edited.pdf>

<http://www.orcanetwork.org/resources/guides.html>

[http://shop.orcanetwork.org/Orcas\\_In\\_Our\\_Midst\\_p/oiom3.htm](http://shop.orcanetwork.org/Orcas_In_Our_Midst_p/oiom3.htm)

### **Otter Spotter**

Otter Spotter is meant to be a resource for teachers, researchers, students, and zoo visitors who wish to learn about otters. The website offers teacher resources, research, news, and more.

<http://otterspotter.com/>

### **People of NOS**

Students can read interviews with an extensive, and still-growing, list of people working on ocean issues through the *People of NOS* (NOAA Ocean Service) website. Read about the careers of people working on issues of science and research, education, conservation and restoration, and more.

<http://oceanservice.noaa.gov/profiles/welcome.html>

### **Research in Environmental Education**

The EEResearch network is communicating environmental education research to educators, with the goal of improving education programs based on sound research findings. Developed by the Cornell University Civic Ecology Lab and NAAEE's Research Special Interest Group, this blog features research briefs that can be accessed in full.

<http://eelinked.naaee.net/n/eeresearch>

### **Student's Guide to Global Climate Change**

The EPA offers this website for students in grades 6-8. The website covers the science, impacts to society and ecosystems, and solutions to climate change through videos, interactive graphics, and more. Resources for teachers include Tips for Educators and links to additional websites.

<http://www.epa.gov/climatechange/kids/resources/additional.html>

### **SURF Talk Book**

The Summer Undergraduate Research Fellowship (SURF) at the California Institute of Technology is designed to give undergraduate students an opportunity to conduct research under the guidance of leading scientists and engineers. The SURF Talk Book was developed as an aid to their oral presentation requirement. The downloadable book offers advice on how to create a compelling presentation that will capture the audience's attention.

[http://www.murf.caltech.edu/fellows/SURF\\_talk\\_book.pdf](http://www.murf.caltech.edu/fellows/SURF_talk_book.pdf)



### **Sustainability Education Resources**

Shelburne Farms' Sustainable Schools Project offers resources designed to help schools use sustainability as an integrating context for curriculum, community partnerships, and campus practices. Resources include the *Education for Sustainability Starter Kit*, a professional development tool that helps prepare educators and schools to start using sustainability as an integrating theme and to catalyze school change with efficient use of existing resources, through a series of self-guided learning opportunities; Healthy Neighborhoods/Healthy Kids Guide, a civic engagement and service-learning framework that can be used across K-12 grade levels as well as community settings; and more. These resources and much more are available as free downloads from the website.

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

### **Tsunami Aftermath: Tracking Marine Debris**

Debris from the tsunami that devastated Japan last year may reach the U.S. this winter. However, there is still a large amount of uncertainty over exactly what is still floating, where it's located, where it will go, and when it will arrive. Check out this video, podcast, and story from NOAA.

<http://oceanservice.noaa.gov/news/features/dec11/japan-tsunami-debris.html>

### **Virtual Library in Spanish**

This Spanish library provides a compilation of documents in Spanish for environmental educators which include experiences, guidelines, multimedia, educational material, and other helpful information.

<http://www.reambi.org/biblioteca-virtual>

### **Wildlife Refuge Coloring Books, English and Spanish**

The Refuges Washington Office has a few hundred coloring books designed for grades 2-3 which describe the National Wildlife Refuge System. The coloring books are available for free, as long as supplies last. Send your mailing address - no P.O. Box addresses - and phone number to Martha Nudel and tell her how many you would like. Both English and Spanish versions are available, so please specify.

Contact Martha at [Martha.Nudel@fws.gov](mailto:Martha.Nudel@fws.gov)

## **INITIATIVES, JOURNALS, and MORE**

### **Sanctuary Ocean Count – Hawai'i**

Participate in the Sanctuary Ocean Count project, which offers the community a chance to monitor humpback whales from the shores of O'ahu, Hawai'i, and Kaua'i. The count is held during peak whale season on the last Saturdays of January, February, and March. Check the website for details and sign up – it's a blast!

<http://hawaiiumpbackwhale.noaa.gov/involved/ocwelcome.html>

### **Whale Song Project**

You can help marine researchers understand what whales are saying. It's as simple as listening to a large song sound and finding a small one that matches it best.

<http://whale.fm/>

### **Wild Life Employment Resources**

As part of a blog, several students have compiled a list of employment resources to help students and young professionals find employment in the realm of conservation.

<http://futureofconservation.blogspot.com/p/employment-resources.html>