

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

MARCH 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 References

Framework for Evaluating Impacts from Informal Science Education Projects

The report, *Framework for Evaluating Impacts from Informal Science Education Projects*, is available for downloading from the Center for Advancement of Informal Science Education. It provides the results from a National Science Foundation-sponsored workshop on evaluating informal education.

<http://inisci.org/>

Guide to Building Effective Education Initiatives

The SAI (STEM Accelerator Initiative) Guide to Building Effective STEM Education Programs is available from the National Alliance of State Science and Mathematics

Coalitions. The guide can be a useful resource for anyone designing a new education program or conducting a strategic review of an existing program.

http://www.dehavillandassociates.com/SAIGuide_NASSMC.pdf

Lessons in Conservation

The Center for Biodiversity and Conservation at the American Museum of Natural History has launched a new online journal, *Lessons in Conservation* (LinC), designed to provide educators and students with up-to-date resources in biodiversity conservation. *Lessons in Conservation* is the official journal of the Network of Conservation Educators and Practitioners (NCEP), a collaborative project of the American Museum of Natural History's Center for Biodiversity and Conservation and a number of institutions and individuals around the world. All materials in LinC are peer-reviewed, and are a part of NCEP teaching modules which include a synthesis document summarizing a conservation-related topic; a visual presentation with notes and discussion questions; a field or laboratory exercise with accompanying solutions; and a relevant short case study with teaching notes illustrating particular themes from across NCEP modules. Easily modifiable versions of the materials found in LinC, along with additional teaching modules, are available on the website.

<http://ncep.amnh.org/linc/>

UNEP Year Book 2008

The UNEP Year Book 2008 is the fifth annual report on the changing environment produced by the United Nations Environment Programme in collaboration with many world environmental experts. The report highlights the increasing complexity and interconnections of climate change, ecosystem integrity, human well-being, and economic development. It examines the emergence and influence of economic mechanisms and market-driven approaches for addressing environmental degradation, and it describes recent research findings and policy decisions that affect our awareness of and response to changes in our global climate and environment. Chapters offer a global overview, a feature focus on using markets and finance to fight climate change, and emerging challenges of methane release from the Arctic. The document is available for purchase or downloading from the website in English, Spanish, and French.

http://www.unep.org/publications/search/pub_details_s.asp?ID=3980

PROGRAM OF THE MONTH

OceansLive! from Monterey Bay

Dr. Robert Ballard's *Immersion Presents*, a cutting-edge, interactive educational program, will broadcast live from the Monterey Bay National Marine Sanctuary in California from March 2-7, 2008. Using the *Research Vessel Fulmar*, the expedition team will explore many of the region's ecosystems, including estuaries, kelp forests, and submarine canyons.

Daily live broadcasts, which are part of a larger interdisciplinary science curriculum designed for upper elementary and middle school students, will air from March 2–7, 2008 every hour from 11am through 3pm EST; visit the website for the broadcasts.

Educational materials from the *Immersion Presents: Monterey Bay Student Activity Guide* are available for downloading from the web portal. In the *Ocean in Motion* activity, participants build a model to simulate upwelling around the Monterey Bay

National Marine Sanctuary. In the second activity, *Forests of the Sea*, participants play a game to learn more about the organisms that live in kelp forests of the Monterey Bay. <http://OceansLive.org>.

WEBSITE OF THE MONTH

A Global Map of Human Impacts to Marine Ecosystems

This analysis of human impacts to marine ecosystems, posted on the website for the National Center for Ecological Analysis and Synthesis and published in *Science*, February 15, 2008, shows that over 40% of the world's oceans are heavily affected by human activities and few if any areas remain untouched. The goal of the research was to estimate and visualize the global impact humans are having on the ocean's ecosystems. The article is available for downloading from the website, which includes the world map along with the different data layers and additional information. While on the website, check out the link to ***Kids Do Ecology***, an educational, participatory, bilingual website, supporting an inquiry-based approach to science for 5th grade classes to design and conduct scientific experiments in ecology.

<http://www.nceas.ucsb.edu/GlobalMarine>

MESSAGE FROM THE BRIDGE

Science Fair Season

Help your students plan, carry out, and present a great science fair project this spring with help from the Bridge. In our *Guiding Students* section you will find teacher-reviewed resources to help students get a leg up on the competition with annotated links to information on preparing a great project and tips for presenting it to the judges. Presentation information covers oral presentations, reports, and posters, and discusses the most effective way to convey experiments to the public. Those with great websites providing more tips and tricks on preparing, running, or presenting science fair experiments are encouraged to submit their site for inclusion.

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

Science Fair Resources http://www.marine-ed.org/bridge/index_student_res.html

REQUESTS

Ocean Literacy Research Initiative

The Ocean Project is undertaking a national project to find out how the ocean community can connect more effectively with the American public in order to build ocean literacy and encourage conservation action. They are currently conducting a post-1999 literature review to inform their research initiative. Please let them know of any public opinion research, perception studies, or consumer behavior studies you know of on the ocean or the environment more generally.

Forward all leads to apenn@theoceanproject.org

Searching for Marine-Based Genetics Lesson Plans

High school marine biology teachers are looking for lesson plans for teaching genetics with a marine theme. They would prefer lesson plans about salmon, but would appreciate lesson plans about any marine organisms that could be used in high school biology courses.

Contact Peggy Hamner at phamner@ucla.edu

Teachers Wanted to Pilot Curriculum Guide

The NOAA Ocean Data Education (NODE) Project is developing curriculum for grades 5-8 designed to help teachers and students use real scientific data to explore dynamic Earth processes and understand the impact of environmental events on a regional or global scale. The *Investigating El Niño Using Real Data* curriculum guide contains five activities designed for grades 6-8 that incorporate real data from NOAA. Teachers are wanted to help test and evaluate this curriculum guide.

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

GRANTS AND OPPORTUNITIES

All Roads Seed Grants

The National Geographic *All Roads Film Project* showcases breakthrough film and still photography from indigenous and underrepresented minority cultures around the globe. The program seeks filmmakers who bring their lives and communities to light through first-person storytelling. The deadline for application is March 15, 2008.

<http://www.nationalgeographic.com/allroads/>

Barataria-Terrebonne National Estuary Program Mini-Grants

The Barataria-Terrebonne National Estuary Program (BTNEP) offers funding through their Mini-Grants Program to support community-based restoration, outreach, and education projects. Through the mini-grants program, citizens gain a greater awareness and understanding of the issues facing the Barataria-Terrebonne Estuary System and join with BTNEP in creating effective solutions. The grants also help BTNEP foster creative partnerships among community groups. The deadline for proposals is April 3, 2008.

<http://grant.btneep.org/>

BEN Scholars

The National Science Digital Library Biological Sciences Pathway invites undergraduate faculty in the biological sciences to apply to become BiosciEdNet (BEN) Scholars. The goal of the BEN Scholars Program is to promote the use of digital library resources and student-centered teaching and learning methods in higher education, specifically in biological sciences lecture and laboratory courses, and in research training programs. Hurry - the deadline for application is March 11, 2008.

<http://www.biosciEdnet.org/portal/about/benScholars.php>

Brower Youth Awards

The Brower Youth Awards is an annual national award recognizing six young people for their outstanding activism and achievements in the fields of environmental and social justice advocacy. Earth Island Institute established the Brower Youth Award to honor founder and legendary activist David R. Brower. Young activist leaders ages 13-22 living in North America are eligible to apply. The deadline for application is May 15, 2008.

<http://www.broweryouthawards.org/article.php?id=113>

Facing the Change

Facing the Change seeks stories, essays, and poetry expressing grassroots, personal responses to global warming. This planned anthology will explore what everyday people

from all walks of life and all ages are feeling, thinking, and doing in response to climate change. Educators and students are encouraged to submit their own work. The deadline for submission is May 1, 2008.

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

Gloria Barron Prize for Young Heroes

The Gloria Barron Prize for Young Heroes seeks nominations for its 2008 awards. The Barron Prize recognizes young people ages 8-18 in the U.S. and Canada who have made a significant positive difference to people and our planet. The deadline for nomination is April 30, 2008.

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

Jordan Fundamentals Grants

Jordan Fundamentals offers Innovation Grants to individual teacher who offer approaches that attempt to engage students in school using either experimental or traditional strategies effectively, and Inspiration Grants to teams of teachers to support scaling-up the implementation of approaches, originally developed with Innovation Grants. The deadline for application is March 30, 2008.

<http://www.nike.com/jumpman23/features/fundamentals/guidelines.html#code>

Pay It Forward Mini-Grants

Pay It Forward Mini-Grants are designed to fund one-time-only service-oriented projects identified by youth as activities they would like to perform to benefit their school, neighborhood, or community. Projects must contain a “pay it forward” focus – that is, they must be based on the concept of one person doing a favor for others, who in turn do favors for others, with the results growing exponentially – to be considered in the grant making process. Grant applications are reviewed and considered by a selection committee three times a year; the next deadline is April 15, 2008.

<http://payitforwardfoundation.org/educators/grant.html>

Project Slingshot

Project Slingshot, sponsored by Clif Mojo Bars and Focus the Nation, is offering summer scholarships for work on creative solutions that can propel global warming solutions into action. Applicants, 18-25 years old, may offer proposals in one of three categories: outdoor fanatics protecting the places we love to play; innovators challenging our expectations; and artists inspiring our communities. The deadline for application is March 15, 2008.

<http://69.30.50.18/mojoslingshot.php>

Thesis Award on Migratory Species Conservation

The UNEP/Convention on Migratory Species Thesis Award is offered to award theses concerned with conservation of migratory species. The thesis should provide new data and insights into the biology and ecology of migratory species or external factors disrupting their migration patterns. Research results must be applicable to conservation measures to the benefit of migratory species. Candidates' theses must have been approved since November 2005. The deadline for thesis submission is May 31, 2008.

http://www.cms.int/news/PRESS/nwPR2008/01_Jan/Thesis_award.htm

Think Globally, Report Locally

The People Speak, an initiative of the United Nations Foundation, challenges U.S. high school students to create one to two minute video news stories showing a local angle to

one of four global issues, including access to clean water. The deadline for submissions is May 2, 2008.

<http://www.thepeoplespeak.org/contests/reportlocally.html>

Wildlife Conservation Society Research Fellowship Program

The Research Fellowship Program administered by the Wildlife Conservation Society Global Conservation's Training and Capacity Building Program is a small grants program designed to build capacity for the next generation of conservationists through supporting individual field research projects that have a clear application to the conservation of threatened wildlife and wildlife habitat. They seek projects that are based on sound and innovative conservation science and that encourage practices in conservation that can contribute to sustainable development. Most of the grantees are professional conservationists from the country of research and/or post-graduates pursuing a higher degree. Grants are reviewed twice a year; the next deadline for application is March 15, 2008.

<http://www.wcs.org/international/tcbp/rfp>

Write On! Wetlands Challenge

May is American Wetlands Month. Get your students involved and engaged with the 2008 Write On! Wetlands Challenge. Science, reading, and the arts collide in this annual competition that first asks middle schoolers to compose a children's book about wetlands and then asks elementary students to illustrate the winning manuscript. The theme for 2008 is *Marshy Migrations: Journey's of Lifetime*. Each year, animals of all kinds depend on wetlands for food and protection as they prepare for and complete their seasonal migration routes. Students should select one of these animals and write a story about their journey. The deadline for entries for authors in grades 7-9 is April 1, 2008. The Call for Illustrators in grades K-6 begins May 1, 2008.

http://www.wetland.org/education_writeon.htm

Young Conservationist Award

The International Ranger Federation and IUCN's World Commission on Protected Areas (WCPA) call for nominations for the Young Conservationist Award. The award aims to recognize and raise awareness of the outstanding contributions made to the management of protected areas, and leadership shown, by young conservationists under the age of 35. It also seeks to encourage young professionals and help them develop networks by inviting winners to join WCPA. Applications are invited for/from people working in protected areas, including rangers, interpreters, people working with local communities, policy makers, scientists, and others. The deadline for application is April 28, 2008.

<http://www.iucn.org/themes/wcpa/youth/youthaward.html>

Youth Award for Excellence and Leadership in Groundwater

The Groundwater Foundation established this award to recognize a student, age 12-17, for his/her outstanding leadership and creation of innovative groundwater protection projects. This award was endowed by W.C. Foxley and E.P. Taiganides and brought inspiration and recognition to deserving youth over the years. The deadline for nomination is July 14, 2008.

<http://www.groundwater.org/aw/youthabout.html>

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

BioBlitz - California

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 in the Santa Monica Mountains National Recreational Area, May 31-32, 2008. Educators are encouraged to have their students participate. The deadline for teachers to register is March 31, 2008. National Geographic and the U.S. National Park Service are planning a series of ten annual BioBlitzes around the country – check the website for future sites.

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

Marine Science Education Internships

The University of Georgia's Marine Education Center and Aquarium (MECA) is located on the north end of Skidaway Island in Georgia. Their primary mission as an extension service of the university is to provide both formal and informal educational programs which focus on the ecology of Georgia's estuaries, coastal islands, and offshore waters. The audience ranges from pre-kindergarten to graduate level and Elderhostel groups. They offer paid internships for recent graduates who would like some teaching experience in the marine realm and have not yet decided whether to go to graduate school or take a full-time permanent position. The deadline for application is April 5, 2008.

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

Whale Camp

The Whale Camp, on Grand Manan Island off the coast of Northern Maine, offers summer programs for students and teachers to closely 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 one, two, and three-week 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. Discounts are available to NMEA teachers and their students. Contact Contact Dennis Bowen at whalecamp@verizon.net for information about the discounts.

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

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Advanced ROV Building for Classroom Projects – California

The Marine Advanced Technology Education (MATE) Center announces the free summer institute for 2008, Advanced Remotely Operated Vehicle Building for Classroom Projects, July 7-13, 2008 in Monterey, California. Educators will work in teams to design and build their own ROVs to complete a set of predetermined mission tasks.

Participants will have the opportunity to interact with undersea engineers, ROV pilots, and marine technicians to understand the technology and the work of these marine professionals. In addition to classroom and hands-on learning experiences, field trips around the Monterey Bay area are planned.

http://www.mpcfaculty.net/tami_lunsford/SI_08_institute/Info.aspx

Bring the Ocean and Coral Reefs into Your Classroom at the National Science Teachers Association Conference

Learn more about America's underwater treasures and the International Year of the Reef at the National Science Teachers Association conference, March 27-30, 2008 in Boston, Massachusetts. Check out the various sessions, short courses, and symposiums being offered to bring oceans into your classroom.

Contact sanctuary.education@noaa.gov

Communicating Ocean Sciences Summer Workshop - California

COSEE-CA offers the Communicating Ocean Sciences Summer Workshop, June 2-4, 2008 in Berkeley, California. The course will teach education-theory-grounded methodology and provide materials needed to teach the award-winning courses, Communicating Ocean Sciences and Communicating Ocean Sciences to Informal Audiences, taught at more than 24 universities with marine science programs. The deadline for application is May 2, 2008.

<http://www.coseeca.net/collegecourse/>

Earth as a System is Essential: Seasons and the Seas – MA, NH, ME

Earth as a System is Essential: Seasons and the Seas (EaSiE) is a three-year project funded by the NOAA Environmental Literacy Program for K-12 Education. The overarching goal of EaSiE is to transform the traditional middle school study of seasons and weather into an exploration of the dynamic interactions between Earth's land, oceans, atmosphere, and living world. Middle school teachers from Massachusetts, Maine, and New Hampshire will work with NOAA scientists and the Maine Mathematics and Science Alliance to develop a relevant, unifying systems theme that bridges the gap between existing materials and concepts related to seasonal and climatic changes in the Gulf of Maine. Through workshops, field trips, and online discussion, teachers will gain further understanding of Earth as a system, learn instructional strategies that support student learning, and help to develop and pilot two units that integrate NOAA resources into instruction to support student thinking about Earth system science.

<http://www.mmsa.org/easie/>

Floods and Flows: Exploring Mars Geology on Earth – Montana

This NASA-sponsored field-based workshop, July 13-19, 2008, is designed by the Lunar Planetary Institute primarily for middle school science teachers. Applications are also welcome from other educators, including pre-service teachers, informal educators, education specialists, early college instructors, and junior college instructors.

Participants will spend the week with planetary scientists visiting the site of Ancient Glacial Lake Missoula and tracing its flood waters through Montana, Idaho, and into Washington. From these field experiences and accompanying classroom activities, participants will build an understanding of surface processes on Earth, including water flow, volcanism, glaciation, and sedimentation. Attendees will extend their understanding to interpret what the features on the surface of Mars suggest about the past environments and history of the red planet. A limited number of grants are available to cover the registration fee; the deadline for application is April 7, 2008.

<http://www.lpi.usra.edu/education/fieldtrips/2008/>

Long Island Sound Educators Conference - Connecticut

The Southeastern New England Marine Educators are hosting the Long Island Sound Educators Conference on May 2, 2008 in Norwalk, Connecticut. The conference focuses on topics addressing Long Island Sound and the coastal environments.

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

Marine Protected Areas Course - Mexico

Students and practitioners interested in MPAs in the Caribbean region are invited to enroll in an international course to be held June 21-29, 2008, in Puerto Morelos, Mexico. The course, *Marine Protected Areas for the South Florida, Mexican Caribbean, and Mesoamerican Region*, will analyze ecological and socioeconomic aspects of MPA design and management, and will be co-led by researchers from the National University of Mexico, Florida International University, and NOVA Southeastern University. Full fellowships for the course are available for Latin American students. The course is fully bilingual; translations for Spanish guest lectures will be provided. Contact Ligia Collado Vides at colladol@fiu.edu

National Conservation Training Center Courses – West Virginia, Oregon

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

- OUT8101: Public Outreach and Education: Overview and Program Planning; April 21-25, 2008; the deadline for registration is March 3, 2008; contact Sandy Spakoff at sandy_spakoff@fws.gov
- OUT8119: Sustainable Funding Strategies for Non-Profit Partners; May 6-8, 2008; contact Laura Jones at laura_jones@fws.gov; NOTE: this course will take place in Portland, Oregon
- OUT8113: Developing and Working with Friends Groups; May 21-23, 2008; contact Laura Jones at laura_jones@fws.gov
- OUT8116: Grant Writing for Conservation; May 28-30, 2008; the deadline for registration is March 14; contact Ora Dixon at ora_dixon@fws.gov
- OUT 8127: Public Participation & Informed Consent–Part I, Bleiker Approach for Public Officials to Complex Problem-Solving; June 10-12, 2008; the deadline for registration is March 3, 2008; contact Ora Dixon at ora_dixon@fws.gov
- OUT8163: Connecting People to Nature through Birding; June 16-19, 2008; the deadline for registration is April 21, 2008; contact Juanita Gustines at Juanita_gustines@fws.gov
- OUT8121: Interest-Based Negotiation; June 30-July 2, 2008; the deadline for registration is April 22, 2008; contact Ora Dixon at ora_dixon@fws.gov
- 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; contact Laura Jones at laura_jones@fws.gov
- (Formally LED 5136): Applying Collaboration to Complex Environmental Issues; August 11-15, 2008; contact Ora Dixon at ora_dixon@fws.gov

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

North American Association for Environmental Education Conference

The 37th North American Association for Environmental Education (NAAEE) Annual Conference, October 15–18, 2008 in Wichita, Kansas, has released its call for research symposium proposals. Conference strands include Conservation Education; Energy Education; Environmental Justice, Environmental Health, and Climate Change; and more; research proposals around the theme EE Research: To What End? will be

accepted until March 31, 2008 with student poster proposals accepted until May 31, 2008.

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

Project WET/Webfoot Training - Tennessee

Educators at Reelfoot Lake State Park will conduct Project WET and Project Webfoot training on May 3, 2008 in Tiptonville, Tennessee. Participants will receive both Project WET and Project Webfoot curriculum guides, along with additional materials.

Contact Kim Crews at kcrews@utm.edu

School of Rock - Texas

Deep Earth Academy (formerly JOI Learning), the Integrated Ocean Drilling Program, and the Consortium for Ocean Leadership offer opportunities for teachers. During the School of Rock 2008, *Using Ocean Cores to Explore Past Climate Change*, July 6-14, 2008 in College Station, Texas, educators will have daily opportunities to conduct geological, physical and/or chemical analyses of sediment and hard-rock cores. Scientists will instruct participants on topics such as mid-ocean ridges, composition and structure of the oceanic crust, paleoceanography, and more. The workshop will also provide educators with time to brainstorm and begin planning classroom activities based on their research and new knowledge. The deadline for application is April 4, 2008. Check out their booth, #2162, at NSTA for more information and new activities.

<http://www.oceanleadership.org/learning/SOR2008>

EDUCATIONAL RESOURCES

Antarctic Quest Challenge

NASA Quest Challenges are free, web-based, interactive explorations designed to engage students in authentic scientific and engineering processes related to issues encountered daily by NASA personnel. Starting in March, students in grades 5-14 will develop a research question and debate the value of studying the chosen Antarctic feature. In this challenge for, students become scientists and propose Antarctic research using a new tool called LIMA, Landsat Image Mosaic of Antarctica. The LIMA web site is designed as part of the International Polar Year to familiarize people with Antarctica, to explore the richness of its features, to learn about why Antarctica matters to us all, and to explain and demonstrate how scientists use satellite imagery to study the continent.

<http://quest.nasa.gov/challenges/lima/about.html>

Biodidac

Biodidac is a bank of digital images, video, and animations that can be used and adapted for teaching biology. They have black and white illustrations that are free for educators; registration is required. Illustrations are included from Eubacteria, Protista, Fungi, Plantae, Animalia, Human Biology, and Histology. The website is available in French and English.

<http://biodidac.bio.uottawa.ca/>

Digital Worlds GIS

Digital Worlds GIS 2 is built from the technology supplied by ESRI (the world's largest GIS company) and developed in partnership with ESRI(UK). The package is for the education market and gives pupils experience of GIS tools, bridging the gap between

education and commercial applications of GIS. Though based in the U.K., the website can offer an introduction to GIS use in the classroom, along with examples of lesson plans. Users have also been able to integrate TerraLook imagery data with the layers using the software.

<http://www.digitalworlds.co.uk/>

EcoTipping Points Project

The EcoTipping Points website features environmental success stories collected from around the world by a team of scientists and journalists. The stories display a diversity of detail but have in common a community-based process switching environmental decline to a course of restoration and sustainability. Teachers interested in working with project staff to help incorporate the materials into their lessons should contact Gerry Marten through the website.

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

Environmental Science Interactive

Environmental Science Interactive is a set of 14 online laboratories used to complement a traditional lecture course, turning it into a lecture plus lab course. Topics include water resources, atmosphere and climate, policy and decision-making, and much more. For a limited time, they offer free access for instructors.

<http://www.webschoolofscience.com/EnvScience.php>

Essentials of Geology

Designed to complement a geology textbook, this website includes animations, interactive crossword puzzles, and news articles; many of the materials can be used as stand-alone exercises. The animations cover the Earth's magnetic field, the spread of the sea floor, the formation of ocean crust, and more.

<http://www.wwnorton.com/college/geo/egeo/welcome.htm>

GLOBE at Night Campaign

GLOBE at Night, February 25-March 8, 2008, is designed to aid teaching about the impact of artificial lighting on local environments and the ongoing loss of a dark night sky as a natural resource for much of the world's population. The website will include instruction guides, one-page flyers, and more.

<http://www.globe.gov/GaN/>

Ice Stories: Dispatches from Polar Scientists

The Exploratorium celebrates the International Polar Year 2007-2008 by giving cameras to a group of penguin biologists, glaciologists, cosmologists, geologists, and marine scientists working in Antarctica and the Arctic. Visitors can learn about the thoughts and experiences of the scientists working in these two regions. Check out the archived materials, upcoming webcasts, and more.

<http://www.exploratorium.edu/poles/index.php>

International Migratory Bird Day

Environment for the Americas invites you to participate in International Migratory Bird Day 2008, May 10, 2008. The initiative focuses attention on migratory birds' journeys between summer and winter homes. This year, the bird conservation focus is *Tundra to Tropics: Connecting Birds, Habitats, and People*. The website includes downloadable materials, activity ideas, lists of bird festivals, and more.

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

Museum of Underwater Archaeology

The Museum of Underwater Archaeology introduces students to the work of underwater archaeologists and maritime historians. Explore shipwrecks, lost colonies, and underwater archaeological projects around the world. Follow the stories of the *CSS Alabama*, a Confederate ship sunk in battle, and the *Industry*, a sloop that went down in 1764 while delivering supplies to British troops in Florida. Learn about the six steps in conducting an underwater archaeology project. Resources include a teaching kit, a worldwide site map, and more.

<http://www.uri.edu/artsci/his/mua/MJA.htm>

Ocean Currents Radio Show

Join host Jennifer Stock of the Cordell Bank National Marine Sanctuary on March 10, 2008 as she discusses sustainable seafood with Sheila Bowman of the Monterey Bay Aquarium's Seafood Watch Program on the Ocean Currents radio show from 1-2 pm on KWMR 90.5 FM Point Reyes Station, 89.7 Bolinas and live on the web at

<http://www.kwmer.org>. Check out upcoming radio shows, listen to archived programs, and check out other upcoming National Marine Sanctuary events through these links.

<http://cordellbank.noaa.gov/newscalendar/welcome.html>

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

<http://sanctuaries.noaa.gov/education/events/welcome.html>

Polar Sciences Special Collection

Teachers' Domain offers their Polar Sciences Special Collection, funded by the National Science Foundation, with 20 new resources about the Arctic and the Antarctic, plus resources from existing collections, a lesson plan, and more.

<http://www.teachersdomain.org/exhibits/ipy07-ex/index.html>

Protected Areas Management Effectiveness Information Module

The Protected Areas Management Effectiveness Information Module contains information on protected areas management effectiveness at three different levels – methodology, assessment, and site level. The module is linked to the World Database on Protected Areas, which allow users to obtain further information about the protected areas assessed. It also provides a space for users to submit information on management effectiveness methodologies and assessments as well as obtain further information on experts, publications, and links to related information.

<http://www.unep-wcmc.org/wdpa/me>

Somewhere Between Yesterday and Just This Side of Tomorrow

This children's coloring/activity book is a story written from the wildlife perspective, with the focus on awareness of polluting our watershed and the damage of Eurasian water milfoil in waterways. It is geared for K-6 with watershed, watercycle, pollution, and identification activities. Vocabulary, word search, and more are included with the story. The book is self-published; you may ask for a sample or order directly from the author. Contact Sherry Cavanaugh at ewmbook@hotmail.com

Texas Education Agency Best Practices Clearinghouse

The Texas Education Agency has established an online clearinghouse of information related to best practices of high-performing and highly efficient campuses, school districts, and charter schools in instruction, dropout prevention, business/management practices, and public school finance and resource allocation. The goal of the

clearinghouse is to provide information about best practices that is specific, actionable, and accessible to schools and interested members of the public.

<http://www.tea.state.tx.us/bestprac/>

Water Science for Schools

The U.S. Geological Survey's *Water Science for Schools* website offers a broad range of information about water. Topics include basic background information, a breakdown of water use in the U.S., a glossary of terms, and much more. The website includes activities, graphics, data tables and more.

<http://ga.water.usgs.gov/edu/sitemap.html>

Watershed Wonders

The Algalita Marine Research Foundation is dedicated to the protection of the marine environment and its watersheds through research, education, and restoration. Their website offers educational materials available for downloading along with other initiatives. *Watershed Wonders* is an educational video series exploring issues in marine conservation, watershed management, and plastic debris. The series includes standard-based activities and information about water and watersheds for middle and high school classrooms.

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

A Whale of a Story

Electronic Field Trips from Ball State University are interactive, multi-media educational resources, selecting hard-to access places, national parks, and species for their focus. *A Whale of a Story* is a collaboration between Ball State University, Aquatic Adventures, and Scripps Institution of Oceanography, following the migration of the eastern Pacific gray whale. Designed for 3-8 graders, the website offers games, webisodes, and more.

<http://www.bsu.edu/eft/home/00front.htm>

INITIATIVES, JOURNALS, and MORE

Green Careers Resource Guide

The Green Careers Resource Guide is designed to assist career development professionals, but is also of use to self-directed students, career explorers, job seekers, and career changers.

<http://www.cassio.com/FreeResourceGuides.htm>

National Environmental Education Week

National Environmental Education Week, April 13-19, 2008, offers a full week of educational preparation, learning, and activities in K-12 classrooms, nature centers, zoos, museums, and aquariums; the week's theme is *Carbon Footprints*. The website includes a participant toolkit, teaching resources, nature journaling blog, and much more. Become a formal partner by registering on the home page.

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

Rx Effects

Rx Effects is the newsletter of the Fire Effects Monitoring Program in the National Park Service. It is an outlet for information on Fire Effects Monitoring, fire research, and other types of wildland fire monitoring. The newsletter is annually produced for the National Park Service but anyone with an interest in fire ecology is encouraged to submit

information about their program or research. Examples of submissions include: contact information for your program; summaries of your program's goals, objectives, and achievements; monitoring successes and failures; modifications to plot protocols that work for your park; hints for streamlining collection of data, data entry, and analysis; event schedules; and abstracts of papers or posters resulting from your program. The goal of the newsletter is to let the fire effects monitoring community know about you and your program. You'll see from past editions that the newsletter is a mixture of science, entertainment, and the occasional haiku. Rx Effects is issued each year in the spring. The deadline for submissions is March 13, 2008.

http://www.nps.gov/fire/fire/fir_eco_rxeffects.cfm

Touch the Invisible Sky

Touch the Invisible Sky is a 60-page book with color images of nebulae, stars, galaxies and some of the telescopes that captured the original pictures. Each image is embossed with lines, bumps, and other textures. These raised patterns translate colors, shapes, and other intricate details of the cosmic objects, allowing visually impaired people to experience them. Braille and large-print descriptions accompany each of the book's 28 photographs, making the book's design accessible to readers of all visual abilities.

<http://hubblesite.org/newscenter/archive/releases/2008/05/full/>