

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

**JANUARY 2011**

This update is funded by the National Marine Sanctuary 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.

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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](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**

### **Mapping Human Uses of the Ocean**

The National Marine Protected Areas Center has published a best practices manual on mapping human uses of the ocean using participatory GIS techniques. The report, *Mapping Human Uses of the Ocean: Informing Marine Spatial Planning Through Participatory GIS*, summarizes the center's mapping approach; provides lessons learned from various participatory mapping projects throughout California, the Northeast, and Hawai'i; and provides insight to the successful planning and implementation of mapping efforts to capture spatial data on human uses of the ocean in different regions and at varying scales.

[http://www.mpa.gov/pdf/helpful-resources/mapping\\_human\\_uses\\_nov2010.pdf](http://www.mpa.gov/pdf/helpful-resources/mapping_human_uses_nov2010.pdf)

## MESSAGE FROM THE BRIDGE

### NMEA Call for Proposals

Bridge-partner, the National Marine Educators Association (NMEA), has announced its call for proposals for the annual NMEA conference taking place June 29-July 2, 2011 in Boston, Massachusetts. Join educators from all over the globe for *Cape to Cape: In the Hub of Marine Education*. The conference agenda includes field trips, three days of concurrent sessions, and special evening events at Thompson Island in Boston Harbor and the New England Aquarium. Strand themes are diverse audiences, partnerships, research and exploration, STEM sensations, stewardship, and traditional knowledge. The deadline for submission is February 18, 2011. For more information please visit the NMEA website, and if you are interested in helping with the conference, please contact Bob Rocha at [brocha@whalingmuseum.org](mailto:brocha@whalingmuseum.org).

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

<http://www.marine-ed.org/bridge>

<http://www.marine-ed.org>

## REQUESTS

### Seeking Articles

The editors of *Current: The Journal of Marine Education* are seeking articles for upcoming general issues on topics related to marine education. They seek original manuscripts that describe research, lessons, resources, or strategies for teaching marine and aquatic lessons to a variety of audiences.

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

## GRANTS AND OPPORTUNITIES

### 21st Century Museum Professionals Grants

The Institute of Museum and Library Services is calling for proposals from museums, museum service organizations, and universities for projects designed to enhance the professional development of museum staff. The 21st Century Museum Professionals grants are intended to have an impact on multiple institutions by reaching broad groups of museum professionals throughout the nation's cities, counties, states, and regions. The deadline for application is March 15, 2011.

<http://www.ims.gov/applicants/grants/21CenturyMuseums.shtm>

### Action for Nature Young Eco-Hero Awards

Action for Nature seeks applications from students 8-16 for its International Young Eco-Hero Awards program. The awards program recognizes the individual accomplishments of young people whose personal actions have significantly improved the environment. Projects must concern advocacy, environmental health, research, or protection of the natural world. The deadline for application is February 28, 2011.

[http://www.actionfornature.org/?page\\_id=190](http://www.actionfornature.org/?page_id=190)

### American Honda Foundation Grants

The American Honda Foundation makes grants to K-12 schools, colleges, universities, trade schools, and others for programs that benefit youth and scientific education, and programs pertaining to academic or curriculum development that emphasize innovative educational methods and techniques. The foundation seeks programs that are scientific,

creative, humanistic, innovative, and more. Grants are awarded on a quarterly basis, with deadlines of November 1, February 1, May 1, and August 1 each year.

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

### **Amgen Award for Science Teaching Excellence**

The Amgen Award for Science Teaching Excellence is an annual awards program that recognizes extraordinary contributions by educators across the United States, Puerto Rico, and Canada who are elevating the level of science literacy through creativity in the classroom and motivation of students. The deadline for application is February 11, 2011. See the website for eligibility details.

<http://www.amgen.com/citizenship/aaste.html>

### **Bommies Award**

The Great Barrier Reef Foundation's Bommies Award is given for an innovative concept to preserve the Great Barrier Reef in the face of climate change. Applicants are asked to demonstrate innovative thinking, a willingness to work with different collaborators across a broad spectrum of disciplines and experience, and a commitment to addressing the challenges of climate change on coral reefs. The contest is open to any PhD student or early career researcher under the age of 36 years regardless of nationality. The deadline for application is February 18, 2011.

<http://www.barrierreef.org/ResearchVision/GeneratingNewIdeasTheBommiesAward.aspx>

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### **Braitmayer Foundation Education Grants**

The Braitmayer Foundation offers grants to fund a broad range of K-12 education programs with curricular reform initiatives and professional development opportunities for teachers. The grants can be used as seed money, challenge grants, or to match other grants to the recipient organizations. Note that the revolving deadlines for application have been changed. The next deadline for application is March 15, 2011.

<http://www.braitmayerfoundation.org/guid.cfm>

### **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. The deadline for pre-proposals is January 14, 2011. Non-Federal cash or in-kind match is required.

[http://www.nfwf.org/AM/template.cfm?section=charter\\_programs\\_list&template=/CM/ContentDisplay.cfm&ContentID=17910](http://www.nfwf.org/AM/template.cfm?section=charter_programs_list&template=/CM/ContentDisplay.cfm&ContentID=17910)

### **Celebrate Urban Birds Mini-Grants**

The Cornell Lab of Ornithology offers mini-grants to support the organization of community Celebrate Urban Birds events. The deadline for application is February 15, 2011.

<http://www.birds.cornell.edu/celebration/community/minigrants/mini-grants-2011/2010-mini-grants-1>

### **Classroom Earth Professional Development Grants**

Classroom Earth's 2011 Professional Development Grants enable middle and high school teachers to take one six-week online course offered by the Wildlife Conservation Society. The course will facilitate scientific learning and equip teachers to bring wildlife

conservation into the classroom and connect students with their natural surroundings. The deadline for application is February 1, 2011.

<http://www.classroomearth.org/2011wcgrants>

### **Coastal Management Fellowship Program**

NOAA's Coastal Services Center's Coastal Management Fellowship provides on-the-job education and training opportunities in coastal resource management and policy for postgraduate students, and project assistance to state coastal zone management programs. The program matches postgraduate students with state coastal zone programs to work on projects proposed by the state and selected by the fellowship sponsor. The deadline for application is January 28, 2011.

<http://www.csc.noaa.gov/cms/fellows.html>

### **Danielle de St. Jorre Scholarship**

The International Ocean Institute presents an annual scholarship for one woman from Small Island Developing States (SIDS) involved in marine related research activities, to improve her knowledge in the subject by attending training or a university degree program. The deadline for application is January 21, 2011.

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

### **Do Something Awards**

DoSomething.org honors the nation's best young world-changers, age 25 and under. Do Something Award nominees and winners represent pivotal doers in their field, cause, or issue. The deadline for nomination is March 1, 2011.

<http://www.dosomething.org/programs/awards>

### **Ecybermission Competition**

Ecybermission is a web-based math, science, and technology competition for students in grades 6-9. Students compete for regional and national awards while working to solve problems in their community. Hurry - the deadline for registration is January 7, 2011.

<https://www.ecybermission.com/public/Login.aspx>

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

The Endangered Species Day Art Contest provides students with an opportunity to learn about endangered species and express their knowledge and support through artwork. The art contest is an integral part of the annual national Endangered Species Day, celebrated on May 20, 2011. The deadline for entry is March 15, 2011.

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

### **Endangered Species Program Grants**

The Cooperative Endangered Species Conservation Fund provides grants to States and Territories to participate in a wide array of voluntary conservation projects for candidate, proposed, and listed species. The program provides funding for species and habitat conservation actions on non-Federal lands; a non-Federal match is required. The deadline for application is January 18, 2011.

<http://www.fws.gov/angered/grants/>

### **Every Day Grants**

Public Lands Every Day Capacity Building Grants from the National Environmental Education Foundation, with support from Toyota Motor Sales USA, Inc. are intended to help strengthen nonprofit public lands support groups, enabling them to do more to

connect their communities to the land. Twenty Every Day 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 30, 2011.

[http://neefusa.org/grants/every\\_day\\_grants\\_2011.htm](http://neefusa.org/grants/every_day_grants_2011.htm)

### **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 14, 2011.

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

### **Gannett Foundation Community Action Grants**

The Gannett Foundation Community Action Grants support local groups involved in education and neighborhood improvement, economic development, youth development, community problem-solving, assistance to disadvantaged people, environmental conservation, and cultural enrichment. Grant applications are reviewed twice a year; the next deadline for application in most areas is February 16, 2011.

<http://www.gannettfoundation.org/guidelines.htm>

### **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. Applicants should be enrolled at a university within the United States. 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)

### **Get Green Video Contest**

Planet Connect, in partnership with the Leaders of Environmental Action Films, announces the 2011 Get Green Video Contest. High school students are asked to show their connection to the oceans. The deadline for entry is February 23, 2011.

<http://www.planet-connect.org/2011getgreen>

### **Grant Calendar**

The Mt. Baker-Snoqualmie National Forest offers this grant calendar on a new website (it's worth checking the long link). The calendar provides staff and partners easy access to the latest funding opportunities for forest-related issues within western Washington. As these issues may include global climate change, habitat restoration, open space conservation, historical preservation, environmental education, and urban community outreach, readers of this newsletter may find useful information here. Periodic notifications of upcoming grant deadlines are distributed through email. In addition to the calendar, there is a great listing with links to supplemental grant information.

[http://www.fs.usda.gov/wps/portal/fsinternet!/ut/p/c5/04\\_SB8K8xLLM9MSSzPy8xBz9CP0os3gjAwhwtDDw9\\_Al8zPwhQoY6leDdGCqCPOBqwDLG-AAjgb6fh75uan6BdnZaY6OiooA1tkqIQ!!/dl3/d3/L2dJQSEvUUt3QS9ZQnZ3LzZfME80MEkxVkfCOTBFMktTNVVJNDawMDawMDA!/?navtype=BROWSEBYSUBJECT&cid=fsbdev7\\_001659&navid=14000000000000&pnavid=null&ss=110605&position=Not%20Yet](http://www.fs.usda.gov/wps/portal/fsinternet!/ut/p/c5/04_SB8K8xLLM9MSSzPy8xBz9CP0os3gjAwhwtDDw9_Al8zPwhQoY6leDdGCqCPOBqwDLG-AAjgb6fh75uan6BdnZaY6OiooA1tkqIQ!!/dl3/d3/L2dJQSEvUUt3QS9ZQnZ3LzZfME80MEkxVkfCOTBFMktTNVVJNDawMDawMDA!/?navtype=BROWSEBYSUBJECT&cid=fsbdev7_001659&navid=14000000000000&pnavid=null&ss=110605&position=Not%20Yet)

[%20Determined.Html&ttype=detailfull&pname=Mt.%20Baker-Snoqualmie%20National%20Forest-%20Working%20Together](#)

### **Green Cup Challenge**

The National Green Cup Challenge is a student-driven inter-school energy project, encouraging schools to measure and reduce campus electricity use and greenhouse gas emissions. It also supports other greening efforts, including recycling and water conservation. The deadline for entry is February 18, 2011.

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

### **Green Prize in Public Education**

The National Environmental Education Foundation, with support from the National Education Association Foundation and in partnership with EarthEcho International, invites public schools to demonstrate how they have successfully taken on the challenge of becoming a green school in an innovative, sustainable and replicable way. The deadline for entry is February 15, 2011.

[http://www.neefusa.org/grants/green\\_prize/](http://www.neefusa.org/grants/green_prize/)

### **Grosvenor Teacher Fellow Program**

The Grosvenor Teacher Fellow Program gives six K-12 classroom teachers and/or nonformal educators from the U.S., Canada, and Puerto Rico the opportunity to travel aboard the *National Geographic Explorer* to Arctic Svalbard. The deadline for application is January 15, 2011.

[http://www.expeditions.com/Grosvenor\\_Teacher\\_Fe674.asp?](http://www.expeditions.com/Grosvenor_Teacher_Fe674.asp?)

### **Gulf of Mexico Regional Funding Opportunity**

NOAA, the Gulf of Mexico Sea Grant programs, and E.P.A's Gulf of Mexico Program announce a request for pre-proposals as the first step in the review process to identify one- or two-year projects to address priority coastal issues in the Gulf of Mexico region for 2012-2013 funding. Areas of opportunity include Coastal Storms Program; Ecosystem Services Valuation; and Sea-Level-Rise Data, Products, and Tools. The deadline for pre-proposals is February 25, 2011.

<http://masgc.org/page.asp?id=609>

### **Innovation Awards**

PBS Teachers Innovation Awards recognize teachers who use innovative and effective methods of teaching in their classroom. Submissions include a video clip showing a demonstration of innovation with students (inside or outside of a classroom) or an innovative project that was the result of an instructional activity conducted. The video should clearly demonstrate how a PBS resource was used or modified to enhance the lesson or project. The deadline for submission is March 31, 2011.

<http://www.pbs.org/teachers/innovators/>

### **Innovations in Global Climate Change Education**

The goals of this project are to use NASA's contributions to climate and Earth systems science, through collaboration with minority institutions, to improve the quality of the STEM education; to increase the level of climate literacy and engagement of the U.S. public; and create a diverse, highly skilled and motivated future workforce in climate related sciences. Proposals will be accepted from minority higher education institutions, community colleges, public school districts with high under-represented/under-served enrollment, and/or non-profit organizations with a substantial history of working with



under-represented communities. Check the solicitation for complete details. The deadline for the notice of intent to apply is January 27, 2011.

<http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solld=%7BD47D7CD-C7CE-5BB5-C657-D40F86748010%7D&path=open>

### **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 17, 2011.

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

### **J/aRT Contest**

Students can submit entries for the J/aRt Contest featuring artwork that focuses on the deep sea microbes and microbiology work of the research vessel, *JOIDES Resolution* and her scientists and crew. Prizes include a visit to the winning school by members of the JR team. The deadline for submission is January 31, 2011.

<http://joidesresolution.org/node/446>

### **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 18, 2011. Contact your state Sea Grant program director.

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

### **Lowe's Toolbox for Education Grants**

The Lowe's Toolbox for Education offers grants to schools and parent/teacher groups across the United States. School projects should encourage parent involvement and build stronger community ties. The next deadline for application is February 18, 2011.

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

### **National Preservation Awards**

Each year the National Trust for Historic Preservation celebrates the best of preservation by presenting National Preservation Awards to individuals and organizations whose contributions demonstrate excellence in historic preservation. Check the website for the different award categories. The deadline for nomination for all awards is February 17, 2011.

<http://www.preservationnation.org/take-action/awards/>

### **NMEA Awards**

The National Marine Educators Association Awards honor educators and individuals who have shown exceptional leadership in the field of marine education.

- Outstanding Teacher Award - For educators who have shown effective and innovative classroom teaching at all levels.
- James Centorino Award - For individuals who have shown distinguished performance in marine education by professionals not in the classroom setting.
- Marine Education Award - For outstanding leadership and work in any aspect in marine education on the local, regional, or national level.

The deadline for nomination is April 1, 2011.

<http://www.marine-ed.org/docs/nomform.pdf>

### **NMEA Stipends and Scholarships**

NMEA's Expanding Audience Committee is seeking nominations for the 2011 Expanding Audience Stipend Awards, which aims to recruit and assist individuals from groups underrepresented in science or those who serve underrepresented or underserved audiences, to become a part of the NMEA family. The deadline for nomination is April 15, 2011. The deadline for nomination for the Traditional Knowledge Stipend is April 1, 2011. The deadline for application for the Scholarship program to attend the annual conference is March 1, 2011.

<http://www.marine-ed.org/scholarships-stipends.html>

### **Northrop Grumman Foundation STEM Grants**

The Northrop Grumman Foundation contributes to non-profit organizations for educational initiatives that promote the advancement of science, technology, engineering, and math on a national level. Check the website for details.

<http://www.northropgrumman.com/corporate-responsibility/corporate-citizenship/foundation-grant-guidelines.html>

### **Science and the Public Fellows Program**

The Society for Science & the Public Fellows Program provides funds and training to selected U.S. science and math teachers who serve under-resourced students, to enable interested and motivated students to perform high-quality independent scientific research. Fellows may serve up to four years. The deadline for application to the program is January 17, 2011.

<http://www.societyforscience.org/outreach>

### **Staples Urban Environment Challenge**

The Staples Foundation for Learning and Earth Force encourage students in urban communities in grades 5-9 to take action on pressing local issues created by global climate change, through a service learning project in their community. Projects must involve 10 or more students, and 60 percent of the student population must qualify for free or reduced lunch. Check the website for eligible cities. The deadline for registration is January 31, 2011.

<http://earthforce.org/section/programs/uec>

### **Teaching Ambassador Fellowship**

The U.S. Department of Education's Teaching Ambassadors are outstanding teachers who have a record of leadership, strong communication skills, and policy insight who work for one year for the U.S. Department of Education, either full-time in Washington, D.C., or part-time in their home states. The Teaching Ambassador Fellowship supports the Department's mission by enabling a cadre of teachers from across the country to learn more about and contribute their classroom expertise to the national dialogue and in turn facilitate discussions with educators across the country. The deadline for application is January 17, 2011.

<http://www2.ed.gov/programs/teacherfellowship/index.html>

### **Toshiba America Foundation Grants**

Toshiba America Foundation Grants support innovative projects designed by math and science teachers to make their own classrooms more exciting and successful for



students. Grade 6-12 applications for \$5,000 or less are accepted on a rolling basis throughout the calendar year. Larger grant requests are reviewed twice a year, with the next deadline for application of February 1, 2011.

<http://www.toshiba.com/taf/612.jsp>

#### **Urban Bird Treaty Cities Challenge Grants.**

Based on a competitive grants proposal process, chosen cities are awarded U.S. Fish & Wildlife Service challenge grants. The Urban Bird Treaty city is challenged to raise an amount equal to or greater than the amount of funds awarded by the grant; the matching support must be of non-federal origin. The deadline for application is January 31, 2011.

<http://www.fws.gov/migratorybirds/urbantreaty.html>

#### **Youth Environmental Symposium - Georgia**

Middle and high schools, as well as student clubs, throughout Georgia are invited to take part in the annual Youth Environmental Symposium, a statewide environmental competition sponsored by the Georgia Conservancy, February 25, 2011 in Atlanta, Georgia. The goal of the symposium is to develop knowledgeable, dedicated, and interested students who are more aware of the environment. The deadline for submission is January 20, 2011.

<http://eeingeorgia.org/resource/about.aspx?s=91564.0.0.4863>

## **INTERNSHIPS AND TEMPORARY OPPORTUNITIES**

#### **Graduate Assistantship - Wisconsin**

The Central Wisconsin Environmental Station Graduate Assistantship is an opportunity for those interested in gaining teaching, mentoring, and supervisory experience in the environmental education field while pursuing a Masters in Environmental Education and Interpretation. The assistantship is a two-year commitment beginning May 31, 2011. Applications are currently under review; apply as soon as possible before March 31, 2011.

[http://www.uwsp.edu/cnr/cwes/graduate\\_assistantship.aspx](http://www.uwsp.edu/cnr/cwes/graduate_assistantship.aspx)

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

#### **American Fisheries Society Annual Meeting – Washington**

The theme of the American Fisheries Society Annual Meeting, September 4-8, 2011 in Seattle, Washington, is *New Frontiers in Fisheries Management and Ecology: Leading the Way in a Changing World*. The deadline for proposals is January 14, and for papers is February 11, 2011.

<http://afs.confex.com/afs/2011/cfp.cgi>

#### **Climate Change Courses - Online**

The State University of New York's College of Environmental Science and Forestry is offering two online courses on climate change. Climate Change Science and Sustainability, March 21-May 6, 2011 introduces participants to climate science, the evidence of modern climate change, and an evaluation of some of the proposed solutions. Climate Change Science and Environmental Meteorology, January 18-May 11, 2011 is a more in-depth examination of climate science and climate change through a basic meteorological perspective.

<http://www.esf.edu/esfonline/>

### **Coastal Waters Institute - Texas**

Artist Boat, with funding from NOAA's B-WET program, offers this free professional development for teachers in grades 7-8. The Coastal Waters Institute is a five-day program with different sessions available June-August, offering teachers the opportunity to get hands-on, feet-wet training in art, science, social studies, English and math. Check the website for areas served and contact information. Space is limited.

<http://www.artistboat.org/coastal-waters-institute-for-art-science-and-math.html>

### **International Marine Conservation Congress**

The deadline for early registration for the 2nd International Marine Conservation Congress, Making Marine Science Matter, May 14-18, 2011 in Victoria, British Columbia, Canada, is February 15, 2011.

<http://www.conbio.org/IMCC2011/>

### **Marine Education Workshop - Florida**

This Marine Education Workshop from Newfound Harbor Marine Institute, February 18–February 21, 2011 in Big Pine Key, Florida, will offer the opportunity to study a variety of subjects within the Florida Keys National Marine Sanctuary, including coral ecosystems, mangrove islands, sponge and sea grass beds, and algal shoals.

<http://www.nhmi.org/tchwshp.htm>

### **Misconceptions About Climate Changes - Online**

This webinar, January 21, 2011, will identify common misconceptions held by students, and will offer pedagogic strategies for handling various types of misconceptions in the college classroom. Registration is free, but limited to 20 participants. For those who cannot attend, the presentation file, related references, and a webcast of this session will be available after the event.

<http://serc.carleton.edu/NAGTWorkshops/climatechange/webinar/jan.html>

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

NOAA's Ocean Exploration Program and partners offer 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.

- February 26, 2011 with Georgia Aquarium in Atlanta, Georgia, a follow-up Learning Ocean Science through Ocean Exploration workshop. The deadline for registration is February 11, 2011. Contact Kim Morris-Zarneke at [kzarneke@georgiaaquarium.org](mailto:kzarneke@georgiaaquarium.org)
- February 26, 2011 with Dauphin Island Sea Lab on Dauphin Island, Alabama, a follow-up Learning Ocean Science through Ocean Exploration workshop. The deadline for registration is February 11, 2011. Contact Sara Johnson at [sejohnson@disl.org](mailto:sejohnson@disl.org)
- March 5, 2011 with Nauticus, The National Maritime Center in Norfolk, Virginia, a follow-up Learning Ocean Science through Ocean Exploration workshop. The deadline for registration is February 18, 2011. Contact Jennifer Tabor at [jennifer.tabor@norfolk.gov](mailto:jennifer.tabor@norfolk.gov)
- March 5, 2011 with Birch Aquarium at Scripps in San Diego, California, a follow-up Learning Ocean Science through Ocean Exploration workshop. The deadline for

registration is February 18, 2011. Contact Adrienne Marriott at [Creec9a@hotmail.com](mailto:Creec9a@hotmail.com)

- March 26, 2011 with National Aquarium in Baltimore, Maryland. Why Do We Explore?, an introductory professional development workshop for teachers. The deadline for registration is March 11, 2011. Contact Joe Harber at [Jharber@aqua.org](mailto:Jharber@aqua.org)
- March 26, 2011 with Audubon Aquarium of the Americas in New Orleans, Louisiana, a follow-up Learning Ocean Science through Ocean Exploration workshop. The deadline for registration is March 11, 2011. Contact Tricia LeBlanc at [tleblanc@AudubonInstitute.org](mailto:tleblanc@AudubonInstitute.org)

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

### **Our Changing Oceans – Washington, D.C.**

Join scientists, professionals, policy makers, students, and other to share perspectives and develop action-oriented recommendations, new initiatives, and other outcomes to improve our stewardship of oceans and their resources. The National Council for Science and the Environment will present the 11th National Conference on Science, Policy and the Environment: *Our Changing Oceans*, January 19-21, 2011 in Washington, D.C. Webcasting of special sessions is available for a reduced rate.

<http://communities.earthportal.org/ncseoceans2011/>

### **Seminars on Science - Online**

Registration is open for the spring sessions of Seminars on Science from the American Museum of Natural History. Courses are co-taught by an experienced classroom teacher and a research scientist. Upcoming courses include The Diversity of Fishes, The Ocean System, Water, Climate Change, and more. Spring Session 1 runs January 24–March 6, 2011; the deadline for registration is January 10, 2011. Spring Session 2 runs March 14–April 24 2011; the deadline for registration is February 28, 2011.

<http://www.amnh.org/learn/>

### **Shipwrecks and Maritime Landscapes of the Great Lakes - Michigan**

Thunder Bay National Marine Sanctuary and Alpena Community College offer the chance to attend *United by Water: Exploring American History through the Shipwrecks and Maritime Landscapes of the Great Lakes*, July 17-23 and July 24-30, 2011 in Alpena, Michigan. The program is part of Landmarks of American History and Culture Workshops, offered by the National Endowment for the Humanities to provide community college faculty with the opportunity to engage in intensive study and discussion of important topics and issues in American history and culture, while providing them with direct experiences in the interpretation of significant historical and cultural sites and the use of archival and other primary evidence. The deadline for application is March 1, 2011.

<http://www.alpenacc.edu/shipwrecks/application.html>

## **EDUCATIONAL RESOURCES**

### **5 Gyres**

Together with their partners Pangaea Explorations and Algalita Marine Research Foundation, 5 Gyres organizes research expeditions, inviting scientists, journalists, and others to join the crew. The crews conduct research and communicate about the global impact of plastic pollution in the world's oceans and employ strategies to eliminate the

accumulation of plastic pollution in the five subtropical gyres. They use multimedia outlets and peer-reviewed publications including print and television media; websites and blogs; lectures and school outreach; and a traveling exhibition about plastic pollution to museums, science centers, and aquariums to teach about marine debris.

<http://5gyres.org/>

### **A Community on Ecosystem Services**

The conference, A Community on Ecosystem Services, highlighted the broad interdisciplinary nature of research and applications of ecosystem services and the need to combine ecological, geographic, social, economic, and institutional information and models for resource management, conservation, restoration, and development decisions. In general, the sessions focused on placing monetary value and developing markets for ecosystem services, and the science of valuing services (often non-market, non-dollar) for use in management. The website offers downloadable abstracts and will post videos from the plenary sessions and some of the concurrent sessions.

<http://www.conference.ifas.ufl.edu/aces/>

### **Archeology Twitter Feed**

The NPS Archeology twitter feed highlights projects, accomplishments, and news items related to archeology in national parks, other federal archeology projects, and general interest archeology news. It emphasizes content related to archeology performed in parks, with NPS funds, or by NPS personnel.

<http://twitter.com/NPSArcheology>

### **C-MORE Teacher Resources**

The Center for Microbial Oceanography offers a variety of science kits with lesson plans and materials for hands-on science activities in a self-contained format, for distribution within Hawai'i. Each kit provides the information and supplies necessary for educators to teach their students about a particular topic in oceanography. The website offers the lesson plans for downloading, along with many more resources. Topics include ocean acidification, marine debris, random sampling, and more.

[http://cmore.soest.hawaii.edu/education/teachers/science\\_kits.htm](http://cmore.soest.hawaii.edu/education/teachers/science_kits.htm)

### **Caribbean Sea Grant Publication Database**

The University of Puerto Rico Sea Grant Program has developed a research program focused on conservation and management of marine and coastal resources in the Caribbean. The website includes a publication and information database with peer-reviewed articles, white papers, and more, specific to marine and coastal resources in the Caribbean. Check out *How to use our Publication Database* before use.

<http://seagrantpr.org/caribbean/how-to-use-our-publication-database/>

### **Climate Reel**

Climate Reel offers a collection of NASA's videos and visualizations of climate change. The website highlights popular videos and offers lists of videos organized by theme. Each video explores a different aspect of climate change, and encourages the viewer to explore the topic further.

<http://climate.nasa.gov/ClimateReel/>

### **Coral Disease Database**

The Global Coral Disease Database supports coral reef science, management, and decision-making communities in the collation, storage, and liberation of coral disease

data. The project aims to collate information on the global distribution of coral diseases in order to contribute to the understanding of coral disease prevalence. The user-driven, publicly accessible web portal allows users to view and share coral disease data, as well as access information about coral diseases, disease identification, and coral disease monitoring best-practices.

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

### **Coral Hub**

The Coral Hub website provides free coral identification resources, especially for Indo Pacific coral genera. A main resource on the website is the Coral Finder Toolkit, offering motivated persons the opportunity to teach themselves how to identify Indo Pacific coral genera regardless of the myriad growth forms expressed by these species. The website has video training and self testing resources, a genus index, and more.

<http://www.coralhub.info/>

### **COSEE News**

The Centers for Ocean Sciences Education Excellence (COSEE) Network is pleased to announce three new Centers: COSEE Florida, COSEE OCEAN, and COSEE TEK. Find out more by reading the About Us pages on the COSEE.net website. To follow these and other developments, sign up for COSEE Network News. While on the website, check out the resources for educator links.

<http://www.cosee.net/about/cnn/>

### **COSEE-West Resources**

COSEE-West distributes supplemental resources to educators during lectures and workshops, many of which are available electronically on their website. Materials include bibliographies, a video list, lectures, educational activities, and much more. Topics range from chemistry to coral reefs, weather and climate to fisheries, and much more. Resources are constantly being added – check back here often.

<http://www.usc.edu/org/cosee-west/resources.html>

### **Dynamic Bird Migration Maps**

eBird, a joint project of the Cornell Lab and Audubon, with the help of bird watchers and high-performance computing, has released fifteen dynamic maps capturing the ebb and flow of bird migration. See the maps in action, and check out the other resources on the website, including links to games, news, and more.

<http://ebird.org/content/ebird/news/ebird-animated-occurrence-maps>

### **ES 2000: Endangered Species of the Next Millennium**

This student-designed website provides an overview of endangered species issues, including definitions, background on biological classification, and history of extinction. The website outlines causes of population decline and provides case studies. There is an A-Z listing of endangered species, multimedia, facts, and more.

<http://library.thinkquest.org/25014/english.index.shtml>

### **Galveston Bay Environmental Curriculum**

Artist Boat Eco-Art educators developed these lessons, activities, and practicum with funding from the Texas Education Agency and NOAA's B-WET program. The lessons are available online for downloading. Lessons include background information, pre-lessons, post-lessons, and extension activities in art, science, social science, and more. Be sure to check out the many other resources available on this website.

[http://www.artistboat.org/Galveston\\_curriculum.html](http://www.artistboat.org/Galveston_curriculum.html)

### **Guide to Our Oceans**

The Nature Conservancy Magazine's Winter 2010 issue offers this online introductory Guide to Our Oceans. The website offers additional links for more in-depth information about each topic. Archives of past issues of the Nature Conservancy Magazine include features on Fish and Tradition, coral, mangroves, fire, and much more.

<http://www.nature.org/magazine/winter2010/features/art32763.html>

### **Interdisciplinary Climate Change Education Modules**

The National Council for Science and the Environment has developed a curricular package using NASA data and web materials for an undergraduate general education course on climate change. A series of eight self-contained modules is available on this Encyclopedia of Earth website. Educators will have access to a parallel web portal to assist in course development and an additional web portal permitting communication among students at participating institutions.

[http://www.eoearth.org/article/NCSE-NASA\\_Interdisciplinary\\_Climate\\_Change\\_Education](http://www.eoearth.org/article/NCSE-NASA_Interdisciplinary_Climate_Change_Education)

### **LSI: Attack of the Alien Invaders**

*LSI: Life Science Investigation - Attack of the Alien Invaders* uses the news story of the potential Asian carp invasion of the Great Lakes to interest students in life science.

This collection of nine multimedia resources provides teachers and students access to real scientists and science practices used in the field to manage and control invasive species and to monitor ecosystem health.

<http://www.wviz.org/lis>

### **National Snow and Ice Data Center**

The National Snow and Ice Data Center researches the cryosphere, and this website offers information on their work on the world of ice and snow. The website offers links to information about Sea Ice, Snow, Glaciers, Arctic Climate, and more. To stay relatively warm on these cold winter nights, check out the Photo Gallery, with photos of blizzards, snow phenomena and formations, and more.

<http://nsidc.org/cryosphere/>

### **NEON**

The NASA Educators Online Network (NEON) is a learning community developed by NASA's Aerospace Education Services Project and managed by Penn State University's College of Education. The network allows teachers to collaborate with scientists, engineers, and other STEM educators to help support their classroom work. The goal of the network is to help K-12 teachers and STEM professionals find each other based on expertise, needs, and interests; learn from and support each other; find teaching, learning, and professional development resources; and more. Free registration is required.

<http://neon.psu.edu/>

### **Ocean-Climate Website**

The World Ocean Observatory, in collaboration with the Global Forum, has created a website to address the interrelation between ocean and climate. The website includes video interviews, online links and resources, a news feed, and an interactive forum for comment.



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

### **Ocean Podcasts**

NOAA's National Ocean Service Communications and Education Division celebrated the launch of their 100th audio podcast episode. Check out *Making Waves* and *Diving Deeper*; subscribe to the service, and check the archive for any missed episodes.

<http://oceanservice.noaa.gov/podcast.html>

### **Our Ocean Space**

The World Ocean Observatory has launched Our Ocean Space, a web-based network for the exchange of ocean related projects—art, audio-visual presentations, and other formats—created and uploaded by students and teachers to share with their counterparts worldwide. The intent is to link together young people through their understanding and interpretation of ocean systems.

<http://thew2o.net/our-ocean-spaces>

### **PolarConnect**

PolarTREC (Teachers and Researchers Exploring and Collaborating) will offer PolarConnect live online presentations throughout January, 2011. These free National Science Foundation-funded events connect participants to scientists working in Antarctica. Each event is also archived for downloading and later viewing. Free registration is required.

<http://www.polartrec.com/polar-connect>

### **Science Comedian, Lab Out Loud**

Brian Malow is a science comedian and video correspondent for Time.com. Check out the Lab Out Loud YouTube clips about walking into a bar (“Bacteria walk into a bar. The bartender says, ‘We don’t serve bacteria here.’ The bacteria say, but we’re staph.”) and evolution. And while you’re spending time with these short clips, check out the rest of the Lab Out Loud episodes.

<http://laboutloud.com/2010/12/episode-55-science-comedian-brian-malow/>

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

<http://laboutloud.com/>

### **Scientists Making an Impact**

Scientists working with COSEE generate and disseminate research-based programs, tools, publications, and other intellectual property in educational settings. This website will introduce you to scientists who are achieving broader impacts for their research through their involvement with COSEE's education and outreach programs. Three of the case studies are complete; check back often for further profiles.

[http://www.cosee.net/engaging\\_scientists/](http://www.cosee.net/engaging_scientists/)

### **Smithsonian Lesson Plans**

Smithsonian lesson plans emphasize inquiry-based learning using primary sources and museum collections. Each plan is print-friendly and provides all the materials needed—photographs, reproductions, handouts, activities, suggested strategies, standards information, and additional online resources. Browse lesson plans by subject area or search by grade levels and keywords. Check out *Tale of a Whale and Why It Can Be Told*, *Tomorrow's Forecast: Oceans and Weather*, and more.

[http://www.smithsonianeducation.org/educators/lesson\\_plans/lesson\\_plans.html](http://www.smithsonianeducation.org/educators/lesson_plans/lesson_plans.html)

### **Solutions for The Oceans**

*Solutions* is a nonprofit print and online publication dedicated to showcasing ideas for solving the world's integrated ecological, social, and economic problems. *Solutions for The Oceans* is a special issue of the magazine inspired by a meeting at the Smithsonian to get *Beyond the Obituaries* and look for marine solutions. It will be published mid-January.

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

### **St. Petersburg Coastal and Marine Science Center**

The research programs of the St. Petersburg Coastal and Marine Science Center have a primary focus of investigating processes related to coastal and marine environments and societal implications related to natural hazards, resource sustainability, and environmental change. The website offers links to podcasts, publications, data sets, and more. Check out *Corals: A 50-Year Photographic Record of Change*; *SHARQ*; and more.

<http://coastal.er.usgs.gov/>

### **Student Experiments at Sea**

This interdisciplinary curriculum introduces the scientific process, experimental design, and data analysis. The website offers downloadable units on plate tectonics, hydrothermal vents, ridge visualization, and surveying deep sea organisms.

[http://www.ridge2000.org/SEAS/for\\_teachers/curriculum/index.html](http://www.ridge2000.org/SEAS/for_teachers/curriculum/index.html)

### **Voices of the Bay**

Voices of the Bay is a place-based fisheries education program for students (grades 7-12 and community colleges) that encourages harbor field trips and fishermen oral interview activities by students. The downloadable curriculum focuses on California but can be adapted for other regions. The modules are Balance in the Bay, From Ocean to Table, and Capturing the Voices of the Bay.

<http://sanctuaries.noaa.gov/education/voicesofthebay.html>

### **Why Do We Explore?**

The NOAA Office of Ocean Exploration and Research announces the first module of the Okeanos Explorer Education Materials Collection. The materials collection is being developed to encourage educators, students, and citizen scientists to become personally involved with the voyages and discoveries of America's first Federal ship dedicated to Ocean Exploration. The modules, How Do We Explore? and What Do We Expect to Find? will follow. Materials for each theme will include a Leader's Guide for Classroom Explorers, background information, links to resources, and an overview of recommended lesson plans.

<http://oceanexplorer.noaa.gov/okeanos/edu/welcome.html>

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

### **Tax Relief for Teachers**

The tax bill includes provisions that may be of interest to teachers. The bill extends for two years a \$250 deduction for elementary and secondary school professionals for expenses incurred for books, supplies, and other equipment used in the classroom

<http://www.americantaxrelief.goodarticlesite.com/teachers-and-students-save-your-receipts-for-back-to-school-shopping/>