

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

MAY 2008

This update is provided with support from NOAA's Office of Education and by 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, CREEC, 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/helpful_resources/education_training.html. 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 Reference

Locally-Managed Marine Area Guidebook

A new book offers step-by-step guidelines to help coastal communities and conservation partners plan and maintain locally managed marine areas (LMMAs). The guidebook, *Locally-Managed Marine Areas: A Guide to Supporting Community-Based Adaptive Management* (CBAM), is published by the LMMA Network, an initiative to help LMMAs in the Western Pacific benefit from the collective experience of their practitioners. The publication is structured around four general phases: initial assessment; design and planning; implementation of CBAM; and ongoing CBAM. Although it is aimed at a Pacific Islands audience, the book offers useful guidance to communities elsewhere who are working to manage their local marine resources. It is downloadable from the website.

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

National Marine Debris Monitoring Program Final Report

The Ocean Conservancy has released key findings from the National Marine Debris Monitoring Program, a five-year national study of trash in the ocean. The goal of the study was to set a nationwide scientific baseline of the marine debris problem in the U.S. The downloadable report can help federal and state agencies and local communities better understand where trash in the ocean is coming from and assist them in developing solutions for preventing this serious problem.

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

INITIATIVE OF THE MONTH

Phoenix Islands Protected Area

The small Pacific Island nation of Kiribati has established a California-sized marine protected area of coral reefs and rich fish populations. The Phoenix Islands Protected Area (PIPA) conserves one of the Earth's last intact oceanic coral archipelago ecosystems, consisting of eight coral atolls and two submerged reef systems in a nearly uninhabited region of abundant marine and bird life. The 410,500-square-kilometer (158,453-square-mile) protected area also includes underwater mountains and other deep-sea habitat. Kiribati and the New England Aquarium developed PIPA over several years of joint scientific research, with funding and technical assistance from Conservation International's Global Conservation Fund and Pacific Islands Program.

<http://www.phoenixislands.org/index.php>

MESSAGE FROM THE BRIDGE

Learn about Fisheries

Learn and teach about the country's commercial and recreational fisheries with help from The Bridge's Human Activities sections. Here, you can find a listing of links to teacher-reviewed fisheries websites. The websites contain information for all grade levels and ages, with fact sheets, lesson plans, and more. Check out the interactive games that demonstrate the importance of the world's fisheries and how to preserve them. Learn about over-fishing, the different kinds of gear used to catch fish, by-catch, and the importance of water quality. The fisheries section also contains links to each of the United States' regional fisheries commissions, all of which contain important information for their specific corner of the world. Know of a great fisheries website? Nominate it for inclusion on the Bridge.

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

Fisheries Collection http://www.marine-ed.org/bridge/index_fisheries.html

REQUESTS

Seeking Curriculum Writer

Heal the Bay is a nonprofit environmental organization dedicated to making Southern California coastal waters and watersheds, including Santa Monica Bay, safe, healthy, and clean through research, education, community action, and advocacy. They are developing a web-based tool and curriculum for classroom teachers to use in conjunction with a beach or neighborhood cleanup and seek a curriculum writer. The website tool will allow students to input their trash data into an on-line database. The position is to be completed by July 2008.

<http://www.healthebay.org/aboutus/jobs.asp>

GRANTS AND OPPORTUNITIES

Akitas to Zebras Animal Challenge

The Akitas to Zebras Animal Challenge, sponsored by The Weather Channel Kids, welcomes all animal lovers who have ideas that will improve the life of an animal or pet. Categories include spreading public awareness of endangered species and more. The deadline for entry is June 30, 2008.

<http://www.bkfk.com/Modules/Competition/Competition.aspx?section=changeit>

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 over two years to two nonprofit organizations working in each identified community to promote vibrant neighborhoods.

Local Heroes recognizes and honors five heroes per year in each of the selected communities whose achievements and leadership on local issues contribute significantly to neighborhood vitality. The deadline for application/nomination is June 27, 2008.

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

CALFED Science Program Fellowships

The CALFED Science Program, through California Sea Grant, is accepting applications from qualified individuals to compete for fellowship opportunities in 2008. Up to 12 fellowships are available in estuarine and riverine science for qualified predoctoral students and postdoctoral researchers. Fellows will focus on the San Francisco Bay-Sacramento-San Joaquin Delta system, studying trends and patterns of habitats, populations and system response to a changing environment; aquatic invasive species; water supply, water quality; and/or developing indicators and performance measures. The fellowships will begin September 2008. The deadline for application is June 6, 2008.

<http://www.csgc.ucsd.edu/EDUCATION/CALFED/CALFEDIndx.html>

Cabrillo National Monument Photo Contest

Cabrillo National Monument in San Diego announces the first annual Cabrillo National Monument Annual Park Pass Photo Contest. The deadline for entry is July 31, 2008.

<http://www.cnmf.org/photocontest.html>

Classroom Earth National High School Challenge

The National Environmental Education Foundation, in partnership with The Weather Channel, is launching the Classroom Earth National High School Challenge to help provide teachers around the country with support for their innovative work to bring environmental education into the classroom. Grants will be offered for Course Integration and Professional Development. The deadline for proposal submission is June 20, 2008.

http://www.neefusa.org/programs/ce_grant.htm

Envision 2050 Poster Contest

EnVision 2050: Is the Future Nature? is looking for poster artwork, designs, and ideas created by students in grades 6-12. Students are encouraged to think about the future

of tomorrow's cities, from how they will look to how people will move within them, with an eye towards nature and natural processes. Posters should address the issues of climate change and carbon emissions. Hurry – the deadline for entry is May 15, 2008.

<http://www.urbanrevision.com/envision2050/index.php>

Green Science Fair For a Better Planet

Instructables and Discover magazine offers the Green Science Fair For a Better Planet contest. Think green, share what you've learned, and win prizes. Build an eco-friendly project, test and compare "green" products, repurpose old parts, or just show a greener way to live. The deadline for entries is June 6, 2008.

<http://www.instructables.com/id/How-To-Enter-the-Green-Science-Fair-for-a-Better-P/>

Impacts to Coral Reef Systems Education and Outreach Grant

The EPA is soliciting applications for a grant, *Increasing Awareness of Environmental Impacts to Coral Reef Systems in the Caribbean through Targeted Outreach, Training and Education*, addressing coral reef ecosystems within Puerto Rico and the U.S. Virgin Islands. Hurry - the deadline for application is May 12, 2008.

<http://www.epa.gov/region02/grants/>

Jacob K. Javits Gifted and Talented Students Education Program

The purpose of the Jacob K. Javits Gifted and Talented Students Education Program is to carry out a coordinated program of scientifically based research, demonstration projects, innovative strategies, and similar activities designed to build and enhance the ability of elementary and secondary schools nationwide to meet the special educational needs of gifted and talented students. The deadline for application is June 5, 2008.

<http://www.ed.gov/legislation/FedRegister/announcements/2008-2/042108b.html>

Learning and Leadership Grants

The National Education Association offers grants to both individual and group applicants to participate in high-quality professional-development experiences. All professional development must improve practice, curriculum, and student achievement. One time professional growth experiences, such as attending a national conference or engaging a professional speaker, are discouraged. The next deadline is June 1, 2008.

http://www.neafoundation.org/programs/Learning&Leadership_Guidelines.htm

Live Green Teacher Grants

The *Live Green* Teacher Grant program from General Motors, challenges middle school teachers to develop innovative ideas for furthering environmental and energy sustainability. Teachers will identify an issue or problem, create a plan to address it, and integrate the topic into classroom teaching. The deadline for application is May 15, 2008.

<http://livegreen.discoveryeducation.com/>

Lorax Challenge

The Youth Venture Lorax Challenge is an opportunity for people ages 12-20 across the country to turn their dreams of saving the planet into reality. Applicants must have a youth-created, -led, and -managed venture team with an ongoing action plan to benefit the community. Each venture team must have a clear, attainable action plan. The deadline for application is May 31, 2008.

<http://genv.net/en-us/lorax>

Mia J. Tegner Memorial Research Grants in Marine Historical Ecology and Environmental History

Marine Conservation Biology Institute offers the Mia J. Tegner Memorial Research Grants in Marine Environmental History and Historical Ecology. The program focuses on projects from both natural and social scientists that seek to uncover interactions between natural and human history in the marine and estuarine environments worldwide. MCBI is particularly interested in studies that seek to describe systems prior to large-scale human impacts and industrialization. Hurry - the deadline for application is May 5, 2008.

<http://www.mcbi.org/what/tegeneroverview.htm>

Mickelson ExxonMobil Teachers Academy Awards

The Mickelson ExxonMobil Teachers Academy offer elementary school teachers a chance to attend the 2009 Mickelson ExxonMobil Teachers Academy for free, to improve their math and science teaching skills. Students can nominate teachers from Grades 3-5 or urge them to apply for an all-expense paid trip to the Academy's math and science professional development program in July, 2009 in Jersey City, New Jersey. The deadline for application is October 31, 2008.

http://www.sendmyteacher.com/send_your_teacher.php

Minority Science and Engineering Improvement Program

The Minority Science and Engineering Improvement Program is designed to effect long-range improvement in science and engineering education at predominantly minority institutions and to increase the flow of underrepresented ethnic minorities, particularly minority women, into scientific and technological careers. The deadline for application is May 22, 2008.

<http://www.ed.gov/legislation/FedRegister/announcements/2008-2/042208c.html>

NAAEE Scholarships

A limited number of Affordability Scholarships will be awarded to provide discounted full conference registration to NAAEE members who have lower incomes and little or no financial support from their employer. Students and retirees are not eligible. Diversity Scholarships are also available. The deadline for application is June 15, 2008.

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

Ocean Art Contest

Coastal America's Coastal Ecosystem Learning Center (CELC) members are sponsoring an ocean art contest open to students in grades K-12 and college and university students. The contest has been created to use art to provide a visual expression of the importance of the ocean through the seven Essential Principles of ocean literacy created by the Ocean Literacy Network. The purpose is to enhance public awareness of the importance of the ocean and to convey how personal actions affect the ocean. The entry deadline is May 30, 2008.

<http://www.coastalamerica.gov/2008artcontest.html>

Ocean Guardian Schools - California

Promote ocean conservation at your school or in your local community by becoming an Ocean Guardian School, with support from the National Marine Sanctuaries System. An Ocean Guardian School makes a commitment to the protection and conservation of its local watersheds, the world's ocean, and special ocean areas, like national marine sanctuaries. The school makes this commitment by proposing and then implementing a

school- or community-based conservation project. Schools in select California counties may be eligible for implementation funding.

http://sanctuaries.noaa.gov/education/ocean_guardian/welcome.html

The Sense of Wonder: Rachel Carson Intergenerational Photo, Essay, and Poetry Contest

The EPA, Generations United, and the Rachel Carson Council, Inc., announce a poetry, essay, and photography 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." Share this love of nature with a child and others around you. To enter the contest, you must work as a team with a person from a generation older or younger than yourself. Entries will be judged on creativity, originality and 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, 2008.

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

Trash to Treasures Competition

The Trash to Treasure Competition, sponsored by Intel, wants applicants to use trash to create a treasure. The deadline for submission is June 30, 2008.

<http://www.bkfk.com/Modules/Competition/CompetitionIdeation.aspx?section=buildit>

Young Birder of the Year Contest

The American Birding Association/Leica Young Birder of the Year is an annual contest for youth ages 10–13 and 14–18. Completed projects are due by October 10, 2008 but youth must register by June 1, 2008.

<http://americanbirding.org/yb/yby/index.html>

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Khaled bin Sultan Living Oceans Foundation Fellowship Program

The Khaled bin Sultan Living Oceans Foundation sponsors graduate fellowships for doctoral students and post-doctoral researchers whose research supports conservation, management, and restoration of coral reef ecosystems. Beginning in 2009, an individual will have the opportunity to participate in a multidisciplinary global coral reef expedition with research opportunities in French Polynesia, Kiribati, Palau, Philippines, Maldives, and other locations. The primary objectives of the cruise are to characterize coral reef ecosystem health across gradients of human and natural disturbance; determine global and local processes that control the functioning of these ecosystems, identify and predict impacts across gradients; and identify strategies to mitigate impacts. The deadline for application is May 30, 2008.

http://www.livingoceansfoundation.org/index.php?option=com_content&task=view&id=56&Itemid=115

Summer Education in Maine

Main Audubon offers summer sessions for adults and youth at their camp on Hog Island, Maine. *Educators Workshop Week*, July 13-19, 2008, offers ideas and insights in a relaxed atmosphere. *The Climate Change Workshop*, July 23-26, 2008, helps educators integrate nature and climate change into their curriculum. *The Coastal Maine Marine Science Session* for teens, July 20-26, 2008, is designed to help teens explore the field of marine science and gain the basic knowledge necessary to begin thinking about a

future career in marine science or simply appreciate the complexities of marine communities. Financial aid may be available.

http://www.maineaudubon.org/explore/camp/hi_overview.shtml

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Connecting with Climate Change - Maryland

NOAA and Sally Ride Science offer this educator conference, Connecting with Climate Change, July 23-24, 2008 in Silver Spring, Maryland. Explore the latest findings, meet experts, and learn to customize content for your classroom.

http://www.sallyridesience.com/for_educators/conferences/climate

Conservation Biology for Educators - Online

The Bronx Zoo is piloting its newest online course, Conservation Biology for Educators, May 3-31, 2008, at a discounted rate.

Contact Tom Naiman at tnaiman@wcs.org

Field Marine Study of Coastal Ecosystems - Maine

August 18-21, 2008, teachers will travel aboard the *Erica Lee* to survey the ecosystems of the lower portion of the Merrimack River, coastal Plum Island and Ipswich Bay, the Isles of Shoals, and Thacher Island. Particular emphasis will be paid to the rocky intertidal zone, fishing and the fishing industry, and the gull rookery. As part of their studies, teachers will develop scientific (biological, physical, and chemical) and social (historic and current) profiles of these rich ecosystems and develop standards-based lessons/unit of study that will engage students and connect them to these maritime resources.

Contact Kate Yeomans at Kate@boatcamp.org

Florida's Wildlife: On the Frontline of Climate Change - Florida

The Florida Fish and Wildlife Conservation Commission invites participation, August 20-22, 2008 in Orlando, Florida for an event focusing on Florida's Wildlife: On the Frontline of Climate Change. Learn from presenters and share your knowledge and expertise in one of five workshops to identify key research needs, improve awareness of impacts on wildlife, and develop ideas to optimize species conservation for integration into Florida Fish and Wildlife's comprehensive climate change strategy.

<http://www.ces.fau.edu/floc/>

IMPAC2 and International Marine Conservation Congress – Request for Symposia Proposals

Organizers of the Second International Marine Protected Areas Congress (IMPAC2) and the International Marine Conservation Congress are accepting proposals for symposia and workshops at the joint event, May 20-24, 2009 in Washington, D.C. Proposals for symposia will feature a specific group of speakers on a topic, for a session to last 2.5 hours. Proposals for workshops will be task-based, convening people to pursue a particular goal such as developing recommendations or outlining a publication. The deadline for submission is June 1, 2008. Individual presentations will open September 1, 2008.

<http://www2.cedarcrest.edu/imcc/proposals.html>

Leadership Development in Natural Resources – Online

Leadership Development in Natural Resources: Strategic Planning and Implementation, has been developed by the University of Wisconsin-Stevens Point, the Environmental Education and Training Partnership (EETAP) and Treehaven Environmental Learning Center. The course, from September 22–November 21, 2008, is designed to assist environmental educators and natural resource professionals in learning and applying key elements of successful strategic planning. A variety of strategic planning models will be examined using case studies, simulation, and small group activity. Emphasis will be placed on managing the strategic planning process to build the capacity of organizations to provide effective environmental education programs. Course participants will also have an opportunity for individual consultation time with the course instructor to discuss specific issues and questions they might have regarding strategic planning. The deadline for registration is August 22, 2008.

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

Making EE Relevant for Culturally Diverse Audiences – Online

The new 10-week on-line course, Making EE Relevant for Culturally Diverse Audiences, September 2–November 6, 2008, is designed to provide participants with the basic knowledge and skills needed to make environmental education relevant to culturally diverse audiences. This online course has been developed in collaboration with national EE experts who represent diverse cultural and ethnic backgrounds. Participants will broaden their perspective of EE to encompass interests and issues of concern to culturally diverse audiences, assess barriers to participation among these audiences, and apply cultural competency skills in building relationships and partnerships with members of an audience they intend to work with in the future. Although there are no prerequisites for this course, a working understanding of environmental education is essential for success in this course. The deadline for registration is August 2, 2008.

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

National Conference on Coastal and Estuarine Habitat Restoration

Restore America's Estuaries' 4th National Conference on Coastal and Estuarine Habitat Restoration, October 11-15, 2008 in Providence, Rhode Island, focuses on the goals and practices of coastal and estuarine habitat restoration. The conference will advance the science, scale, pace, practice, and success of habitat restoration at all scales. The deadline for student poster proposals is May 31, 2008.

<http://www.estuaries.org/?id=4>

National Conservation Training Center Courses – West Virginia

The U.S. Fish and Wildlife Service offers professional development courses at the National Conservation Training Center campus in West Virginia, many of which may be of interest to this group. For more information, contact the individual identified below.

- OUT8106: Powerful Presentation Tools and Techniques; July 14- 18, 2008; the deadline for registration is June 2, 2008; contact Juanita Gustines at juanita_gustines@fws.gov
- OUT8114: Volunteer Recruitment Management; August 5-8, 2008; the deadline for registration is June 23, 2008; contact Laura Jones at Laura_Jones@fws.gov
- OUT8181: Working with the News Media; August 4-6, 2008; the deadline for registration is June 20, 2008; contact Sandy Spakoff at sandy_spakoff@fws.gov

- OUT8122: Applying Collaboration to Complex Environmental Issues; August 11-15, 2008; the deadline for registration is May 30, 2008; contact Ora W. Dixon at Ora_Dixon@fws.gov

http://training.fws.gov/documents/Section1_NCTC_Sponsored_Courses.pdf

NOAA Ocean Exploration Professional Development Workshops - Mississippi

The Gulf Coast Research Laboratory, University of Southern Mississippi, J.L. Scott Marine Education Center presents NOAA Ocean Exploration Professional Development Workshops for science educators of grades 6-12 on June 30, 2008, in Ocean Springs, Mississippi, with a follow-up workshop October 17, 2008.

Contact Dr. Shelia Brown, shelia.brown@usm.edu

NSTA Web Seminars

NSTA Web Seminars are 90-minute, live professional development experiences that use online learning technologies to allow participants to interact with experts, education specialists, and others. Educators can use online tools that allow them to mark-up and annotate presenter's slides or share desktop applications in addition to engaging in chat with others online and answering quizzes and poll questions. Seminars may be archived and available for viewing after the live event has occurred. Upcoming seminars focus on corals, polar science, and more.

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

Ocean Science Professional Development Workshop - Washington

This four-day Ocean Science Professional Development Workshop for teachers of grades 4-5, August 4-7, 2008 in Seattle, Washington, explores the dynamic relationships in the marine environment from Puget Sound to the Olympic Coast to the deep ocean. The workshop is designed to prepare teachers to facilitate an inquiry-based, marine science-rich experience necessary to bring students to higher standards and understanding of ocean literacy principles. Participants in this course will be eligible for free admission to the Seattle Aquarium and a field trip to a local beach, including free transportation for their class. Registration is required and space is limited.

Contact Karen Matsumoto at karen.matsumoto@seattle.gov

Project Wild Aquatic Workshop - Maine

The Maine State Aquarium is hosting a Project Wild Aquatic workshop, May 23, 2008 in Boothbay Harbor, Maine, for teachers and education students. The workshop will include curriculum materials and the Project Wild Aquatic activity book and provide hands-on activity training. Participants will receive a complimentary 2008 Family Pass to the aquarium, and more. The deadline for registration is May 19, 2008.

<http://www.maine.gov/dmr/rm/aquarium/resources.htm>

Seacoast Science Center Distance Learning

The Seacoast Science Center in Rye, New Hampshire offers distance learning opportunities. All of the programs can be adjusted to meet the learning styles and curriculum needs of each audience. In addition to the following four standard programs, science center educators can work with you and their resources to custom create a program or a series of programs.

- The American Lobster
- Coastal Creatures and Animals Adaptations
- Horseshoe Crab Program

- Love and Lifecycles at the Seacoast Science Center

http://www.seacoastsciencecenter.org/programs/distance_learning.php

Whale Class – Massachusetts

The University of Georgia, College of Education is offering the 2008 Whale Class, July 12-20, 2008 in Salem and Gloucester, Massachusetts. This is a graduate-level course for teachers who are interested in advancing environmental education through principles of contextual learning and teaching. Participating teachers serve as naturalists on whale watching boats while learning to apply aspects of contextual learning, teaching and reflective practice; new contextualized instructional materials are an expected outcome.

<http://jschell.myweb.uga.edu/discovery/>

Wildlife Recreation and Nature Tourism - Online

This graduate-level certificate program from the University of Wisconsin – River Falls, will help conservationists, community leaders, and recreation and hospitality providers build the skills necessary to effectively preserve the natural resources of and generate jobs and revenue for their communities.

<http://www.uwrf.edu/ogs/programs/programs-index.php/wrnt/21/gs>

World Congress of Science Centers

The fifth World Congress of Science Centers, June 15-20, 2008 in Toronto Canada, will address the role science centers play to inspire and actively engage people in new ways of seeing, understanding, and thinking about themselves in a world increasingly defined by rapid globalization and technological change. The theme is *Science Centres as Agents of Change - Locally, Nationally, and Internationally*.

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

EDUCATIONAL RESOURCES

Act Green

Scholastic has launched ACT GREEN!, an educational website designed to motivate and empower kids to take action in school, at home, and in their community to preserve the environment. The multi-media website provides kids, parents, and teachers with customized green plans, expert tips, short films provided by Live Earth, and a "Greenroom" to share ideas with other kids.

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

Activities for the Changing Earth System

Ohio State University offers an online version of their Earth Systems Education Program publication, Activities for the Changing Earth System, with information and activities including ice core importance, contributions of volcanoes to climate change, and more. There are ten middle school and ten high school activities.

<http://earthsys.ag.ohio-state.edu/project/pubs/ACES.html>

Amphibian Alert! Curriculum

This downloadable curriculum aims to teach children what amphibians are and why amphibian population declines are important to scientists and communities throughout the world. The curriculum targets age groups from grades 2-5 but is adaptable to other grades.

<http://eeingeorgia.org/net/content/go.aspx?s=67749.0.68.4863>

Biodiversity and Agriculture

The Convention on Biological Diversity supports teachers in guiding students through an exploration of biodiversity issues with the launch of its first educational module for children and teachers on biodiversity and agriculture, the 2008 theme for the International Day for Biological Diversity, May 22, 2008. The module consists of an online educational web portal for primary school students, and five accompanying lesson plans for educators. The module has been designed to engage students in a variety of exercises reflecting the principles of education for sustainable development. The modules could be adapted to include marine and coastal issues.

<https://www.cbd.int/ibd/2008/resources/teaching/>

Biology Corner

This virtual biology website is maintained and updated by science educator and high school teacher, Shannan Muskopf. The website offers labs, worksheets, and various classroom activities. Lesson plans include Biodiversity of Ponds, Comparing Ecosystems, and more. There are online quizzes and links to other science education resource websites.

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

BVI Marine Awareness Guide

The British Virgin Islands Ministry of Natural Resources and Labour and the Conservation and Fisheries Department are encouraging BVI residents to learn more about International Year of the Reef (IYOR), which is being celebrated worldwide throughout the year. They have launched a Marine Awareness Guide, available in hard copy on-island at the Conservation and Fisheries Department in the Quastisky Building and The Moorings. The guide includes information about the island's marine habitats, species, laws, and more. An on-line version is available for downloading from the SailDiveBVI website.

<http://www.saildivebvi.com/paper/marine-awareness-08.pdf>

Climate Change Backpack

The New England Science Center Collaborative has developed the Climate Change Backpack[®], a teaching tool containing graphs, experiments, a climate change play, an imitation ice core, lesson plans, and more. The lessons are designed to expand or contract according to the audience and available teaching time. All of the activities are downloadable.

<http://www.sciencecentercollaborative.org/backpack.php>

Coral Reef Photos

Dr. Paddy Ryan has posted coral reef photos to his website in an easy to access set of pages. There are additional categories that may be of interest, so check out this website. School teachers are welcome to use these in their classrooms.

<http://www.ryanphotographic.com/coralreef.htm>

Endangered Species Day

National Endangered Species Day, May 16, 2008 provides an opportunity for parks, wildlife refuges, zoos, aquariums, conservation organizations, and others to educate the public about the importance of protecting endangered species. This special day is also an opportunity to highlight the everyday actions that individuals and groups can take to

help protect our nation's wildlife, fish, and plants. Check out events in your area, download educational materials, and more.

https://www.givengain.com/cgi-bin/giga.cgi?cmd=cause_dir_custom&cause_id=1704&page=day

Environmental Education Curricula Library

Check out National Environmental Education Week's library of curricular resources. Topics include Amphibians and Reptiles, Birds, Climate Change, and much more. Other resources include green reading, newsletters, funding resources, and more.

http://www.eeweek.org/resources/curricula_library.htm

Global Climate Change: Economics, Science, and Policy

MIT's Sloan School of Management, through the OpenCourseWare initiative, offers materials for the course on climate change, including a syllabus, reading suggestions, lecture notes, and several assignments. The class introduces scientific, economic, and ecological issues underlying the threat of global climate change and the institutions engaged in negotiating an international response. It also develops an integrated approach to analysis of climate change processes and assessment of proposed policy measures, drawing on research and model development within the MIT Joint Program on the Science and Policy of Global Change. Some of the reading materials are available on-line.

<http://ocw.mit.edu/OcwWeb/Sloan-School-of-Management/15-023JSpring-2007/CourseHome/index.htm>

Humpback Whale Migration Game

Humpback whales are found in the oceans worldwide. They hold the record for the longest migration among mammals. Play the interactive Migration Game to find out more about humpback whales and how you can help protect them.

http://sanctuaries.noaa.gov/whales/main_page.html

Keeping Habitats Healthy eFieldTrip

The eFieldTrip, *Keeping Habitats Healthy: We All Can Help!* is the latest educational outreach program in the Bureau of Land Management's *Share the Adventure* series. The eFieldTrip has three major components – a virtual visit, a trip journal, and Ask the Experts, open April 29-May 1, 2008.

<http://www.efieldtrips.org/Habitat/index.htm>

Nautical Charts: Message in a Bottle!

NOAA's National Ocean Service Education section offers interactive activities, tutorials, and case studies for use in the classroom. The latest offering is *Nautical Charts: Message in a Bottle!*, designed for grades 3-5, in cooperation with NOAA's Office of Coast Survey. The activity uses animation to teach chart symbols, safe boating, and the importance of nautical charts. The website includes movies, pictures, and links to other resources. The activity uses the same characters and methodology employed in a similar multimedia tool, *Sea Floor Mapping*, launched last year.

http://oceanservice.noaa.gov/education/nautical_charts/welcome.html

NOW Classroom Global Warming Lesson Plan

NOW on PBS offers the NOW Classroom website, allowing teachers to select skill-based activities and lessons, incorporating their choice of NOW on PBS programs. NOW topics cover many themes, including the environment, government in action, social

policy, business, and more. The NOW Classroom standards-linked lesson on global warming can help students in grades 9-12 research and form credible opinions on this topic.

<http://www.pbs.org/now/classroom/globalwarming.html>

Plants of the Eastern Caribbean

This online photo database is devoted to the native and naturalized flowering plants of the islands of the Eastern Caribbean. The aim of the website is to serve as an accessible resource for identifying the plants of the archipelago and to provide a forum for sharing information on Caribbean plants and their conservation. The database comprises about two thousand flowering plants, mainly those found in the wild, although a few commonly cultivated plants are included.

<http://ecflora.cavehill.uwi.edu/>

Sanctuary Integrated Monitoring Network

NOAA and partners have launched SIMoN, the Sanctuary Integrated Monitoring Network, a user-friendly website featuring background information about three West Coast national marine sanctuaries, Monterey Bay, Gulf of the Farallones, and Cordell Bank, along with information about the latest scientific research in these locations. Topics include rocky shores, estuaries, geology, and much more. In addition to the topical organization, the website offers search capabilities, special topic selection, including a photo library, interactive maps, species database, and more.

<http://www.sanctuariesimon.org/index.php>

Science Friday Kid's Connection

Science Friday is a weekly National Public Radio show that discusses the latest research with science and policymakers. Science Friday Kids' Connection takes that material and turns it into science lessons for middle school kids. Each topic includes a summary of the discussion that took place on the show, resources, references, and more.

<http://www.kidsnet.org/sfkc/>

Visual Dictionary

The Visual Dictionary website offers annotated images that identify each part of a given item, such as a turtle or starfish. Visitors can search the site by using the embedded search engine, by list of topics, or by picture thumbnail. There is also a link to Wikipedia for more information on the topic, and a catalog of images. An image-share feature allows the use of an image on a webpage, and classroom use is allowed, subject to conditions.

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

INITIATIVES, JOURNALS, and MORE

briefCAISE

The premier issue of briefCAISE, the newsletter of the Center for Advancement of Informal Science Education (CAISE), offers news, educational links, information about opportunities, and more. CAISE, funded by the National Science Foundation, is devoted to advancing and improving the practice of informal science education (ISE) in its many and varied forms—among them, film and broadcast media, science centers and museums, zoos and aquariums, botanical gardens and nature centers, digital media and gaming, and youth, community, and after-school programs. CAISE studies issues and

trends in informal science education, documents the impact and value of ISE, offers professional development opportunities for those working with and seeking NSF support, and provides a collective voice for the field. The newsletter will have profiles of NSF-funded projects, briefs on research relevant to ISE practice, and *Impact Sightings* - data, case studies, and anecdotes about the value of ISE.

<http://inisci.org/resources/>

DoRight Enterprises

DoRight Enterprises™ is a youth-run consulting firm. This interdisciplinary curricular program "employs" students as consultants in a not-for-profit consulting firm run by the teacher. DoRight consulting groups can be set up within academic curricular programs or after-school programs. Through the program, students acquire the environmental and economic knowledge and skills necessary to offer their expertise as consultants to help their local businesses, hospitals, schools, and others reduce operating costs, raise profits, and reduce environmental impact.

<http://scottbeall.com/dorightsummary.htm>

Free Science "Stuff" for Teachers

This wiki-style page from Science Inquirer offers free teaching resources from listservs, podcasts, videos, posters, and more.

<http://scienceinquirer.wikispaces.com/freestuff>

Marsh Mania – Texas

The Galveston Bay Foundation will host the annual Marsh Mania planting event on May 31, 2008. The goal of this restoration project is to involve local citizens in hands-on wetlands restoration activities while increasing awareness and appreciation of wetland habitats and functions.

http://www.galvbay.org/events_marsh.html

The Missing Link

Not marine related, but deeply intriguing. The Missing Link is a monthly podcast on the strange history of science, medicine, and technology. The website includes the archived materials, along with lists of suggested readings for those who are looking for additional information. These podcasts are for people who are scared of science but deeply intrigued by it, and for scientists who know there must be a better back story than what's told in the sidebars of their textbooks.

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

North American Breeding Bird Survey

The North American Breeding Bird Survey website is a cooperative effort between the Patuxent Wildlife Research Center and the Canadian Wildlife Service's National Wildlife Research Centre, to monitor the status and trends of North American bird populations. Following a rigorous protocol, data are collected by participants along thousands of randomly established roadside routes throughout the continent. Professional coordinators and data managers work closely with researchers and statisticians to compile and deliver these population data and population trend analyses on more than 400 bird species, for use by conservation managers, scientists, and the general public.

<http://www.pwrc.usgs.gov/bbs/>

World Ocean Day

The World Ocean Day website offers inspiration for planning World Ocean Day (June 8, 2008) events, along with a global event map with everything from ocean excursions and watershed cleanups to community projects to stitch together a fluffy underwater display. List your event on the website to help get the word out. Take advantage of the resources in the media and outreach kit and additional offers, including Seas the Day bookmarks, Monterey Bay Aquarium National Seafood Wallet Guides, and 41pounds.org postcards.

<http://www.theoceanproject.org/wod/>