

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

MAY 2010

This update is funded by the National Marine Sanctuaries Foundation in partnership with NOAA's Ocean Exploration and Research Program, with additional support from NOAA's Office of Education and the National Marine Protected Areas Center, to share information pertinent to the marine educator community. It is intended to encourage exchange of information and programs. We hope that it will also promote collaboration among the different educators addressing similar issues in their programs.

Please share this email with your colleagues and constituents. If you request materials or respond to a request for information, please mention that you learned about it from NOAA's Information Exchange.

The information included here has been compiled from many different sources, including EE-NEWS@NAAEE, EEinGEORGIA, the Scout Report, edinfo at FREE, scuttlebutt, NSTA Express, and others. We have verified web addresses, but make no guarantee that they will remain active. The Department of Commerce/NOAA does not necessarily endorse or promote the views or facts presented on these sites.

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

Notable References

Climate Change Impacts in the Caribbean

A new report spearheaded by the CARIBSAVE project under United Nations Development Programme funding, *An Overview of Modelling Climate Change Impacts in the Caribbean Region with Contribution from the Pacific Islands*, highlights the impacts of climate change on Caribbean nations and natural resources. The report focuses on sea level rise projections and implications, ocean acidification impacts on Caribbean coral reefs, and water resources and agriculture in the Caribbean, and offers additional analysis for the Pacific Islands.

<http://www.caribsave.org/index.php?id=5>

Convenient Solutions to an Inconvenient Truth

The World Bank offers a series of manuscripts on environment and development. The latest, *Convenient Solutions to an Inconvenient Truth: Ecosystem-based Approaches to Climate Change*, offers an argument for including ecosystem-based approaches to mitigation and adaptation as an essential pillar in national strategies to address climate change. Ecosystem-based approaches can offer cost-effective, proven and sustainable solutions that contribute to, and complement, other national and regional adaptation strategies. The book can be read on-line.

<http://issuu.com/world.bank.publications/docs/9780821381267>

A Global Analysis of the Effectiveness of Marine Protected Areas in Preventing Coral Loss

A recent paper in *PLoS One* examined surveys conducted in over 300 tropical MPAs for a meta-analysis, concluding that MPAs can be effective at preventing coral loss, especially after they have been established for a while, and argues that MPAs can be effective at increasing coral-reef resilience.

<http://www.plosone.org/article/info:doi/10.1371/journal.pone.0009278>

Our Living Oceans

Our Living Oceans: Report on the Status of U.S. Living Marine Resources is part of a series of national status reviews by NOAA Fisheries. The report provides a report card to the American public on the biological health of U.S. living marine resources. The report can be downloaded from the web in full or by unit.

<http://www.st.nmfs.noaa.gov/LivingOceans.html>

Recreational Visitor Diversity

The United States Forest Service has recently issued two social-science reports on culturally diverse recreational visitors to national forests. Many such visitors are from urban areas; they include immigrants and others who have come from places with very different natural environments and attitudes toward nature. The reports, *Recreation visitor research: Studies of diversity* and *Serving culturally diverse visitors to forests in California: A resource guide*, are available online.

http://www.fs.fed.us/psw/publications/documents/psw_gtr210/

http://www.fs.fed.us/psw/publications/documents/psw_gtr222/

PORTAL OF THE MONTH

National Biological Information Infrastructure

The National Biological Information Infrastructure is a broad, collaborative program to provide increased access to data and information on the nation's biological resources. The website links diverse, high-quality biological databases, information products, and analytical tools maintained by partners and other contributors in government agencies, academic institutions, non-government organizations, and private industry. The program focuses on wildlife biology and issues surrounding wildlife such as ecosystems, land cover, habitats, and more. Each topic major category (Plants, Animals & Other Organisms, Habitats, Ecological Topics, Geographic Perspectives, and Toolkit) opens to a myriad of useful resources. Ecological Topics alone includes bird conservation, fire ecology and management, invasive species, threatened and endangered species, and more. Under Habitats-Marine, check out OBIS-USA, a one-stop source for biogeographic data collected from U.S. waters and oceanic regions.

As an added bonus, all images on the website are available for most noncommercial uses. NBII LIFE (Library of Images From the Environment) offers different categories, special collections, and even a kids section with games, stories, coloring pages, projects, and more. Set aside some time to look through this resource.

http://www.nbii.gov/portal/server.pt/community/nbii_home/236

WEBSITES OF THE MONTH

Deepwater Horizon Incident Website

NOAA's Office of Response and Restoration offers this Deepwater Horizon Incident website with the latest news, trajectory maps and forecasts, links to scientific weather and biological response services to federal, state, and local organizations, and images, much more. The Information for Students and Teachers hosts background information about spills, activities and lesson plans, and much more. Check out the Web Portals for links to emergency response programs, restoration planning tools, and more. On the NOS website, you can learn more about the spill in the April 27 episode of Making Waves, and check out a recent episode of Diving Deeper to learn more oil spills in general and how NOAA responds to these events in an interview with Amy Merten from NOAA's Office of Response and Restoration.

<http://response.restoration.noaa.gov/deepwaterhorizon/>

<http://www.incidentnews.gov/incident/8220>

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

Discovery of Sound in the Sea

The Discovery of Sound in the Sea website provides scientific content introducing the physical science of underwater sound and how people and animals use sound to accomplish various tasks. The newly redesigned website takes advantage of the advances in web technology since the website was originally launched, offering a more interactive learning environment. Interactives are highlighted in the Audio Gallery and Scientist Gallery, with sights and sounds from the sea and interviews with scientists. Background information can be found in downloadable booklets, while teacher and student resources include structured tutorials and educational games.

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

MESSAGE FROM THE BRIDGE

Oil Spill Resources

With the Gulf of Mexico oil spill disaster dominating the headlines, you may be looking for resources to use with your students, or are just curious yourself. The Bridge has just updated its oil spill collection with many new resources ready for classroom and/or science-center use. Dig deeper into the causes and effects of oil spills than what is on your local news channel or in the newspaper. The recent events in the Gulf serve as an excellent teachable moment at every educational level and have provided numerous topics for your students to debate. Look to the Bridge for the web's best, educator-reviewed resources on this, or any environmental current event. And if you have a great oil spill or other ocean science resource, nominate it to for inclusion on the Bridge.

http://www2.vims.edu/bridge/search/bridge1output_menu.cfm?q=spill

REQUESTS

Educator Review of Ocean Portal

The National Museum of Natural History, in collaboration with more than 20 partner organizations, invites you to preview and offer feedback on the Smithsonian Ocean Portal. The portal is designed to transport visitors to the coastline, the open water, and the deep ocean through interactive content. The site is a work in progress, and they are looking for input to fine-tune it before the public launch. As you browse, please share your thoughts by leaving comments or using the feedback form in the upper right-hand corner of each page. You may also email your comments to ocean@si.edu.
<http://ocean.si.edu/>

Reviewers Needed

Grades 7-12 science teachers are needed to review online interactive earth satellite images, May-July, 2010. Indiana State University has completed two new online interactive modules (Temporal module – Volcanoes. and Spectral module – Light Interactions) that involve analyzing satellite images of Earth. Science teacher's comments will maximize clarity of content and ease of use by both teachers and students in creating a final version to be available in Fall 2010. Contact Paul Mausel at paul.mausel@indstate.edu

GRANTS AND OPPORTUNITIES

Active Learning Grant Program

Samsung's Active Learning Grant Program awards cameras, based on need, to K-12 schools that can utilize a document camera to encourage active learning. The deadline for application is June 1, 2010.
<http://www.samsunggrants.com/>

American Water Works Association YouTube Video Contest

Join American Water Works Association in celebrating what *Only Tap Water Delivers*. Film a creative video highlighting how you celebrated Drinking Water Week, May 2-8, 2010, and then post it to YouTube. The deadline for entry is May 30, 2010.
<http://www.awwa.org/Government/content.cfm?ItemNumber=44766&navItemNumber=3863&showLogin=N>

Aquaculture Research Program Funding

NOAA Sea Grant offers this program to fund aquaculture research projects for FY 2010-2011, as part of the overall plan to support the development of environmentally and economically sustainable ocean, coastal, or Great Lakes aquaculture. Matching funds are required. The deadline for submission is May 25, 2010.
http://www.csgc.ucsd.edu/FUNDING/APPLYING/SPEC_COMPET/AQR2010PropInst.html

Bank of America Neighborhood Heroes and Local Heroes Programs

The Bank of America Charitable Foundation Neighborhood Excellence Initiative is accepting applications/nominations for the following programs. *Neighborhood Builders* offers core operating support and leadership training to nonprofit organizations working in each identified community to promote vibrant neighborhoods. *Local Heroes* recognizes and honors heroes whose achievements and leadership on local issues

contribute significantly to neighborhood vitality. The deadline for application/nomination is June 1, 2010.

http://www.bankofamerica.com/foundation/index.cfm?template=fd_neighborexcell

Bank of America Student Leaders

Students with a passion for improving their community and who are high school juniors and seniors can apply for a Bank of America Student Leader paid internship at a nonprofit/charitable organization, along with a week-long Student Leadership Summit in Washington, D.C. in July, 2010.

http://www.bankofamerica.com/foundation/index.cfm?template=fd_studentleaders

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. Grant applications are accepted twice each year; the deadline for the next grant cycle is June 1, 2010.

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

Campus Ecology

The National Wildlife Foundation's Campus Ecology program has been helping transform the nation's college campuses into living models of an ecologically sustainable society, and training a new generation of environmental leaders. Campus Ecology Fellowships are awarded to college undergraduate and graduate students who desire to help reverse global warming on campus and beyond.

<http://www.nwf.org/Global-Warming/Campus-Solutions/About.aspx>

Coastal Zone Management Information Systems RFP

NOAA is soliciting proposals for modernizing and improving State Coastal Zone Management Information Systems, providing support to projects that will result in improved coastal decision-making processes as they pertain to permitting and/or land use in state coastal zones. The deadline for proposal is June 1, 2010.

<http://www07.grants.gov/search/synopsis.do;jsessionid=QKTLLhrc92XQV50DKBFbpCSzlvPqG01JTfGDJsRmGFTm7LlIrtY0!-898524254>

Competitive Grants Program - California

The California State Parks Foundation is a statewide membership organization dedicated to protecting, enhancing and advocating for the California State Parks System. The foundation offers competitive grants to benefit the state parks system. Qualified non-profit groups, as well as California state park units and park agencies, are encouraged to apply. Grants target four main areas: Volunteer Efforts and Recognition; Education and Interpretation; Natural and Cultural Resource Protection; and Capacity Building.

<http://www.calparks.org/programs/competitive-grant/>

Earth Day/World Ocean Day Challenge

Challenge yourself and your coworkers or students to send in your best ideas on how to reduce your use of plastic. The Committee will vote on which idea we consider the most creative and/or demanding of efforts. Send in the idea via email. The deadline for submission is May 22, 2010.

Contact Amy Gollenberg at agollenberg@dolphinquest.com

FishAmerica Foundation Grants

The American Sportfishing Association's FishAmerica Foundation offers grants for projects to restore marine, estuarine, and riparian habitats important to marine and anadromous fish species. Projects must involve community participation through an educational or volunteer component tied to the restoration activities. The deadline for application is June 7, 2010.

<http://www.fishamerica.org/grants/>

Free Student Memberships to Marine Technology Society

Teledyne RD Instruments has agreed to sponsor a limited number of complimentary one-year student memberships to the Marine Technology Society. The free memberships are open to undergraduate or graduate students enrolled in a marine science or a technology program.

Contact Michael Hall at michael.hall@mtsociety.org

Fulbright Scholar Program

The Fulbright Scholar Program offers grants in lecturing, research, or combined lecturing/research awards in environmental science. In addition, faculty and professionals in environmental science also can apply for one of the All Discipline awards open to all fields. The deadline for application is August 2, 2010.

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

Indigenous Leaders Conservation Fellowship

Conservation International's Indigenous Leaders Conservation Fellowship creates opportunities for leaders and scholars from indigenous and traditional peoples' communities and organizations to explore solutions to the impacts of climate change and the threats to ecosystems and biodiversity that are affecting their lands, communities and livelihoods. Year-long fellowship will be offered to four candidates, with two in Biodiversity, and two in Climate Change. The deadline for application is June 11, 2010.

http://www.conservation.org/discover/centers_programs/itpp/Pages/indigenous_fellowship.aspx

International Award for Young People

The International Award is a self-development program available to youth 14-25. Participants design their own award program, set their own goals, and record their own progress.

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

Kodak American Greenways Awards Program

The Kodak American Greenways Awards Program provides seed money to stimulate greenway, blueway, and trail planning and design. Schools are welcome to apply. The program is a partnership project of the Eastman Kodak Company, The Conservation Fund, and the National Geographic Society, and provides small grants to stimulate the planning and design of greenways in communities throughout America. The deadline for application is June 15, 2010.

<http://www.conservationfund.org/node/245>

Lexus Eco Challenge

The 2010-2011 Lexus Eco Challenge is open to students in grades 6-12. Students submit an action plan on a specific environmental issue within a listed topic that affects

their local community. The Land/Water Challenge runs September 27-November 3, 2010; Air/Climate runs November 18, 2009-January 19, 2011; and the Final Challenge runs February 7-March 14, 2011. The website offers lesson plans, research links, and complete details.

<http://www.scholastic.com/lexus/>

Marine Debris Art Contest

Keep the Sea Free of Debris is a contest for students in grades K-8 sponsored by NOAA's Marine Debris Program. Students are encouraged to be creative in showing how marine debris affects them and what they are doing about it in their communities. The deadline for submission is June 1, 2010.

<http://marinedebris.noaa.gov/outreach/artcontest.html>

MASNA Scholarship

The Marine Aquarium Societies of North America offers the MASNA Scholarship to a full-time undergraduate seeking a degree in the marine science field. The deadline for application is July 1, 2010.

<http://www.masna.org/AboutMASNA/MASNAScholarship/tabid/83/Default.aspx>

MPA Capacity Assessment RFP

The Gulf and Caribbean Fisheries Institute/CaMPAM offers a consultancy opportunity to conduct a Management Capacity Assessment of MPAs in the Caribbean region. Note that this opportunity is contingent upon funding. The deadline for proposals is May 28, 2010.

http://campam.gcfi.org/CapAssess/GCFICaribbean_MPA_Capacity_Assessment_RFP_GCFI.pdf

NAAEE–Pierce Foundation Photo Contest

NAAEE seeks photos that will inspire people to achieve environmental excellence, reflecting the theme *Paint Me a Picture*. The photography contest is one element of a larger effort by NAAEE to re-invigorate the use of the arts in the EE field, and is sponsored by the Albert I. Pierce Foundation. The deadline for submission is June 10, 2010.

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

National EE Week Photo Blog Contest

National Environmental Education Week offers the EE Week Photo Blog and contest, designed to allow educators to upload their photos and stories of bringing environmental education into the classroom. Prizes will be awarded to the top three blogs that are submitted from April 1-May 31, 2010.

<http://www.eeweek.org/photoblog.htm>

National Environmental Education Training Program Grant

The EPA's National Environmental Education Training Program delivers environmental education training and long-term support to teachers and other education professionals across the U.S. to enable them to teach effectively about environmental issues. U.S. institutions of higher education, non-profit organizations, or a consortium of such institutions are eligible to apply. The deadline for application is July 26, 2010.

<http://www.epa.gov/education/educate/solicitation.html>

National Trails Awards

The National Trails Awards celebrate the exemplary people across the landscape of America who work to create a national system of trails to meet the recreation, health, and travel needs of all Americans. American Trails will honor outstanding efforts made by agencies, trail professionals, the private sector, corporations, and others at the American Trails National Symposium. The deadline for nominations is June 30, 2010.

<http://www.americantrails.org/2010/awards.html>

Nature of Learning Grants

The Nature of Learning is a community-based environmental education initiative of the U.S. Fish & Wildlife Service's National Wildlife Refuge System. The National Fish and Wildlife Foundation seeks applications from organizations interested in initiating the Nature of Learning in their communities. Programs must involve a partnership among a local school(s), community group (e.g., Refuge Support Group), and National Wildlife Refuge. The program theme is *Climate Change and Citizen Science*. The deadline for application is June 14, 2010.

http://www.nfwf.org/AM/Template.cfm?Section=Browse_All_Programs&CONTENTID=9421&TEMPLATE=/CM/ContentDisplay.cfm

NOAA Restoration Center/FishAmerica Foundation Partnership

FishAmerica Foundation funds projects that result in on-the-ground habitat restoration and clearly demonstrate significant benefits to marine, estuarine, or anadromous fisheries resources. A portion of the total available grant funds will be dedicated to projects that further NOAA's Open Rivers Initiative through dam and other river barrier removal. All projects must involve community participation through an educational or volunteer component tied to the restoration activities. The deadline for submission is June 7, 2010.

http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/partners/fishamerica.html

NOAA Restoration Center/The Nature Conservancy Partnership Funds

Projects should be linked to a priority conservation area as identified in TNC's marine ecoregional planning process or identified as a high priority by the state or territorial TNC chapter. Projects are also expected to include significant community involvement and engage project partners. Potential applicants are encouraged to contact NOAA's Community-based Restoration Program staff to discuss project ideas prior to submitting an application. The deadline for submission is May 21, 2010.

http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/partners/tnc.html

North American Association for Environmental Education Awards and Conference Scholarships

The North American Association for Environmental Education presents annual awards to recognize individuals and organizations that excel in EE at local, regional, and global Levels. Nominators must be NAAEE members and submit an explanation and summary of the nominee's accomplishments. The deadline for submission is May 21, 2010. In addition, NAAEE offers four different scholarship opportunities for their 2010 conference, September 29-October 2, 2010; the deadline for application is June 11, 2010.

<http://www.naaee.org/programs-and-initiatives/awards/call-for-nominations>
<http://www.naaee.org/conference/scholarships>

NSTA New Science Teacher Academy Fellowships

NSTA fellowships offer grade 6-12 teachers in their first through third years of teaching a year-long immersion in a host of science-related activities and professional development opportunities. The deadline for application is May 30, 2010.

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

Rachel Carson Sense of Wonder Contest

The EPA, Generations United, and the Rachel Carson Council, Inc., announce a poetry, essay, and photo and dance contest "that best expresses the Sense of Wonder that you feel for the sea, the night sky, forests, birds, wildlife, and all that is beautiful to your eyes." Participants work as a team with a person from a generation older or younger than themselves. Entries will be judged on creativity, originality, and the ability to capture a sense of wonder. The entries will also be judged on how the project brought the intergenerational team in touch with the natural world. The deadline for entry is June 16, 2010.

<http://www.epa.gov/aging/resources/thesenseofwonder/index.htm>

Ready to Teach Program

The Ready to Teach program supports the use of telecommunications to improve teaching by assisting elementary school and secondary school teachers to prepare all students to achieve challenging state academic content and student academic achievement standards in core curriculum areas. Applicants must be a nonprofit telecommunications entity or partnership of such entities. The deadline for application is May 24, 2010; see the website for full details.

<http://www2.ed.gov/legislation/FedRegister/announcements/2010-1/032310h.html>

Save America's Treasures Grants

The National Park Service's Save America's Treasures program awards competitive, matching grants to federal, state, local, and tribal government entities, and nonprofit organizations for preservation and/or conservation work on nationally significant historic properties and collections. The deadline for application is May 21, 2010.

<http://www.nps.gov/history/hps/treasures/index.htm>

Sol Hirsch Education Fund Grants

The National Weather Association awards grants to K-12 teachers to improve the study of meteorology. Selected teachers can use the funds to take accredited courses, attend workshops and conferences, or purchase materials for the classroom. The deadline for application is June 1, 2010.

<http://www.nwas.org/grants/solhirsch.php>

Super Science Fellowships

James Cook University's ARC Centre of Excellence for Coral Reef Studies in Townsville, Australia, seeks applicants for Super Science Fellowships. The deadline for application is May 31, 2010.

<http://www.coralcoe.org.au/employment.html>

Tellabs Foundation Grants

The mission of the Tellabs Foundation is to advance specific, strategic endeavors in communities where Tellabs employees live and work. They build capacity of nonprofit organizations by supporting sustainable initiatives, primarily in education, health and the environment. The Tellabs Foundation Board meets quarterly, usually in January, April,

July and October. The deadline for letters of inquiry or invited proposals is four weeks before the scheduled meeting. It is recommended that letters of inquiry be submitted at least four months before funding is needed.

<http://www.tellabs.com/about/foundation.shtml>

Tool Factory Podcasting Grant

The Tool Factory Podcasting Grant offers digital media accessories needed to start a school podcasting program. Applicants develop and submit a lesson plan incorporating student involvement and creativity. The next deadline for submission is May 15, 2010.

http://www.toolfactory.com/olympus_contest/olympus_podcasting.htm

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. The next deadline, for grades 6-12 grant applications, is August 2, 2010.

<http://www.toshiba.com/tafpub/jsp/home/default.jsp>

Trash to Treasure Competition

PBS KIDS GO! is launching the *Trash to Treasure* competition to celebrate the 40th anniversary of Earth Day, challenging youth ages 5–19 to recycle, reuse, and re-engineer everyday materials into new inventions. Students' inventions should move things or people; protect the environment; or be used for play. The deadline for submission is September 5, 2010.

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

UNESCO-L'OREAL Fellowships

As part of the UNESCO Co-Sponsored Fellowships Scheme, this joint program with the L'ORÉAL Corporate Foundation promotes the contribution of young women in research development in the field of life sciences. The program is designed to identify and reward fifteen young women scientists, active in the field of life sciences. Candidates must already be engaged in pursuing research at the doctoral or post-doctoral level in one or allied fields of life sciences including biology, biochemistry, biotechnology, agriculture, medicine, pharmacy, and physiology. The deadline for application is June 30, 2010.

<http://cambodiajobs.blogspot.com/2010/04/unesco-loreal-fellowships.html>

Wal-Mart State Giving Program

Wal-Mart's State Giving Program strives to award grants that have a long-lasting, positive impact, primarily in four areas of focus: Education, Job Skills Training, Health, and Environmental Sustainability. The deadline for application is August 20, 2010.

<http://walmartstores.com/CommunityGiving/8168.aspx?p=8979>

Wildlife Society Conference Native Student Grant

The Wildlife Society offers a native student grant program for students to attend the national Wildlife Society Conference, October 2-6, 2010 in Snowbird, Utah. Any Tribal, Native (Alaska, Hawaii, US Territories), or First Nations students enrolled in a wildlife/natural resources program at an accredited college or university is eligible. The deadline for application is August 6, 2010.

Contact Heather Stricker at hstricker.wildlife@gmail.com

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Barrier Island Explorer Camp - Alabama

Dauphin Island Sea Lab is offering a new summer camp for youth, ages 10-12, the Barrier Island Explorer Camp, June 13-16, 2010 on Dauphin Island, Alabama. Participants will experience trawling aboard the research vessel *Alabama Discovery*, learn first-hand what's in the water, and much more.

<http://dhp.disl.org/barrierislandexplorer.htm>

Discover MarineLab for Small Groups - Florida

MarineLab has opened two weeks, July 17-20, 2010 for grades 9-12 and August 5-8, 2010 for grades 6-8 for teachers to bring small groups (minimum 4 students) to their marine education facility in Key Largo, Florida. Note that this does not have to be a teacher-led program, as long as there is an adult leading the group. See the website for details.

<http://www.marinelab.org/DiscoverMarineLab.html>

Earthwatch Expeditions for Teens

Earthwatch Institute is currently offering 22 teen research teams this summer available exclusively to youth, ages 16-17. Environmental field research is done on the teen expeditions but there are additional activities planned in the evening to provide additional cultural immersion as well as educational aspects.

<http://www.earthwatch.org/teenteam>

Fish Camp - Alabama

Auburn University and the Alabama Cooperative Extension System are offering Fish Camp 2010, July 12-16, 2010 in Auburn, Alabama for high school students. The camp offers fun and hands-on activity blended into a creative learning experience that provides the broadest possible exposure to natural resources careers, with an emphasis on aquaculture, fisheries, and aquatic ecology.

<http://www.aces.edu/dept/fisheries/education/FishCamp2008.php>

Whale Camp and Authors & Artists of the Sea - Maine

In partnership with Immaculata University in Pennsylvania, the *Whale Camp*, on Grand Manan Island off the coast of Northern Maine, offers summer programs for students and teachers to observe and study whales, dolphins, porpoises, and puffins in their natural habitats through direct observation, data collection, and hands-on experience with marine science equipment. A second course, *Authors & Artists of the Sea*, is for students who enjoy expressing themselves in through art and/or creative writing. It includes many of the elements of the Intro to Ecology course but focuses on students demonstrating their learning and experiences through their art and writing. Students will collaborate in the production of a full-color hardbound book. Both programs focus on the ecology of the Bay of Fundy and how the highest tides in the world produce huge quantities of plankton to establish a diverse food web.

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

Young Men and Women in Science Programs - California

The University of Southern California (USC) Sea Grant-Wrigley offers the Young Men in Science Summer Institute for boys entering grades 5-9, August 19-26, 2010 on Catalina Island, California. USC's Young Women in Science program for girls entering grades 6-

8 is offered July 22-29, 2010; the high school program is offered August 2–9th for girls entering grades 9-11.

<http://www.usc.edu/org/seagrant/Education/SummerSciProgram/BSC.html>

http://cesp.usc.edu/2010/summer/ms_girls.shtml

http://cesp.usc.edu/2010/summer/hs_women.shtml

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Adaptive Management of Natural Resources - Online

The US Geological Survey and the Florida Fish and Wildlife Conservation Commission are offering a free online short course, June 7-11, 2010, to expose scientists and managers to the basic components and process of adaptive management.

<http://www.fort.usgs.gov/brdscience/AdaptiveManagementCourse.htm>

Ambassadors of the Environment Teacher Workshop - California

Ambassadors of the Environment is offering this teacher workshop, June 21-25, 2010 in Santa Barbara, California. The workshop offers cross-curricular training on marine, terrestrial, creek, and watershed ecosystems, with an emphasis on ecological roles and connections between species. Participants will receive hands-on K-12 curriculum in marine management, recycling, and more.

Contact Laura Brands at lbrands@oceanfutures.org

Approaches to Inquiry: Shifting Classrooms toward Inquiry Learning - Washington

Port Townsend Marine Science Center offers this teacher training (for teachers of grades 5-10, August 17-21, 2010 with an additional fall follow-up meeting, in Port Townsend, Washington. This workshop takes place in classrooms, the marine lab, and the natural environment.

<http://www.ptmsc.org/education/teacher.html>

Aquaculture 101 Teacher Workshop - Alabama

Auburn University and the Alabama Cooperative Extension System, in conjunction with Gadsden State Community College and the Alabama-Mississippi Sea Grant, offer this free teacher training, June 7-11, 2010 in Gadsden, Alabama.

<http://www.aces.edu/dept/fisheries/education/ProfessionalDevelopmentOpportunities.php>

Audubon International Webinars - Online

To celebrate the mid-way point of the United Nation's Decade of Education for Sustainable Development, Audubon International will be hosting a series of training webinars designed to help people become better stewards of the environment where they live, work, and play. The webinars will focus on topics such as community sustainability, greening your business or property, eco-development practices, and community outreach ideas. Registration is free but space is limited.

<http://www.auduboninternational.org/webinars>

Capitol Hill Ocean Week – Washington, D.C.

The theme of the 2010 Capitol Hill Ocean Week is *Clean Energy and a Healthy Ocean: Navigating the Future*. The symposium will highlight the intersection between ocean and energy issues, including the ocean's diverse abilities to supply energy through current

and emerging technologies and the myriad ways in which energy production and consumption affect the ocean. The deadline for online registration is June 1, 2010.

<http://nmsfocean.org/CHOW-2010-splash>

Changing Reefs: Corals on Acid - Florida

The Florida Marine Science Educators Association is hosting *FMSEA 2010 - Changing Reefs: Corals on Acid*, May 14-16, 2010 in Key Largo, Florida. The conference will offer workshops, field trips, and events. (Note: keynote speakers include Dr. Billy Causey and cartoonist Jim Toomey)

<http://www.fmsea.org/events.html>

Climate Discovery Courses for Educators - Online

The National Center for Atmospheric Research (NCAR) offers a series of online courses for middle and high school science teachers, combining geoscience content, current climate research, easy to implement hands-on activities, and more. Summer courses run June 18-August 8, 2010 and Fall courses run September 17-November 7, 2010. The deadline for registration for the summer courses is June 18, 2010.

<http://ecourses.ncar.ucar.edu/>

Coastal Society International Conference

The Coastal Society's 22nd international conference, *Shifting Shorelines, Adapting to the Future*, will be held June 13-16, 2010 in Wilmington, North Carolina.

<http://www.thecoastalsociety.org/conference/tcs22/Registration.html>

Coastal Waters Institute for Art, Science, and Math - Texas

Artist Boat, with funding from NOAA's B-WET program, offers this free professional development for middle school teachers in a five-county region of Texas. The Coastal Waters Institute is a five-day program with two sessions available in June and July 2010, offering teachers the opportunity to get hands-on, feet-wet training in art, science, social studies, English and math, with a focus on Galveston Bay. The deadline for application is May 31, 2010.

Contact Rani Henderson at Rhenderson@artistboat.org

Earth Science Information Partners Conference – Tennessee

The 2010 Federation of Earth Science Information Partners (ESIP) summer meeting, with the theme *Energy and Climate*, will be held July 20–23, 2010 in Knoxville, Tennessee. ESIP is a consortium of over 100 organizations that collect, interpret, and develop applications for remotely sensed Earth science data. Participating educators of grades 6-12 will attend a session on climate change topics, have access to the introductory plenary, and have a 2-day teacher track. Registration fees and lunches will be covered for all teachers and a time and travel stipend is available for twenty educators, with support from NOAA and NASA.

<http://cimss.ssec.wisc.edu/teacherworkshop/esip/>

Experimental Design and Ecological Statistics - Virginia

This course, August 17-27, 2010 in Front Royal, Virginia, co-taught by Smithsonian Conservation Biology Institute researchers and George Mason University faculty, provides an overview of quantitative methods for ecological research and conservation.

<http://nationalzoo.si.edu/SCBI/MAB/GMU/expdesign.cfm>

Global Climate change Issues and Impacts Workshop - Online

This workshop is offered through Oregon State University E-campus, July 19-August 13, 2010. The course is geared for teachers and general audiences about climate change and impacts of warming that are being expressed in various bioregions of the world. Topics include oil supplies, alternative energy research, conservation, and more. Contact Vicki Osis at vjosis@peak.org

Interactions in the Sciences - Massachusetts

The Museum Institute for Teaching Science offers *Interactions in the Sciences: Observe, Investigate, Explain*, July 6-9 and July 12-16, 2010 in different locations in Massachusetts. Upper elementary and middle school educators will explore how cycles, processes, and systems connect life, physical, and earth science. See the website for complete details.

http://www.mits.org/summer_institute.htm

International Marine Conservation Congress – Request for Proposals

The second International Marine Conservation Congress, *Making Marine Science Matter*, will be held May 14-18, 2011 in Victoria, Canada. The deadline for symposium and workshop proposal submission is August 1, 2010; the deadline for poster and spoken presentation abstracts is December 1, 2010.

<http://sea.typepad.com/sea-blog/2010/04/2nd-international-marine-conservation-congress.html>

Learning Ocean Science through Ocean Exploration - Various

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

- June 21-22, 2010 with Gulf Coast Research Laboratory Marine Education Center in Mississippi, an introductory and follow-up workshop. The deadline for registration is June 7, 2010. Contact Dr. Shelia Brown at shelia.brown@usm.edu
- August 7, 2010 with Nauticus, The National Maritime Center in Virginia, a follow-up workshop. The deadline for registration is July 16, 2010. Contact Jennifer Tabor at jennifer.tabor@norfolk.gov
- August 14, 2010 with Audubon Aquarium of the Americas in Louisiana, a follow-up workshop. The deadline for registration is July 30, 2010. Contact Tricia LeBlanc at tleblanc@AudubonInstitute.org

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

Lifelines for High School Climate Change Education

This project is based at Lawrence Hall of Science, University of California, to establish a network of practicing high school teachers actively using climate change curricula. The key aim of the project will be creation of professional learning communities of teachers who, through a series of remote meetings and workshops, maintain ongoing communication and sharing of best practices among colleagues to strengthen knowledge and promote effective teaching strategies during and beyond the actual grant period. Workshop subject matter will emphasize incorporating analysis of NASA Earth observation data by students in classrooms.

<http://www.lawrencehallofscience.org/gss/lifelines/>

NAI National Workshop

The 2010 National Association of Interpreters Workshop, November 16-20, 2010 in Las Vegas, Nevada will offer professional development and networking opportunities through informative keynote speakers, concurrent sessions and pre-workshop training. Check out the scholarships and awards, and deadlines for submission.

<http://interpnet.com/workshop/>

New Graduate Programs – Florida and North Carolina

A new graduate program offered at the Rosenstiel School of Marine and Atmospheric Science (RSMAS), University of Miami is the Master's of Professional Science. The curriculum combines study in select areas of marine and atmospheric science with interdisciplinary coursework in business, public health, communications, law, and other professional domains. The deadline for applications for the Fall semester is June 1, 2010.

Duke Environment at the Nicholas School is offering a two-year Master of Environmental Management with a specialized Environmental Economics and Policy concentration in Environmental Economics and Policy and a three-year concurrent Master of Environmental Management/Master of Public Policy degree from the Nicholas School and Sanford School of Public Policy. Both provide training in the politics and economics of resource and environmental policy-making. Emphasis is placed on understanding the social and political forces involved, developing facility with quantitative and logical methods of forecasting, and evaluating policy consequences.

<http://mps.rsmas.miami.edu/>

<http://www.nicholas.duke.edu/programs/professional/concurrent>

Oceans à la Carte – Rhode Island

Join the University of Rhode Island's Bay Campus for *Oceans à la Carte: A Workshop for K-12 Educators*, May 22, 2010 in Narragansett, Rhode Island, with oceanography, marine, and environmental science presentations and workshop sessions for formal and informal educators. Choose from a variety of presentations by leading scientists, hands-on activities, and content information sessions. The deadline for registration is May 17, 2010.

<http://omp.gso.uri.edu/ompweb/content/educator-training>

PBS TeacherLine - Online

PBS TeacherLine offers standards-based graduate-level courses in an accessible online format. Subjects include Science, STEM, Instructional Strategies, and more. Check out the special collections, including Weather and Climate, Global Climate Change Education for Middle School, Ecosystems and Human Impact, and much more.

<http://www.pbs.org/teacherline/>

Science at Sea Workshop – Texas

This workshop with educators from the Flower Garden Banks National Marine Sanctuary, June 21-25, 2010 from Galveston, Texas, is designed to give educators first-hand knowledge and experience of the role science and technology play in managing and protecting our natural resources.

<http://flowergarden.noaa.gov/education/workshops.html>

Science through Scuba Symposium – Washington, D.C.

The *Research and Discoveries: The Revolution of Science through Scuba Symposium*, May 24-25, 2010 in Washington, D.C. is presented by the Smithsonian Institution, the National Science Foundation, and the National Research Council. Registration is free.

<http://www.si.edu/sds/>

Summer Institute for Climate Change Education – Minnesota and Online

The Will Steger Foundation's Summer Institute for Climate Change Education, August 12, 2010 in St. Paul, Minnesota, will look back on their last five years of climate change education outreach and curriculum development and take time to *Go Back to the Basics*. Registration is open for 100 on-site participants and an unlimited number of participants for the online webinar.

<http://www.willstegerfoundation.org/index.php/climate-lessons-blog/item/912-save-the-date-summer-institute-2010>

Susquehanna Aquatic Biodiversity Network Workshop - Pennsylvania

Pennsylvania Sea Grant offers this professional development workshop for middle and high school teachers of the Chesapeake Bay Watershed, August 9-13, 2010 in Millersville, Pennsylvania. Lodging for a limited number of out-of-town participants and many free materials and implementation funds are available.

<http://sites.google.com/site/pasabn/Home/new-re/2010sabnbrochureandregistrationform>

Teacher Programs - California

The Monterey Bay Aquarium is offering two institutes, for middle and high school science teachers, in Monterey, California. The *Project-Based Science Institute*, June 21-25, 2010 is specifically designed for teachers of middle school science; the deadline for application is May 24, 2010. For high school teachers, *Connecting with Marine Science*, will take place July 26-30, 2010, with an application deadline of June 30, 2010. Both programs will include both field and classroom activities.

http://montereybayaquarium.org/lc/teachers_place/edu_program_cycles.aspx

http://montereybayaquarium.org/lc/teachers_place/edu_programs.aspx

Teaching About the Marine Environment - Online

The Department of Environmental Studies at the University of North Carolina, Wilmington offers an online course this fall, EVS 592: *Teaching about the Marine Environment, classroom-based methods for ocean education*. Participants will explore on-line sources and print materials for grades 5-12, many adaptable for informal learning. The course is online and asynchronous. Contact the instructor for details.

http://www.uncw.edu/evs/index_000.html

TechSurge Workshop - Virginia

Marine Technology Society offers the 2010 *TechSurge Workshop, Ocean Observing: Thinking Outside the Basin*, June 8–9, 2010 in Norfolk, Virginia. The workshop will provide knowledge and an interdisciplinary perspective to enhance your ability to collect, deliver, and use ocean information. The program can be useful for federal and regional partners involved with marine spatial planning and ecosystem-based management.

<https://www.mtsociety.org/conferences/OceanObserving2010.aspx>

Urban Science Education Leadership Academy - Louisiana

The purpose of the 2010 Urban Science Education Leadership Academy, August 2–5, 2010 in New Orleans, Louisiana, is to positively affect student achievement through the

development of leaders who will help guide reform of the learning, teaching, and assessing of science in elementary and middle schools. Leaders will be driven by personal experiences, knowledge of the change process, use of research, relevant data, and the leadership skills developed in collaboration with others. The deadline for registration is June 30, 2010.

<http://www.nsta.org/conferences/2010/uselacademy.aspx?lid=exp>

USA Science & Engineering Festival

The inaugural USA Science & Engineering Festival, October 10-24, 2010 in Washington, D.C., will culminate in an exposition that will give science and engineering organizations the opportunity to present themselves with a hands-on, fun science activity to inspire the next generation of scientists and engineers.

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

Water Exploration Workshop - Texas

The Water Exploration workshop, August 24, 2010 in Austin, Texas, will provide training on the implementation of the Texas Water Development Board's new high school online curriculum. Water Exploration uses a project-based learning approach to promote inquiry learning about water science and critical water-related issues. Participants from across the state are encouraged to apply.

Contact Dr. Kathy Ellins at kellins@ig.utexas.edu

Wildlife Conservation Society Courses and Webinars - Online

Free Wildlife Conservation Society webinars as an opportunity to learn more about animals and the science of studying wildlife. Participants learn about field research and conservation work as they listen to conservation stories from field researchers.

Webinars also include elements specific to educators wishing to learn more about how to bring these engaging topics to students. The webinar, *Ocean Giants: Sharks*, will be held on June 8, 2010, World Ocean Day. The Bronx Zoo also offers online programs for environmental educators. Upcoming classes include Predators: Biology and Conservation; Energy, Climate and Wildlife Connections; Conservation Communication; and more. Teacher scholarships are available.

<http://www.wcs.org/teachers/online-professional-development.aspx>

EDUCATIONAL RESOURCES

African Dust, Coral Reefs, and Human Health

The USGS offers this website with an overview video of Coral Mortality and African Dust. The documentary identifies how recent changes in the composition and quantities of African dust transported to the Caribbean and the Americas might provide clues to why Caribbean coral reef ecosystems are deteriorating, and how human health may be impacted. The documentary also offers the transcribed narrative.

http://coastal.er.usgs.gov/african_dust/

<http://gallery.usgs.gov/videos/223>

Climate Change Curriculum

Activities for Conceptualizing Climate and Climate Change, from Purdue University and partners, offers a digitally-based instructional program that contains data-rich case studies and visualization activities as well as a visual library, as a resource for grade 7-12 teachers and students. A central goal of this program is to explore the complex

interface between science and society that forms the basis of management decisions related to climate change issues. Modules include Ecological Impacts, Current Climate Maps, Extreme Weather, and Natural Processes. Individual activities include Climate Change Debate, Mid-Latitude Cyclones, Volcanoes and Climate Change, and more.

<http://www.iclimate.org/ccc/>

Coral Reefs: Moorea, French Polynesia - Online

COSEE-West invites formal and informal educators who are interested in learning more about coral reef formation and ecology to participate in a free workshop, *Coral Reefs: Moorea, French Polynesia*, to be held this April-May, 2010. Follow an undergraduate class from the University of California, Los Angeles as the students conduct research on Moorea, French Polynesia. Course lectures, student blogs, and a final course symposium will be available live and archived on the web.

http://www.coexploration.org/cosee_west/moorea2010/

CREEC on Facebook

The California Regional Environmental Education Community (CREEC) Network is now on Facebook, and will post links to, and summaries of, EE research, capacity building, conferences, model school descriptions, and more.

<http://www.facebook.com/creecnetwork>

Deepwater Horizon Oil Spill Contact Information

The Gulf of Mexico Alliance Environmental Education Network offers Gulf States contact information for the Deepwater Horizon Oil Spill as a downloadable Word document.

Click on the oil rig drawing on the main page. There is also a Deepwater Horizon Response website which offers news, volunteer links, and additional information.

<http://gulfallianceeducation.org/>

<http://www.deepwaterhorizonresponse.com/go/site/2931/#>

Digital Library for Earth System Education

The Digital Library for Earth System Education is an online library of web-based resources at all educational levels for teaching and learning about the Earth as a system. It can be searched by keyword, grade level, resource type, collection, and by national standards. The updated website offers an improved K-12 Educator's page, Newest Resources in DLESE, and much more. Turn to this website for great resources.

<http://www.dlese.org>

EarthKAM

EarthKAM is a NASA-sponsored project that provides photographs of Earth taken from the space shuttle and the international space station. Check out the photo galleries and upcoming missions.

<https://earthkam.ucsd.edu/>

Earth Science Curricula

The American Geological Institute, with support from the National Science Foundation, offers a comprehensive portfolio of geoscience education products and services for students and teachers, from kindergarten to high school and beyond. *EarthComm: Earth System Science in the Community* is for high school students. This curriculum is based on the problem-solving, community-based model of instruction. For middle school students, *IES: Investigating Earth Systems* emphasizes inquiry - testing ideas, observing phenomena, collecting data, using scientific reasoning - and the interrelation of Earth

systems. Elementary students have *K-5 GeoSource*, with online professional development for K-5 teachers. The website features content instruction, lesson plans, classroom activities, teaching resource links, downloadable images, cross-curriculum tips, assessment tools, career vignettes, literacy strategies, and more. In addition, the *Environmental Awareness Series* addresses major societal concerns and illuminates the complexity and interconnection of the natural systems, with a balanced review of key issues and topics, such as water, petroleum, metal mining, geologic mapping, and more. <http://www.earthsciweek.org/forteachers/bestineducation.html>

EcoHealth 101: Environmental Change and Our Health

EcoHealth helps sort the science from the sound bites on five major topics including global warming. This website is aimed at grades 5-8 with lesson plans, video clips, links to more information, and more. <http://ecohealth101.org/>

Energy Choices and Climate Change

From the NCAR Online Education, *Energy Choices and Climate Change* looks at issues related to energy and climate change. In the scenarios within this online module, participants make decisions about the types and amount of energy used and see what effect the decisions have on the amount of greenhouse gases emitted to the atmosphere. The goal is to reduce the amount of greenhouse gases added to the atmosphere from fossil fuel emissions while keeping costs within reason. There are two scenarios – from a family’s energy use or global energy use. The website also offers links to greenhouse gas background information. And if you haven’t explored the Windows to the Universe website in a while, be sure to click on the link at the bottom of the page.

<http://www.windows2universe.org/modules/energy/>

Environment Yale

The Journal of the Yale School of Forestry and Environmental Studies has a new website for the Fall 2009 issue, with links to past Issues on the previous website. The journal is published twice per year. Past issues have a search feature.

<http://environment.yale.edu/magazine/>

Expeditionary Learning

King Middle School in Portland, Maine has been refining its expeditionary learning projects for nearly two decades, and has developed Fading Footprints, a six-step rubric for designing a project. The Fading Footsteps project is a twelve-week interdisciplinary ecology unit centered around the guiding question: How does diversity strengthen an ecosystem? Using this project as an example, see how King Middle School creates an action plan around each step.

<http://king.portlandschools.org/files/onexpedition/expeditionproducts/footprints/frame/frameset/frame.htm>

Explore the Ocean

This website by the author of the Agnes Pflumm books offers links to a variety of ocean literacy resources students and teachers. Check out the links to science and art, the Science Rap, and much more.

http://www.agnespflumm.com/secret_seven_explore.htm

Extreme Eukaryotes

This article from the Natural History Museum in London is an early summary of information about free-living eukaryotes in extreme environments. The article includes list of peer-reviewed references up to 1997.

<http://www.nhm.ac.uk/research-curation/research/projects/euk-extreme/>

Extremophilic Bacteria and Microbial Diversity

This online enhancement chapter of a textbook for undergraduate majors examines the many prokaryotic organisms that inhabit extreme. Topics include using new molecular techniques to discover more about bacteria; life at high temperatures, low temperatures, extreme pH levels and in a brine; and extremophiles in the evolution of life.

http://www.mhhe.com/biosci/genbio/raven6b/graphics/raven06b/enhancementchapters/aven30_enhancement.html

Faultline

This website from the Exploratorium provides an introduction to earthquakes and their effects. The site contains an introduction, real time data on earthquakes, activities, and much more.

<http://www.exploratorium.edu/faultline/index.html>

FedFlix

As part of a joint venture between the National Technical Information Service and Public.Resource.Org, the Internet Archive has created this archive of government training films from the past six decades. Users can browse the collection by title or subject, or by word search. The films come from a wide variety of government agencies, including the U.S. Army, NASA, and more. (A simple search on “ocean,” and “moving images” produced an interesting array of items).

<http://www.archive.org/details/FedFlix>

Flow of Energy

The University of Michigan’s Global Change Curriculum offers *The Flow of Energy: Primary Production to Higher Trophic Levels*, an on-line lecture about energy transfer.

<http://www.globalchange.umich.edu/globalchange1/current/lectures/king/energyflow/energyflow.html>

Getting WILD About Environmental Literature

The University of Texas at San Antonio, in collaboration with the Texas Parks and Wildlife Department, has put together this compilation of literature readings with annotations for all levels that align to the Project WILD activities. Check out this useful resource.

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

Great Whales Curriculum

The Great Whales Curriculum, developed by the Marine Mammal Institute at Oregon State University, is now available for downloading in pdf format. The curriculum is geared for grades 6-9.

<http://mmi.oregonstate.edu/outreach>

Hō‘Ailona’s Journal

The University of California, Santa Cruz offers this online Hawaiian monk seal education resource. The website provides information about a young monk seal, Hō‘Ailona, the

ongoing research with her, and conservation observations. Follow along on monthly updates, and keep your eyes out for contests and other projects in which kids can participate.

<http://www.monkseal.ucsc.edu/KP2/Home.html>

International Society for Reef Studies

International Society for Reef Studies offers this new website with links to organizations, publications, and more. The principal objective of the organization is to promote the production and dissemination of scientific knowledge and understanding of coral reefs, both living and fossil.

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

International Year of Biodiversity

The United Nations Convention on Biodiversity has set up a website to celebrate 2010 as the year of biodiversity. The website offers links to worldwide celebrations, multimedia resources, and more.

<http://www.cbd.int/2010/welcome/>

Introduction to Planning and Facilitating Effective Meetings

NOAA's Coastal Services Center offers this facilitations skills primer. The guide explains the role of a facilitator and describes how to plan and execute meetings that deliver results. Topics include planning a productive meeting or workshop, conducting an effective meeting, using proper tools and techniques for meeting facilitation, and facilitating teleconferences, videoconferences, and webinars.

http://www.csc.noaa.gov/publications/effective_meetings.html

Marine Debris

Each year, Ocean Conservancy provides a global snapshot of marine debris collected and recorded at more than 6,000 sites all over the world on a single day during the International Coastal Cleanup. The world's largest volunteer effort for the ocean and waterways works towards global solutions through the cumulative efforts of volunteers around the world.

http://www.oceanconservancy.org/site/PageServer?pagename=program_marinedebris

Mountains in the Sea

The March 2010 issue of *Oceanography* magazine is a special issue on deep-sea seamounts. The open-access articles are posted online.

<http://tos.org/oceanography/issues/current.html>

MPA Mapping Tool

NOAA's National Marine Protected Areas Center has created a new interactive online mapping tool that allows users to view boundaries and access data for more than a thousand marine protected areas in the United States. Data for the mapping tool comes from the newly updated MPA Inventory, a comprehensive database of existing U.S. MPAs, containing a range of information on each of the 1,637 protected areas established or managed by federal, state, or territorial agencies or programs.

<http://mpa.gov/>

NEwswave

NEwswave is the e-journal of the New England Ocean Science Education Collaborative, bringing news and events from member organizations and associates, a collaboration of

forty institutions from across the region including aquaria, museums, universities, and science and research centers. The NEwswave Blog is updated daily with information about ocean science education in New England and includes Member News, Ocean Science Education e-Resources, Professional Development, and much more.

<http://neosec.wordpress.com/>

NYSMEA Website

The New York State Marine Education Association offers a newly redesigned website with lesson plans, job postings, research opportunities, field trip destinations, and marine-related links.

<http://www.seagrant.sunysb.edu/nysmea/>

Ocean Acidification FAQs

The U.S. Ocean Carbon and Biogeochemistry program has compiled a list of frequently asked questions (FAQs) about ocean acidification. The website also offers additional links to presentations, educational tools, and resources.

<http://www.whoi.edu/OCB-OA/FAQs/>

Ocean FEST

Ocean FEST (Families Exploring Science Together), developed by educators at the University of Hawai'i at Mānoa, puts science in the hands of Hawai'i's students, teachers, and their families. The overarching goal of the program is to interest Hawai'i's kids in careers in ocean science and related Science, Technology, Engineering and Mathematics (STEM) fields through fun, hands-on activities. The website offers links to information on marine science careers, program information for Hawaii schools, and additional links, resources, and activities for teachers.

<http://oceanfest.soest.hawaii.edu/>

Ocean Garbage Patches and Predicting Oil-Spill Trajectories

The Ocean Motion website offers a review of the surface circulation of Earth's ocean and classroom investigations appropriate for various disciplines at the high school level. Follow the path of plastic to the ocean gyres and read about what happens to plastic after it circles the ocean gyres for decades. Check out the Casco Bay and Exxon Valdez oil spills.

<http://www.oceanmotion.org/html/impact/marine-resources.htm>

PIMRIS Portal

The Pacific Islands Marine Portal project is a collaborative project between the Pacific Islands Marine Resources Information System (PIMRIS) and the International Oceanographic Data and Information Exchange Programme (IODE) of the Intergovernmental Oceanographic Commission (IOC) of UNESCO to improve access to Pacific marine information for the Pacific Islands community. The portal offers news, articles, and directories of websites relevant to Pacific fisheries and to the coastal and marine environment of the Pacific.

http://www.pimrisportal.org/pop/index.php?option=com_content&view=frontpage&Itemid=1

QuikScience Lesson Plans

The University of Southern California, Wrigley Institute for Environmental Studies, and Quiksilver Foundation offer downloadable lesson plans from the QuikScience Challenge. Topics include global warming, marine pollution, and more.

http://www.usc.edu/org/cosee-west/quikscience/lesson_plans.html

Resources for Earth Sciences and Geography Instruction

Central Michigan University hosts this clearinghouse for science educators and students interested in the fields of earth science and geography. The website is organized alphabetically around the sequence of topics that one might encounter in an introductory earth science or physical geography class, including Atmospheric Circulation, Earth Science Animations, Rivers, Water Resources, and much more. Each topical area includes links to online resources, complete with a short description.

<http://webs.cmich.edu/resgi/>

Sea & Ships

The goal of the National Maritime Museum in England is to illustrate the importance of the sea, ships, time, and the stars and their relationship with people. The Sea and Ships Directory divides the material up by Subjects, People, Collections, Online Galleries, and Games and Interactives. Check out the Your Ocean link from the Games and Interactives. The *Your Waste* lesson gives visitors the opportunity to test their skills at managing an oil spill clean-up operation; other interactives include *Your Climate* and more.

<http://www.nmm.ac.uk/explore/sea-and-ships/>

Sea Turtle Resources

SEE Turtles is a non-profit ecotourism project. In addition to study trips, they offer lesson plans, in-class presentations, and other education resources. The curriculum was teacher-developed to engage students from grades 6-12 on various subjects related to sea turtles.

<http://www.seeturtles.org/1352/classroom-resources.html>

SocMon

The Global Socioeconomic Monitoring Initiative for Coastal Management (SocMon) has launched a redesigned website. One of the site's major improvements is the new SocMon database, which has access to completed SocMon site reports searchable by location, author, monitoring purpose, and other fields. The website also includes interactive maps depicting work done at specific sites around the world and improved access to data, publications, and images.

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

Spatial Trends in Coastal Socioeconomics

The Spatial Trends in Coastal Socioeconomics website provides coastal and ocean managers with one-stop shopping for associated demographic and economic information. The website offers dynamic access to national-scale datasets in those geographic units that coastal and ocean managers must work with daily.

<http://marineeconomics.noaa.gov/socioeconomics/>

STEMresources.com

The Tennessee Department of Education and Middle Tennessee State University offer STEMresources.com, where teachers can access standards-based instructional tools, curriculum materials, and Internet materials. Among the many resources available from this website are standards users guides, curriculum frameworks, links to other STEM websites, teacher work samples, and much more.

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

Tagging Whales in the Antarctic Seas

From May 4-June 13, 2010, scientists and students will journey to the Antarctic Seas to apply suction cup tags to humpback and minke whales to measure their underwater movements and behaviors, in addition to taking measurements of the distribution, abundance, and behavior of prey and physical features of the water column. Follow along with their web log and photos, and check out the 2009 expedition.

<http://www.nicholas.duke.edu/antarctica/2010/>

Western Pacific Regional Fishery Management Council Education Resources

The Western Pacific Regional Fishery Management Council is one of eight regional fishery management councils. Their Education Corner offers student activities, video episodes from *Fishing in Old Hawaii*, and much more. Use the search feature to find many useful resources, and check out the Media Center for downloadable posters, and the Library for additional items.

<http://www.wpcouncil.org/education.html>

Where Words Touch the Earth

In this new digital media collection for grades 3-12, students from American Indian Tribal Colleges interview Elders, students, and community members to provide a Native American perspective on climate change and its effects on their communities.

Downloadable videos touch on key environmental science issues and indigenous knowledge of the depleted salmon population in Washington State, the ecological function and spiritual role of wetlands, and the relationship between humans and nature.

<http://www.teachersdomain.org/special/nasawords/>

Windows to the Universe Website Update

Windows to the Universe has moved to a new home with the National Earth Science Teachers Association, offering new capabilities and opportunities for partnership. The shift is designed to help make the site an open educational resource and to allow scientists, university faculty, K-12 educators, and others to contribute content more readily in support of the geoscience education community. The website offers Earth and space science content, professional development, and much more. Each page is geared to three different reading levels, from beginner (upper elementary) to advanced (high school).

<http://windows2universe.org/>

INITIATIVES, JOURNALS, and MORE

Federal Career Intern Program and Student Educational Employment Program

The *Federal Career Intern Program* is designed to help agencies recruit and attract exceptional individuals into a variety of occupations. In general, individuals are appointed to a 2-year internship. Upon successful completion of the internships, the interns may be eligible for permanent placement within an agency. The *Student Educational Employment Program* provides Federal employment opportunities to students who are enrolled or accepted for enrollment as degree seeking students taking at least a half-time academic, technical, or vocational course load in an accredited high school, technical, vocational, 2 or 4 year college or university, graduate or professional school.

<http://www.opm.gov/careerintern/>

<http://www.opm.gov/employ/students/intro.asp>

Get Hip to Habitat

Get Hip to Habitat is a program of the Galveston Bay Foundation that brings education and marsh restoration initiatives together in one program. The foundation works with students and teachers to establish a salt marsh wetland nursery on their school campus grounds and later transplant their established grasses to Galveston Bay wetlands.

http://galvbay.org/education_gethip.html

Natural Capital Project

The Natural Capital Project is a joint venture among Stanford University, The Nature Conservancy, and World Wildlife Fund, working to develop tools to incorporate natural capital into decisions. InVEST is a family of software-based tools for Integrated Valuation of Ecosystem Services and Tradeoffs, helping decision-makers to quantify the importance of natural capital, to assess the tradeoffs associated with alternative choices, and to integrate conservation and human development. The program offers webinars of Marine InVEST (check it out through the EBM Tools Network).

<http://naturalcapitalproject.org/home04.html>

Ocean Literacy Website

The College of Exploration has launched an Ocean Literacy website, with a complete set of scope and sequence charts which can be viewed as web pages or downloaded in a variety of different formats. Visitors can sign up for ocean literacy news, keep up with research, and more.

<http://oceanliteracy.wp.coexploration.org/>

Protected Area of the Week

The World Commission on Protected Areas (WCPA) and the Protected Area Programme (PPA) of the IUCN has launched a new initiative promoting protected areas worldwide as the best places on earth. Each week a different protected area from a different region and representing a different biome will be featured on the homepage of IUCN website, the WCPA website, on twitter, and igoogole.

http://www.iucn.org/about/work/programmes/pa/pa_paday/

Science News

Science News is the magazine of the Society for Science and the Public. Major topics include Earth, Environments, Science & Society, Science News for Kids, and more. The Bookshelf offers reviews of the latest science-oriented, books, while Multimedia offers videos and photo slideshows to explain scientific research. Issues can be read online; visitors can also subscribe to a variety of blogs.

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

Semester of Service Strategy Guide

The 2010 version of Youth Service America's Semester of Service Strategy Guide was developed to help educators engage young people in an extended service-learning framework of at least 70 hours, and presents step-by-step instructions on how to identify and implement meaningful service and learning experiences.

<http://www.ysa.org/2010-sos-guide>

Surf It, Save It Festival – North Carolina

The North Carolina Aquarium at Fort Fisher, North Carolina, is hosting the *Surf It, Save It: Aquarium Surf Festival*. The event, June 5-6, 2010 at the aquarium, is designed to encourage environmental stewardship through surfing, as well as educate visitors about the sport's culture and lifestyle. Festival activities include surfing films; hula and ukulele demonstrations; rehabilitated shore birds and turtles; sea oats planting; and clean-ups of Masonboro and Zeke's islands. Surfer's Healing mini-camps for autistic children and a search-and-air rescue demonstration by the U.S. Coast Guard, featuring a H60 helicopter and C-130, will be staged on the nearby beach.

<http://www.ncaquariums.com/surf-it-save-it-aquarium-surf-festival>

Timelapse PlantCam

This outdoor camera takes time lapse photos that can be stitched together to create a video of your project site. It can be used for wetland restoration monitoring, as a teaching tool, and more. The Swamp School website offers two examples of wetland monitoring with the camera.

<http://swampschool.org/new/outdoor-nature-cameras/wetland-plantcam/>

Youth in the Great Outdoors

The Department of the Interior has created the Office of Youth in the Great Outdoors to help coordinate efforts to employ, educate, and engage young people from all backgrounds in exploring, connecting with, and preserving America's natural and cultural heritage. Check out the Student Internship Opportunities, and watch this website as more information is added.

<http://www.doi.gov/whatwedo/youth/>