

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

**MAY 2009**

This update is funded by the National Marine Sanctuaries Foundation in partnership with NOAA's Ocean Exploration and Research Program, with additional support from the 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/helpful\\_resources/education\\_training.html](http://mpa.gov/helpful_resources/education_training.html). 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 References**

### **Learning Science in Informal Environments**

The National Research Council report, *Learning Science in Informal Environments: People, Places, and Pursuits*, reviews science learning across settings and learner age groups and over varied spans of times, and stresses the need for professional development among educators in the field.

[http://www.nap.edu/catalog.php?record\\_id=12190](http://www.nap.edu/catalog.php?record_id=12190)

### **Migratory Species: Biological, Cultural, and Economic Assets of the Americas**

The Western Hemisphere Migratory Species Initiative (WHMSI) contributes to the conservation of the migratory species of the Western Hemisphere by strengthening communication and cooperation among nations, international conventions, and civil society, and by expanding constituencies and political support. *Migratory Species: Biological, Cultural, and Economic Assets of the Americas* offers an overview about the importance of migratory species, WHMSI and its products to date, migratory species conventions, and conservation challenges and solutions. The publication is also available in Spanish and French.

<http://www.eco-index.org/migratory/>

### **WEBSITE OF THE MONTH**

#### **Seaweek**

The Marine Education Society of Australasia (MESA) runs a national themed Seaweek each year. The website hosts many downloadable materials and other resources. Check out the resources on the decline of sawfish, bycatch, sharks, ocean cultures, and much more. There are lesson plans, puzzles and games, information sheets, and useful links for more information.

<http://www.mesa.edu.au/seaweek.asp>

### **MESSAGE FROM THE BRIDGE**

#### **Coral Bleaching**

As the eastern U.S. continues to swelter, people are drinking more water and seeking out air conditioning. But what do corals do when the temperature rises? In this month's featured Data Analysis Teaching Activity, the Bridge would like to re-introduce you to *Coral Bleaching: A White Hot Problem*. Just recently updated to include 2008 data, *Coral Bleaching* explores the effects of rising ocean temperatures on the coral in San Juan, Puerto Rico. Using four years of water temperature data from ocean observing system buoys, students will compare these data, evaluate trends, forecast 2009 coral bleaching events and discuss the long term effects of elevated water temperatures and coral loss.

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

[http://www2.vims.edu/bridge/DATA.cfm?Bridge\\_Location=archive0406.html](http://www2.vims.edu/bridge/DATA.cfm?Bridge_Location=archive0406.html)

### **GRANTS AND OPPORTUNITIES**

#### **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. *Student Leaders* participate in a leadership summit in Washington, DC and a paid internship with a local nonprofit/charitable organization. The deadline for application/nomination is June 30, 2009.

[http://www.bankofamerica.com/foundation/index.cfm?template=fd\\_neighborexcell](http://www.bankofamerica.com/foundation/index.cfm?template=fd_neighborexcell)

### **Endangered Species Day Artwork Contest**

For Endangered Species Day, children across the country are invited to enter a contest for the best endangered species posters and pictures. Schools, scout troops, and other educational institutions are encouraged to have students write and draw as part of their Endangered Species Day lesson plans. Posters can depict one or many endangered species and should express the importance of protecting endangered species, the threats to wildlife and wild places, or the benefits of conservation. The deadline for entry is May 31, 2009.

[http://www.stopextinction.org/cgi-bin/giga.cgi?cmd=cause\\_dir\\_custom&cause\\_id=1704&page=dayposters](http://www.stopextinction.org/cgi-bin/giga.cgi?cmd=cause_dir_custom&cause_id=1704&page=dayposters)

### **Intelligent Use of Water Film Competition**

The 2009 Intelligent Use of Water™ Film Competition is now accepting entries which promote smart outdoor water use. Create a short film focused on responsible water use. Narrative, documentary, animated, experimental and/or student-made productions should explore methods and ideas to manage and use earth's most precious resource responsibly. The deadline for entry is August 15, 2009.

<http://www.iuowfilm.com/index.html>

### **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, 2009.

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

### **Krylon Clear Choice Art Scholarship**

Krylon is awarding scholarships to future fine artists and giving students gift packs of art supplies. Foster the growth of future ocean artists and distribute the information about this competition. The deadline for application is May 31, 2009.

<http://krylon.com/krylon-weblogic/art/>

### **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 August 4, 2009.

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

### **Marine Debris Research and Technology Grants Program**

The Marine Debris Research and Technology Grants Program is a partnership between the NOAA Marine Debris Program and National Fish and Wildlife Foundation to provide grants to organizations working on projects to improve our understanding of the impacts of marine debris on our marine and coastal resources, and to reduce and prevent debris in our marine environment. Hurry – the deadline for pre-proposal is May 8, 2009.

<http://www.nfwf.org/marinedebris/rfp>

### **NAAEE Photo Contest**

The North American Association for Environmental Education seeks photos that will inspire people to achieve environmental excellence. Entries may include anything that

reflects the theme, *Our Richly Diverse Natural World*. The deadline for entry is August 15, 2009.

<http://www.naaee.org/conference/2009-conference/>

### **National EE Week Photo Blog Contest**

EE Week would like to hear about how you and your organization are bringing environmental education to students. Your story can be about activities either inside or outside the classroom, before, during, or after EE Week. The deadline for entry is May 22, 2009.

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

### **Nature of Learning Grants**

The Nature of Learning is a community-based environmental education initiative of the U.S. Fish & Wildlife Service 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. Programs must promote an understanding of local conservation issues, improve scientific literacy, and conform to appropriate academic standards of learning. Preference will be given to start-up programs that can demonstrate a commitment to sustaining the program over time. The deadline for application is June 15th, 2009.

[http://www.nfwf.org/AM/Template.cfm?Section=Browse\\_All\\_Programs&CONTENTID=9421&TEMPLATE=/CM/ContentDisplay.cfm](http://www.nfwf.org/AM/Template.cfm?Section=Browse_All_Programs&CONTENTID=9421&TEMPLATE=/CM/ContentDisplay.cfm)

### **NEA Grants**

The NEA Foundation *Learning and Leadership Grants* support public school teachers, public education support professionals, and/or faculty and staff in public institutions of higher education. *Student Achievement Grants* support improved academic achievement of students by engaging in critical thinking and problem solving that deepen knowledge of standards-based subject matter. Grants are awarded three times each year; the next deadline for application is June 1, 2009.

<http://www.neafoundation.org/grants.htm>

### **NOAA's Ocean Education Grants for AZA Aquariums**

The NOAA Office of Education issues this request for applications to support education projects designed to engage the public in activities that increase ocean and/or climate literacy and the adoption of a stewardship ethic. Funded projects will support ocean education projects led by eligible applicants. The deadline for applications is June 9, 2009. See the website for eligibility requirements and full details.

[http://www.oesd.noaa.gov/funding\\_opps.htm](http://www.oesd.noaa.gov/funding_opps.htm)

### **NSTA New Science Teacher Academy Fellowships**

NSTA fellowships offer 6-12th grade 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 June 1, 2009.

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

### **Olympus Student Photo Contest**

Olympus is looking for the student photographers of tomorrow. Students ages 4-18 in the US, its territories, and Canada are eligible to apply. The deadline for application is May 15, 2009.

[http://www.toolfactory.com/olympus\\_contest/olympus\\_student.htm](http://www.toolfactory.com/olympus_contest/olympus_student.htm)

### **Renewable-Energy and Energy Efficiency for Schools in Appalachia**

The Appalachian Regional Commission is accepting proposals focusing on renewable energy and energy efficiency for K–12 schools. This grant program will underwrite costs of installing renewable-energy and energy-efficiency equipment in K–12 schools in Appalachia, and provide support for the implementation of associated science, environment, and business curricula in the classroom. The deadline for submission is May 29, 2009.

<http://www.arc.gov/index.do?nodeId=2926>

### **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 15, 2009.

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

### **Student Essay Writing Contest**

Duckey and his team of Ocean Protectors are offering an essay contest as part of the launch of a new environmental and educational tale of one lucky duck and his sea creature friends who are out to save the ocean from going black. The contest is open to all kids ages 6-16. The deadline for submission is May 15, 2009.

<http://www.duckeyops.com/contest/>

### **Territories and Freely Associated States Education Grant**

The Territories and Freely Associated States Education Grant program supports projects to raise student achievement through direct educational services. Grants are awarded competitively to local educational agencies in the U.S. Territories (American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands) and the Republic of Palau. The deadline for submission is June 10, 2009.

<http://www.ed.gov/legislation/FedRegister/announcements/2009-1/033109b.html>

### **Tool Factory Podcasting Grants**

The Olympus and Tool Factory Podcasting Grant offers tools and accessories to start a podcasting program in your school. Develop and submit a lesson plan demonstrating how you would use podcasting in your curriculum. The next deadline for submission is May 15, 2009.

[http://www.toolfactory.com/olympus\\_contest/olympus\\_podcasting.htm](http://www.toolfactory.com/olympus_contest/olympus_podcasting.htm)

### **Young Birder of the Year Contest**

The American Birding Association and Leica Sport Optics sponsor the Young Birder of the Year, an annual contest for youth ages 10-18. Completed projects are due by October 23, 2009, but youth must register by June 19, 2009.

<http://www.aba.org/yby/>

## **INTERNSHIPS AND TEMPORARY OPPORTUNITIES**

### **Beam Reach Killer Whale Studies - Washington**

Beam Reach Marine Science and Sustainability School in Seattle, Washington offers a 10-week student marine field research opportunity. Students will study the southern resident killer whales, their marine environment, and what it will take to save them. The fall program runs August 24-October 31, 2009.

<http://www.beamreach.org/?tbs4/21/2009>

### **Teacher At Sea – Cordell Bank**

Cordell Bank National Marine Sanctuary and PRBO Conservation Science are working together to offer teachers an opportunity to join ocean monitoring research cruises in 2009 through the Teachers At Sea program on the Research Vessel Fulmar. The deadline for application for the week-long cruise, July 17-22, 2009 is May 30, 2009.

<http://cordellbank.noaa.gov/education/teachatsea.html>

### **Whale Camp**

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, seals, and puffins in their natural habitats through direct observation, data collection, and hands-on experience with marine science equipment. The 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/>

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

### **ANROSP – Call for Presentations**

The Alliance of Natural Resource Outreach & Service Programs (ANROSP) will hold its annual conference September 28-October 2, 2009 in Shepherdstown, West Virginia.

The conference is for professionals and partner organizations who coordinate, administer, or host training and volunteer programs in natural resource conservation, education, and outreach and for those interested in developing such a program.

ANROSP is a national alliance of adult natural resource education and stewardship programs, including Master Naturalists, Master Watershed Stewards, Wildlife Stewards, and others. ANROSP facilitates networking and exchange of resources and information among coordinators of citizen-based environmental programs across the United States.

Hurry – the deadline for submission is May 4, 2009.

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

### **Boat Camp - Massachusetts**

Boat Camp Inc. offers professional development workshops for K-12 and informal educators aboard the vessel Erica Lee and inside their waterfront classroom in Newburyport, Massachusetts. They also offer courses for students and families.

[http://www.boatcamp.org/index\\_home.html](http://www.boatcamp.org/index_home.html)

### **Capitol Hill Oceans Week**

The National Marine Sanctuary Foundation invites you to participate in Capitol Hill Ocean Week 2009, June 9-11, 2009 in Washington, D.C. This year's theme *The Blue Economy: Understanding the Ocean's Role in Our Nation's Financial Future* highlights



the link between the ocean and the economy, and will discuss tangible ways sound ocean policies might impact improvements in our economy. Free registration is required.

<http://nmsfocean.org/capitol-hill-ocean-week-2009>

<http://nmsfocean.org/capitol-hill-ocean-week-registration>

### **Climate Discovery Courses for Educators - Online**

The National Center for Atmospheric Research 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 group discussion. Registration is open for summer and fall courses.

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

### **Communicating Ocean Sciences - California**

Communicating Ocean Sciences is a university course introducing graduate and undergraduate science students to learning and teaching science. The course is designed to be co-taught by an ocean scientist and science educator. The Communicating Ocean Sciences Instructors' Workshop, June 3-5, 2009 in Berkeley, California, shares the pedagogy and curriculum with scientists and science educators interested in teaching the course at their institutions. The deadline for application is May 10, 2009.

<http://www.coseeca.net/programs/communicatingoceansciences/instructorsworkshop/>

### **Diving into the Digital World of Marine Science - Online**

PBS Teachers and Classroom 2.0 will present Jean-Michel Cousteau, host of the PBS series Jean-Michel Cousteau: Ocean Adventures, as guest for "Diving into the Digital World of Marine Science," the next webinar in the PBS Teachers LIVE! Series, **May 4, 2009**. The free webinar will highlight the importance of educating young people about the ocean and the vital role of teachers in inspiring students to become stewards of the environment.

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

### **Earth Science Information Partners Educators Workshop - California**

The Federation of Earth Science Information Partners is a consortium of organizations that collect, interpret, and develop applications for remotely sensed Earth science data. The education committee invites California educators of grades 6-12 to join them at their summer meeting, July 8-9, 2009 in Santa Barbara, California, to learn about federation efforts to study and steward our planet. The deadline for application is May 22, 2009.

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

### **From Shore to Sea Lecture Series - California**

The Channel Islands National Marine Sanctuary's *From Shore to Sea Lecture* series will be presenting *SPLASH – Update on Blue and Humpback Whale Pacific NE Populations*, May 12 and 13, 2009, and *Investigating the Mass Extinction of 12,000 Years Ago*, June 9 and 10, 2009.

<http://channelislands.noaa.gov/focus/calendar.html>

### **Marine Biology Field Courses - Mississippi**

The University of Southern Mississippi Gulf Coast Research Laboratory is now registering for the Summer Field Program to be offered in Ocean Springs, Mississippi.

Courses offered include marine ecology, marine mammals, ocean and human health, and many more.

[http://www.usm.edu/gcrl/summer\\_field/index.php](http://www.usm.edu/gcrl/summer_field/index.php)

### **National Conference on Ecosystem Restoration**

The National Conference on Ecosystem Restoration will take place July 20-24, 2009 in Los Angeles, California. This conference provides a forum to discuss pressing challenges to restoration planning and implementation.

<http://conference.ifas.ufl.edu/NCER2009/reg.html>

### **National Conservation Training Center Courses – West Virginia and Alaska**

The U.S. Fish and Wildlife Service offers professional development courses at the National Conservation Training Center campus in West Virginia, except where noted. For more information about a specific course, contact the individual identified below. Call for availability after the registration deadline.

- OUT8121: Interest-Based Negotiation, June 15-17, 2009; the deadline for registration has been extended. Contact Ora W. Dixon at [Ora\\_Dixon@fws.gov](mailto:Ora_Dixon@fws.gov)
- OUT8113: Developing and Working with Friends Organizations, June 29-July 1, 2009; call for availability. Contact Laura Jones at [Laura\\_Jones@fws.gov](mailto:Laura_Jones@fws.gov)
- OUT8194: Trail Management: Plans, Projects and People, **August 3-7, 2009 in Homer, Alaska**; the deadline for registration is May 15, 2009. October 5-9, 2009 in Shephardstown, West Virginia; the deadline for registration is July 27, 2009. Contact Matt Gay at [Matt\\_Gay@fws.gov](mailto:Matt_Gay@fws.gov)
- OUT8114: Volunteer Recruitment and Management, August 11-14, 2009; the deadline for registration is June 2, 2009. Contact Laura Jones at [Laura\\_Jones@fws.gov](mailto:Laura_Jones@fws.gov)
- OUT8120: Advanced Volunteer Management, August 17-20, 2009; the deadline for registration is June 8, 2009. Contact Laura Jones at [Laura\\_Jones@fws.gov](mailto:Laura_Jones@fws.gov)
- OUT8116: Grant Writing for Conservation, September 9-11, 2009; the deadline for registration is July 6, 2009. Contact Ora Dixon at [Ora\\_Dixon@fws.gov](mailto:Ora_Dixon@fws.gov)
- OUT8122: Applying Collaboration to Environmental Issues, September 14-18, 2009; the deadline for registration is July 6, 2009. Contact: Ora Dixon at [Ora\\_Dixon@fws.gov](mailto:Ora_Dixon@fws.gov)

[http://training.fws.gov/documents/Section1\\_NCTC\\_Sponsored\\_Courses.pdf](http://training.fws.gov/documents/Section1_NCTC_Sponsored_Courses.pdf)

### **Northeastern University Summer Programs - Massachusetts**

Northeastern University's Marine Science Center offers a two week summer program for students, teacher workshops, and other programs. For science teachers of grades 6-12, the *Survey of New England Coastal Ecosystems*, July 13-17, 2009 in Nahant, Massachusetts, focuses on rocky intertidal zone, sandy beach, and salt marsh New England coastal habitats, along with current research in each. Summer opportunities for students entering grades 9-10 in the fall include the *Coastal Ocean Science Academy*, August 10-21, 2009 in Nahant, Massachusetts. Students will spend time doing field-work in local marine habitats on the North Shore and participate in ongoing Marine Science Center research. Participants will be introduced to field sampling techniques, invasive species monitoring, beach clean-up, benthic organism surveys and more.

<http://www.ace.neu.edu/pdp/programs/science>



### **NTEN Courses - Online**

The National Teachers Enhancement Network (NTEN) provides online science courses developed for teachers, created by a collaborative team of scientists and in-service teachers. The courses contain rich science content and emphasize discussion and collaboration among participants. Courses include Fundamentals of Oceanography, Environmental Measurement: Sensors and Electronics, Streamside Science: Hands-On Approaches to Water Quality Education, and more.

<http://btc.montana.edu/courses/asp/ntenindex.aspx>

### **Satellite Educators Conference**

The Satellite Educators Association's *Conference XXII, Coming of Age*, August 13-15, 2009 in Los Angeles, California, is for educators interested in discovering ways to use satellites and related technologies as vehicles for helping students appreciate and understand the complex interrelationships among science, technology, individuals, societies, and the environment while developing and applying inquiry and technology skills to study authentic questions and problems. Make sure to check the website for lesson plans, images, links, and much more.

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

### **Using NASA Observations to Study Changes in Chesapeake Bay - Maryland**

Cutting edge science observations from space will be integrated with classroom-ready lessons in this workshop for middle school teachers, July 7-9, 2009 in Greenbelt, Maryland. An overarching theme of the bay's place in space, and time, and the Earth system will tie together lessons in geology, land use change, air quality, and the water cycle as participants look at the long-ago past and into the future. The workshop is limited to 30 participants.

<http://education.gsfc.nasa.gov/bay/>

### **Virtual Participation in EISTA 2009**

The deadline for submission of proposals for virtual participation in the 7th International Conference on Education and Information Systems, Technologies and Applications: EISTA 2009, July 10-13, 2009 in Orlando, Florida, is May 6, 2009.

<http://www.iiis2009.org/imsci/website/default.asp?vc=5>

### **Voices of the Bay Fisheries Education Workshop - California**

The National Marine Sanctuary Program and the Monterey Bay National Marine Sanctuary invite teachers of all disciplines (grades 8-14) to become immersed in Monterey Bay fisheries, past and present, July 29-31, 2009 in Santa Cruz, California. This free workshop will introduce the new *Voices of the Bay* fisheries education curriculum and to help participants implement this curriculum in their classroom. Space is limited; the deadline for application is May 31, 2009.

Contact Sabrina Beyer at [sabrina.beyer@noaa.gov](mailto:sabrina.beyer@noaa.gov)

### **Waves, Wetlands, and Watersheds Educator Workshop - California**

*Waves, Wetlands, and Watersheds*, a free educator workshop for both formal and informal educators, will be held May 21, 2009 in Imperial Beach, California. Participants will receive a copy of the California Coastal Commission's science activity guide for teachers, *Waves, Wetlands, and Watersheds*. The deadline for registration is May 13, 2009.

<http://www.coastal.ca.gov/publiced/waves/waves1.html>

## EDUCATIONAL RESOURCES

### **Adaptation 2009**

*Adaptation 2009: Safeguarding Fish, Wildlife and Natural Systems in the Face of Climate Change*, was convened by the Wildlife Habitat Policy Research Program and the National Wildlife Federation in February 2009. The conference breakouts were organized around four natural systems: forests, grasslands and shrublands, freshwater ecosystems, and coasts and estuaries. Presentations are available for viewing or via audio from the website, along with summaries and other materials.

<http://ncseonline.org/WHPRP/NWF/Adaptation2009/>

### **Big Green Help**

The Big Green Help from Nickelodeon is a global kid-led initiative that provides information and tools to help explain climate change to kids, and educates and empowers kids to make a difference by connecting them to earth-friendly activities in their everyday lives.

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

### **Dog-Eared Publications and Social Ecology Press**

Dog-Eared Publications aims to turn young readers into environmentally aware citizens and foster a love of science and nature in the new generation by capturing their interest and engaging them with interactive games, mysteries, puzzles, and stories. Social Ecology Press publishes accounts of human behavior, natural resources, and the environment. Their goal is to provide affordable books for classroom adoption and the natural resource professional community. Check out *Discovering Sharks and Rays*, *Discovering Marine Mammals* and both shark and marine mammal *Wild Stickers* from Dog-Eared Publications. Note that they are offering a generous 40% discount; use special offer code Shark209 when ordering. From Social Ecology Press, check out *A Conceptual Approach to Social Impact Assessment* and other publications.

<http://www.dog-eared.com>

<http://www.dog-eared.com/social ecologypress/index.php>

### **Environmental History Resources**

Professor Jan Oosthoek at the University of Edinburgh maintains this website to provide a range of resources and information on environmental history for the general public and scholars. Resources include bibliographies, essays, annotated guides to other web resources, a news feed, and more.

<http://www.eh-resources.org/index.html>

### **EstuaryLive!**

EstuaryLive! is coming up on May 15, 2009. Share your projects on the estuary wiki, and check out the extensive archives and video collection. Make sure to check your technology connections beforehand, to make sure you can join the full broadcast.

<http://estuarylive.pbworks.com/>

<http://estuaries.gov/estuaries101/EstuaryLive/Default.aspx?ID=258>

### **Games@NOAA**

This arcade hosted by NOAA is a portal to games and interactive activities focused on ocean and air themes. It highlights the science and the activities of NOAA and other agencies and organizations promoting environmental stewardship.

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

### **Great Turtle Race**

Eleven leatherback sea turtles are taking part in another Great Turtle Race, speeding from foraging grounds in the waters of Canada to nesting beaches on the shores of the Caribbean. The turtles are tagged with satellite tracking devices that allow visitors to follow their 3,700-mile (6,000-kilometer) journey. Watch the turtles' progress, learn about turtles, and more.

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

### **GulfBase InfoHub**

GulfBase InfoHub is a public information resource for the Gulf of Mexico from the Harte Research Institute for Gulf of Mexico Studies and the National Sea Grant Law Center at the University of Mississippi. Users can search for articles on the laws, the science, and socioeconomic issues relevant to management and use of the Gulf of Mexico.

<http://www.gulfbase.org/infohub/>

### **H<sub>2</sub>O Conserve**

H<sub>2</sub>O Conserve is a web-based project that offers tools and information that enable individuals to make water conservation part of their everyday lives. The website includes links to lesson plans, issue sheets, a water use calculator, and more.

<http://www.h2oconserve.org/home.php>

### **Inspirational People**

Dive Into Your Imagination is a company that creates educational products and activities to educate people of all ages. The website's Kid's Corner showcases both kids and scientists people who are inspirational and motivational. The website also offers information about shooting video and photos, along with other sections.

<http://www.diveintoyourimagination.com/kids-corner/>

### **Investigations of Daily High-Low Temperatures**

Using this online activity from ESRI, students can analyze the spatial patterns of daily temperature extremes and examine the relationship of coasts, latitude, and altitude to temperature extremes across the U.S. in a hands-on, GIS-based environment.

<http://blogs.esri.com/Info/blogs/gisedcom/archive/2009/03/06/investigating-temperature-extremes-in-the-usa-with-gis.aspx>

### **Kelp Forest TV Shows**

Dr. Bill Bushing is currently involved in the production of a proposed commercial cable TV show, *Munching & Mating in the Macrocystis*. The show will focus on the marine life, ecology, and conservation issues related to the giant kelp forests of southern California. The introductory episode is available for downloading from the website.

<http://www.starthrower.org/products/tv%20show/M&M%20tv%20show.htm>

### **Live From IPY**

The International Polar Year is a program of international research and education focused on the Arctic and Antarctic regions. *Live from IPY!* continues to transport the public to remote polar locations through live from the field calls and Internet presentations. Teachers and researchers interact during these presentations and participation is free; each live event is also archived for downloading and viewing at a later date. Check out the upcoming event on May 6, 2009.

<http://www.polartrec.com/live-from-ipy/overview>

### **Long Island Sound Curricular Resource Guide**

Connecticut Sea Grant is pleased to announce the publication of the *Long Island Sound Curricular Resource Guide*. Funded by the EPA – Long Island Sound Study, the 148 page guide is a resource for educators teaching about Long Island Sound. The sections include background information about the sound, activities, lesson plans, science lessons at a field site, and resources. Print copies are free (except shipping), and electronic copies should be available by September 2009.

Contact Karen Massaro at [Karen.Massaro@uconn.edu](mailto:Karen.Massaro@uconn.edu)

### **MAREX Teacher Resources**

University of Georgia Marine Extension Service hosts a teacher resource page with background information on coastal Georgia, field guides, and more. Field guides highlight coastal Georgia flora and fauna. The first curriculum offered is on marine debris; others are planned for future distribution. While on the website, make sure to check out the upcoming professional development opportunities.

<http://www.marex.uga.edu/aquarium/TchrRes.html>

### **Marine Debris to Energy Project**

The New Hampshire Marine Debris to Energy Project studies marine debris at sea and on the shore, incorporating waste-to-energy and recycling as part of cleanup efforts. The website includes individual beach debris breakdowns, a reporting form, and more. Individual beach maps will be available in the future.

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

### **National Extension Water Outreach Education**

The Water Outreach Education - Facilitating Access to Resources and Best Practices Project is a collaborative effort of the United States Department of Agriculture Cooperative State Research, Education, and Extension Service and other public and private clean and safe water partners to identify and promote the use of Best Education Practices and improve access to education resources and strategies. Check out the many downloadable resources available on the website.

<http://wateroutreach.uwex.edu/>

### **Ocean Adventures in the Classroom**

PBS recently premiered new episodes of Jean-Michel Cousteau's Ocean Adventures – check the website for local times. In addition, the website offers resources designed primarily for middle school educators and students, appropriate for use in both formal and informal educational settings. The themes of adaptations, ecosystems and human impact are interwoven throughout the Ocean Adventures episodes and educational materials. The website offers new educational resources including episode-based viewing guides, activities, standards-based lesson plans and in-depth articles.

<http://www.pbs.org/kqed/oceanadventures/educators/>

### **Ocean Book Lists**

One recurring question from teachers is “What books do you recommend? - fiction, text, and inspirational. A variety of organizations pull together recommended lists. Here are just a few lists to start with.

- Los Angeles Unified School District - <http://www.usc.edu/org/cosee-west/oceanbibliog.html>

- The Ocean Project's Book of the Month - <http://www.theoceanproject.org/action/book.php>
- Children's Environmental Literature Bibliography <http://www.dnr.state.wi.us/org/caer/ce/eeek/teacher/childlit.htm>
- The Bridge
  - Frequently Asked Questions - <http://www2.vims.edu/bridge/search/faq.cfm>
  - Resource Center - [http://www2.vims.edu/bridge/search/bridge1output\\_menu.cfm?q=literature](http://www2.vims.edu/bridge/search/bridge1output_menu.cfm?q=literature)

### **Ocean Now**

National Geographic's *Ocean Now* is a project to study healthy, undisturbed places in the ocean. Follow Dr. Enric Sala and a team of scientists as they explore the waters of the southern Line Islands. The crew will document and study water quality, fish populations, predator populations, and the health and diversity of the coral reefs. The website includes an Ask the Crew feature, links to educational resources, and more. <http://ocean.nationalgeographic.com/>

### **Oregon Sea Grant Resources**

Oregon Sea Grant supports research, education, and public outreach to help people understand, responsibly use, and conserve ocean and coastal resources. The resources include:

- Rigorously reviewed science by top marine scientists
- Outreach and education programs designed to deliver the fruits of that research
- Publications and videos about the ocean and coastal world.

Spend some time looking through this website and check out the research and outreach pages. Don't miss the downloadable videos on ocean acidification and invasive species. <http://seagrant.oregonstate.edu/index.html>

### **Queen Anne's Revenge**

North Carolina Department of Cultural Resources offers *Queen Anne's Revenge: Investigating, Interpreting & Preserving the Remains of Blackbeard's Flagship*. This website includes sections on archaeology, artifacts, conservation, education, and more. <http://www.qaronline.org/>

### **Ravenswood Media**

Ravenswood Media produces natural history and social documentaries. They have pioneered a new Internet genre called the "webumentary". The webumentary conforms the documentary format into an online non-linear program by posting streaming digital video on the web. They offer nature, wildlife, environmental, and science video productions. Check out their web offerings on invasives, frogs, and more. <http://www.ravenswoodmedia.com/>

### **Riffle Fish**

Riffle Fish is an evolving webumentary about the plants and animals that live in the riffles of rivers and streams. The on-line documentary will include new clips about the insects, mollusks, fish, and amphibians that make up the riffle community. The site will also provide interviews about the science of riffle ecology and the conservation efforts to preserve their biodiversity. <http://www.rifflefish.com/>

### **Science Snacks**

The Exploratorium: Museum of Science, Art and Human Perception in San Francisco offers *Science Snacks*, miniature science exhibits that teachers can make using common, inexpensive, easily available materials. The Snacks are divided into easy-to-follow sections that include instructions, advice, and helpful hints. Most of the Snacks can be completed by one person. A section called "etc." offers interesting bits of additional scientific and historic information.

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

### **Sea Ice**

NASA's Earth Observatory features an article on sea ice in the Arctic and Antarctic, including background information, monitoring, references, and more.

<http://earthobservatory.nasa.gov/Features/SeaIce/>

### **Seashells: the Plainness and Beauty of Their Mathematical Descriptions**

Jorge Picado of the Universidade de Coimbra recently looked into the question of how seashells grow, and offers this very math-focused article. The author illustrates that many aspects of the growth of plants and animals may be described by simple mathematical laws.

<http://mathdl.maa.org/mathDL/23/?pa=content&sa=viewDocument&nodeId=3294>

### **Ships and Ports and the Marine Environment**

The Australian Marine Environment Protection Association offers new educational materials for middle school students, *Ships and the Marine Environment* and *Ports and the Marine Environment*. These two education packages are student focused, highly adaptable within current pedagogy, and consist of student research information and activities and teacher notes.

<http://www.ausmepa.org.au/other.asp?pagelid=13>

### **Song of the Oceans**

Gary Bowman offers the CD, *Song of the Oceans*, a compilation of original songs celebrating the ocean world and the variety of creatures that live there. The project also addresses modern day conservation challenges. Visitors can listen to *The Tidepool Stomp*, *Plastic Island*, *Where Whales Sing*, and others, read the lyrics, and more.

<http://www.songoftheoceans.com/music.html>

### **TED Talks**

TED (Technology, Entertainment, Design) started out as a conference bringing together people from those three fields. The annual conference now brings together thinkers and doers who are challenged to give the talk of their lives (in 18 minutes). The website offers the best talks and performances, with categories including Technology, Global issues, Science, and more. Check out the offerings from TED Prize winner Sylvia Earle, Richard Pyle, and more. Select "Show talks related to..." for a quick offerings.

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

### **Thinkfinity Literacy Network**

The Verizon Foundation's Thinkfinity Literacy Network links to free, online educational resources for literacy instruction and lifelong learning for adults along with family literacy programs. The content aims to strengthen literacy development, creativity, and critical thinking skills. The website of literacy resources is meant for teachers, volunteers, adult



learners, tutors, parents, and students. A simple search on the “marine” brought a response with more than 900 listings.

<http://literacynetwork.verizon.org/tln/>

### **Virtual Volcano**

The Discovery Channel offers this virtual volcano website with interactive features. Visitors build their own volcano and watch it erupt, or read brief overviews of different features.

<http://dsc.discovery.com/convergence/pompeii/interactive/interactive.html>

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

### **American Trails Magazine Online**

American Trails Magazine has gone digital. Check out the latest issue in its quick-loading, page-turning format. The format also offers a search feature and the ability to print the issue for those who prefer to pass the paper around.

<http://www.myvirtualpaper.com/doc/americantrails/Spr09ATM/2009040801/>

### **And the Winners Are...Ocean Art**

The Hawaiian Islands Humpback Whale National Marine Sanctuary has posted the winners from the 2009 Humpback Whale Month Ocean Contest. Winning art, poetry, and essays from the K-8 participants can be found on the website. Perhaps these will inspire additional waves of young poetry, story-telling, and artistry?

<http://hawaiihumpbackwhale.noaa.gov/news/stories/newsocwinners09.html>

### **BioBlitz - Indiana**

BioBlitz is a 24-hour event in which teams of scientists, volunteers, and community members join forces to find, identify, and learn about as many local plant and animal species as possible. A BioBlitz will take place at Indiana Dunes National Lakeshore on May 15-16, 2009. Educators are encouraged to have their students participate, and educational materials are available for download from the website.

<http://www.nationalgeographic.com/field/projects/bioblitz.html>

### **Conservation and Environmental Education Connections**

The Conservation and Environmental Education Connections listserv is a tool from the U.S. Fish & Wildlife Service for listserv moderators from federal and state agencies and nongovernmental organizations to share professional development opportunities with conservation and EE professionals.

<https://www.fws.gov/lists/listinfo/ceec>

### **Endangered Species Day**

May 15, 2009 is Endangered Species Day. Events will be held across the country to raise awareness about the threats to endangered species, including global warming, and success stories in species recovery. Register your event, download educational materials, and learn more from the website.

[http://www.stopextinction.org/cgi-bin/giga.cgi?cmd=cause\\_dir\\_custom&cause\\_id=1704&page=day](http://www.stopextinction.org/cgi-bin/giga.cgi?cmd=cause_dir_custom&cause_id=1704&page=day)

### **GEF Lessons Learned E-Group**

The Knowledgebase for Lessons Learned and Best Practices in the Management of Coral Reefs project aims to formalize the experiences, outcomes, and lessons learned from previous Global Environment Facility (GEF) projects, as well as major non-GEF initiatives involving coral reefs and associated ecosystems. This e-group creates a forum where institutional and personal experiences in Caribbean coral reef management can be exchanged and linkages can be enhanced and facilitates information sharing and discussions regarding coral reef management in the Caribbean.

<http://tech.groups.yahoo.com/group/gefll/>

### **My Green Job**

KABC-TV's *Green Right Now* offers this series, profiling people who working in the emerging green economy. Read the stories of how they started working in these sometimes-new fields, learn about their training, and get their advice on how you can move into the green-collar workforce.

<http://www.greenrightnow.com/kabc/2009/04/10/special-report-my-green-job/>

### **Sad Day for Oxford Junior Dictionary**

In order to make room for modern words like MP3 player, chatroom, and database, the latest edition of the *Oxford Junior Dictionary* removed many nature-related words as a result of the changing landscape. So BlackBerry now takes the place of blackberry, and it's a cautionary tale for ivy.

<http://www.nextnature.net/?p=3110>

### **Tread Lightly! Charity Auction**

Tread Lightly! will hold its 2nd Annual Tread Lightly! Charity Auction on eBay, June 1-11, 2009, with more than 175 products donated from companies across the country. All money raised will go to address recreation issues on public recreation sites and off-road trails through education, communication, and restoration/stewardship.

<http://www.treadlightly.org/page.php/auction>