

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

APRIL 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

Community Culture and the Environment: Guide to Understanding a Sense of Place

This publication from the EPA addresses the social and cultural aspects of community-based environmental protection. The guide offers a process for defining and understanding the human dimension of an environmental issue and provides a set of tools for more effectively working with the public on environmental protection efforts. The guide is based on the elements of social science theory and methodology (e.g. anthropology, cultural geography, political science, and sociology) that are most relevant to defining and understanding community life as it relates to environmental issues. http://www.contextsensitivesolutions.org/content/reading/epa_community/

U.S. Ocean Policy Report Card

The Joint Ocean Commission Initiative released its third annual U.S. Ocean Policy Report Card, which assesses the nation's progress in 2007 toward implementing the recommendations of the U.S. Commission on Ocean Policy and the Pew Oceans Commission, as well as the actions described in the Administration's U.S. Ocean Action Plan. The objective of the U.S. Ocean Policy Report Card is to inform policy makers and the public of the critical challenges facing our ocean while identifying the many opportunities that are ripe for action. The 2007 U.S. Ocean Policy Report Card concludes that while state and regional initiatives continue to move forward on ocean governance reform, the lack of significant progress at the federal level to commit adequate funding and affect meaningful ocean policy reform hinders national improvement.

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

WEBSITE OF THE MONTH

eNature.com

eNature.com, from the Shearwater Marketing Group, offers information about the wild animals and plants of the United States. The site's core content of wildlife information about almost 6,000 individual species is the same data set used to create the printed Audubon Field Guides. All the data have been reviewed and vetted by leading biologists, zoologists and other natural history specialists. The website offers the ability to keep personal wildlife lists, sign up for newsletters, download mating call ringtones, track migration, and, of course, search wildlife guides.

<http://wild.enature.com/ringtones/>

OPPORTUNITY OF THE MONTH

Peace Corps Opportunities

The Peace Corps offers global opportunities for marine scientists in protected areas management, sustainable development, and environmental education. As a Peace Corps Volunteer, you may work with foreign governments and local communities to plan, implement and evaluate: terrestrial/marine resource needs and utilization (including business enterprises), terrestrial/ocean/coastal conservation efforts, protected areas management, research/surveys, and environmental education projects. Benefits of service include graduate school opportunities, time-in-service accumulation to Federal employment benefits, medical care, student loan deferments, non-competitive Federal hiring status, and much more. To apply, submit an online application nine months to one year before your availability at the Peace Corps web site. For more information, contact Aaron King at aking@peacecorps.gov.

<http://www.peacecorps.gov/>

MESSAGE FROM THE BRIDGE

Go Visit an Aquarium

The Bridge can help you find an aquarium or ocean science-related museum for your spring field trip or summer vacation. In the Resource Center section, you will find a listing of aquariums and ocean science museums; there are even several listings from outside the U.S. Studies show that many of students' most memorable and effective learning experiences occur outside the classroom, where they can see and touch marine

science concepts first hand. The Bridge also features information on field trips to research institutions and other outdoor education centers. Those aquariums, ocean science museums, and education facilities that are not found in the Bridge's collection are encouraged to submit their site for inclusion.

http://www.marine-ed.org/bridge/index_aquarium.html

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

REQUESTS

Contribute to Encyclopedia of Earth

Apply to become a contributor to the Encyclopedia of Earth, the Wiki-style electronic reference about the Earth, with a searchable database of articles written by experts. To qualify, contributors must be a recognized expert in a subject area of the encyclopedia; be willing to work in a very dynamic, highly collaborative authoring and editorial environment; and embrace the encyclopedia's commitment to fairness, objectivity, and quality.

<http://www.eoearth.org/eoe/contribute>

Teachers Wanted to Pilot Curriculum Guide

The NOAA Ocean Data Education (NODE) Project's *Investigating El Niño Using Real Data* curriculum guide contains five activities designed for grades 6-8 that incorporate real data from NOAA. If you would like to help test and evaluate this curriculum guide, please visit the new Data in the Classroom website to register online.

<http://dataintheclassroom.org/>

Technology Use in Non-Formal Environmental Education

Participate in a survey investigating the use of technology in non-formal environmental education efforts. The results of this survey will form a baseline document documenting the extent to which technology is currently being used and what factors influence technology use in non-formal environmental education. The survey takes approximately 10-15 minutes to complete.

https://www.surveymonkey.com/s.aspx?sm=Nedzddsr3q4WXaM3UrBmQw_3d_3d

GRANTS AND OPPORTUNITIES

Braitmayer Foundation Education Grants

The Braitmayer Foundation offers grants to fund a broad range of K-12 education programs with curricular reform initiatives and professional development opportunities for teachers. The grants can be used as seed money, challenge grants, or to match other grants to the recipient organizations. Grant applications are accepted twice each year; the deadline for the summer grant cycle is June 1, 2008.

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

Butler-Cooley Excellence in Teaching Award

The Turnaround Management Association and the John William Butler Foundation honor exceptional teachers who have changed the outcome of students' lives and the communities in which they live with the Butler-Cooley Excellence in Teaching Awards. The deadline for applications is May 1, 2008.

<http://www.turnaround.org/about/awards.asp>

B-WET Grants - Pacific Northwest, Northeast, and Gulf of Mexico

NOAA B-WET provides grants in support of locally relevant experiential learning through meaningful watershed educational experiences in the K-12 environment. The NOAA B-WET program has been highly successful in the three regions where it currently operates and is expanding in 2008 to three new regions: Northeast, Gulf of Mexico, and the Pacific Northwest. Funded projects will involve meaningful watershed educational experiences addressing regional priorities. The Funding Opportunity Number is SEC-OED-2008-2001368. Hurry - the deadline for proposals is April 16, 2008; you must register with grants.gov, which may take several weeks.

<http://www.oesd.noaa.gov/BWET/>

Do Something Plum Grants

Do Something awards and grants are offered weekly and yearly, depending on the grant students apply for; the Plum Grant is offered weekly. Grants will be given to young change-makers and potential community leaders who identify problems in their communities, and then create game plans to do something to change their world. Young people can apply on their own behalves, or on behalf of a group or team.

http://www.dosomething.org/plum_youth_grant_application

Fund for the Improvement of Postsecondary Education

The Comprehensive Program supports innovative grants and cooperative agreements to improve postsecondary education. It supports reforms, innovations, and significant improvements of postsecondary education that respond to problems of national significance and serve as national models. Invitational priority goals pertain to improving the mathematics and science proficiency of postsecondary students, including pre-service mathematics and science teachers, and projects that are designed to establish, improve, or expand Professional Science Master's degree programs, among others. The deadline for transmittal of applications is May 5, 2008.

<http://www.ed.gov/legislation/FedRegister/announcements/2008-1/032108b.html>

Go Overboard Challenge Grant

Commit to a cause you're already passionate about. Burton Snowboards and Girl Overboard author, in partnership with Youth Venture, are co-sponsoring the Go Overboard Challenge Grant to find the best youth-led ideas to change the world. Describe how you, your club, your team, or your entire school will Go Overboard. The deadline for submission is May 1, 2008.

<http://www.burton.com/gobsite/ChallengeGrant.aspx>

ING Unsung Heroes

ING Unsung Heroes awards are given to K-12 educators pioneering new teaching methods and techniques that improve learning. Each project is judged on its innovative method, creativity, and ability to positively influence the students. The deadline for applications is April 30, 2008.

http://www.servicelearning.org/instant_info/funding_sources/index.php?popup_id=1317

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, 2008.

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

NAAEE Awards

The North American Association for Environmental Education Awards Committee announces the Call for Nominations for the 2008 NAAEE Awards. NAAEE members recognize individuals and organizations that excel in environmental education by presenting annual awards in the following categories.

- The Walter E. Jeske Award for service to NAAEE and leadership within the field of environmental education
- Outstanding Service to Environmental Education by an Individual
- Outstanding Service to Environmental Education by an Organization
- Outstanding Contributions to Research in Environmental Education
- K-12 Educator of the Year Award
- Outstanding NAAEE Affiliate Organization

The deadline for application is April 18, 2008.

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

NAAEE Photo Contest

NAAEE seeks photos that will inspire people to achieve environmental excellence. Entries may reflect anything that connects to the environment. There are amateur and advanced categories. The deadline for submissions is July 30, 2008.

<http://www.naaee.org/conference/2008-photography-contest>

National Weather Association Sol Hirsch Education Fund Grants

The National Weather Association awards Sol Hirsch Education Fund Grants for teachers in grades K-12 to improve students' education in meteorology. Teachers selected will be able to use the funds to take an accredited course in atmospheric sciences, attend a relevant workshop or conference, or purchase scientific materials or equipment for the classroom. The deadline for application is August 1, 2008.

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

Nature's Best Photography Contest

Nature's Best Photography Contest celebrates the beauty and diversity of nature through the art of photography, and uses this medium as a creative tool for encouraging greater public interest in outdoor enjoyment and conservation stewardship. The annual Windland Smith Rice International Awards program operates in partnership with the Smithsonian National Museum of Natural History in Washington, DC. The deadline for application is April 26, 2008.

http://www.naturesbestphotography.com/pages/competition_overview.html

NPS Preserve America Grants

The Preserve America Grant Program administered by the DOI's National Park Service will be available at the beginning of April, 2008; proposals will be due by the end of June. The Preserve America matching-grant program provides funding to designated Preserve America Communities to support preservation efforts through heritage tourism, education, and historic preservation planning. Successful applicants will emphasize creative projects that promote and preserve the community's cultural resources.

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

Scholarships in Ocean Governance for Caribbean Nationals

PROGOVNET is a two-year project funded by the Nippon Foundation in collaboration with Dalhousie University (Marine Affairs Program and the Marine & Environmental Law Institute), the International Ocean Institute Canada, and the University of the West Indies (Centre for Resource Management and Environmental Studies). PROGOVNET is offering a variety of scholarships to nationals of the wider Caribbean aimed at building regional capacity in ocean governance.

http://www.ioc-cd.org/index.php?option=com_content&task=view&id=56&Itemid=26

Take Pride in America National Awards

The Take Pride in America partnership is dedicated to installing a sense of volunteerism and good stewardship in all public land users, promoting volunteerism and other civic-minded programs through a wide variety of organizations and initiatives. The Take Pride in America National Awards recognize individuals and groups for outstanding stewardship projects or awareness efforts involving federal, state, and local lands and waters. The deadline for application is May 1, 2008.

http://www.takepride.gov/awards/2008_info.html

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

EPA Summer Opportunities for Students Website

The EPA Summer Opportunities website is available through May 28, 2008. It provides a central website through which students may learn about EPA offices and summer employment opportunities.

<http://www.epa.gov/ohr/student>

Hog Island Summer Camps - Maine

Hog Island Audubon Center's residential programs educate adults, children, and families about coastal wildlife in Maine and beyond. Programs offered include both adult camps and sessions for youth and teens. Some financial aid is available.

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

Orange County Water Camp – California

The Orange County Water Camp is an interactive, week-long water education program for Orange County, California students, entering grades 8 and 9, who are interested in science and the environment. Water Camp will give students the opportunity to visit state-of-the-art laboratories, take behind-the-scenes tours of wetlands and treatment facilities, and talk one-on-one with industry professionals and university professors. Students will learn about water science through hands-on activities and lessons designed to be both fun and informative. Two free sessions are offered, June 23-27 and July 14-18, 2008; the deadline for application is April 4, 2008.

http://www.ocsd.com/education/education_programs/watercamp/about.asp

Marine Science Summer Camps - Georgia

The University of Georgia Marine Education Center and Aquarium provides kids, ages 6-15, with hands-on, feet-in marine science experiences. The Summer Marine Science Camp program teaches kids about the Georgia coast, emphasizing “doing science, not viewing science” in marine science and coastal ecology.

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

SEA Semester – Massachusetts, Maine, and California

The following three-week-long seminars are being offered by Sea Education Association (SEA) for high school students this summer.

- **Science at SEA** focuses on coastal and off-shore marine research, maritime history, and nautical science. Study in Woods Hole, Massachusetts and circumnavigate Cape Cod on a tall ship while conducting oceanographic research and sail training. June 26-July 15, 2008 and July 21-August 8, 2008.
- **Oceanography of the Gulf of Maine** studies intertidal and oceanic marine environments through Cornell University's Shoals Marine Lab. Sail from Appledore Island, Maine on a tall ship while conducting oceanographic research and sail training. July 7-26, 2008.
- **Oceanography of the Southern California Bight** offers subtidal and oceanic studies on Catalina Island at the Wrigley Marine Science Center, Catalina Island, California. Sail the waters of Southern California and the Channel Islands while conducting oceanographic research and sail training. August 7-25, 2008.

http://www.sea.edu/academics/program_highschoolprograms.asp

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Coast Alive! Teacher Institutes – California

Coast Alive! and the California Institute for Biodiversity offer this field experience to strengthen teacher's skills in science, pedagogy, and leadership. Coast Alive! Earth, Wind, Fire, Water Institute for southern California will be held in June 2008; Coast Alive! Land-Sea Interface Institute for the East Bay Regional Park District – San Francisco Bay Area will be held August 3–8, 2008.

Contact Roger Renn at roger@calalive.org

Down Under, Out Yonder - Texas

The 2008 Down Under, Out yonder workshops and field expeditions, sponsored by the Gulf of Mexico Foundation and ConocoPhillips, will be held July 19-23, 2008. This unique way to learn about coral reef ecosystems and the National Marine Sanctuary Program, specifically the Flower Garden Banks NMS located in the Gulf of Mexico, consists of two days of land-based workshop followed by three days of SCUBA diving in the sanctuary. All applicants must be previously SCUBA certified and have a fair amount of open water diving experience. This is a competitive application process; applications should be submitted as soon as possible.

<http://gulfmex.org/duoy.htm>

Environmental Education Courses - Online

The Environmental Education and Training Partnership (EETAP) and the University of Wisconsin, Stevens Point offer these two online courses for the summer and fall of 2008. Scholarships are available.

- Applied Environmental Education Program Evaluation, June 2-August 22 and September 8-December 5, 2008
- Fundamentals of Environmental Education, June 2-August 15 and September 8-November 28, 2008

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

Environmental Educators Training Program – California

The Marin Headlands Environmental Educators Training Program provides teachers and non-traditional educators with skills to create hands-on science standard relevant curriculum for students. The program is presented in partnership with the National Park Service and includes five days of instruction, field trips, seaside lodging, and all meals. Scholarships are available. Two sessions are offered: July 28–August 1, 2008 and August 11-15, 2008, in Sausalito, California.

<http://yni.org/hi/adulted/index.php>

Green Eggs and Sand Workshops – Georgia, Delaware, New York

The Green Eggs and Sand workshops are designed to explore the Atlantic Coast horseshoe crab/shorebird phenomenon and management controversy. There are three Green Eggs and Sand workshops scheduled:

- May 2-4, 2008, Savannah, Georgia
- May 16-18, 2008, Lewes, Delaware
- June 20-22, 2008, Long Island, New York

Contact Jennifer Holmes at Jennifer.Johnson@state.de.us

International Marine Conservation Congress

The Marine Section of the Society for Conservation Biology will be hosting its first stand-alone meeting, the International Marine Conservation Congress, *Making Marine Science Matter*, from May 20-24, 2009 in Washington, DC. The goal of this interdisciplinary meeting is to put conservation science into practice through public and media outreach and the development concrete products (e.g., policy briefs, blue ribbon position papers) that will be used to drive policy change and implementation. The meeting will encompass the 2nd International Marine Protected Areas Congress, consisting of an organized cross-cutting issue within the conference addressing MPAs through the full range of posters, papers, workshops and symposia. Additional cross-cutting issues include education and outreach, fisheries and aquaculture, and more. Check the website for important deadlines; the deadline for the first call for symposia and workshops is June 1, 2008.

<http://www2.cedarcrest.edu/imcc/index.html?CFID=7747710&CFTOKEN=71061409>

International Pacific Marine Educators Network Conference

The International Pacific Marine Educators Network 2008 Conference (IPMEN'08) will be held October 16-21, 2008 in Townsville, Australia and virtually on the web through the College of Exploration. The conference theme is *Sustaining the Pacific: Learning from Elders, Listening to Youth*. Pacific and marine educators worldwide will continue ongoing efforts to build a network aimed at ensuring the health of the Pacific Ocean and the communities who depend upon it. Scholarships will be available, with priority to delegates from low income nations in the Pacific and other small island developing nations or territories in the Pacific. There will be direct links with the 2008 International Youth Coastal Conference. Check the College of Exploration website for virtual participation and the NAAEE website for the Virtual Australian Tour.

<http://www.ipmen.net/default.htm>

<http://www.coexploration.org/ipmec/>

<http://www.naaee.org/programs-and-initiatives/professional-development-tours/virtual-australian-tour/>

Invasive Species of Everglades National Park

Take your students on an electronic field trip to the Everglades National Park to explore invasive species. The eFieldTrip consists of three major components: a trip journal, a virtual visit, and posting questions via the Ask the Experts Web Form. Ask the Experts will be available from April 15-17, 2008.

www.eFieldTrips.org

Learning Ocean Science through Ocean Exploration - Oregon

NOAA's Office of Ocean Exploration and Oregon Sea Grant offer this professional development follow-up workshop, April 12, 2008 in Portland, Oregon, for teachers who participated in the October 2007 introductory workshop, along with other interested science educators of grades 6-12. Pre-registration is required and space is limited. The deadline for registration is April 7, 2008

Contact Nancee Hunter at nancee.hunter@oregonstate.edu

MATE's Summer ROV Workshop – California

The Marine Advanced Technology Education (MATE) Center announces their summer institute for 2008, Advanced Remotely Operated Vehicle Building for Classroom Projects, July 21-27, 2008 in Monterey, California. Throughout the week, educators will work in teams to design and build their own ROVs to complete a set of predetermined mission tasks. Educators will learn how to program a basic stamp to control sensors and motors on their ROVs. 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. The participants will test their ROVs in a mini-competition at the end of the week. The deadline for application to this free workshop is April 14, 2008.

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

NASA Ocean Mission Educator Conference - California

NASA's Ocean Surface Topography Mission on the Jason-2 satellite (OSTM/Jason-2) is scheduled to launch on June 15, 2008. An Educator Launch Conference will be held on June 14-15, 2008 in Lompoc and Vandenberg Air Force base, California, with education workshops, dinner banquet, and launch viewing. OSTM will measure sea surface height to an accuracy of < 4 cm every ten days. Sea surface topography measured by satellite has numerous applications that are important to global environmental monitoring. These include: predicting hurricane intensification, improving tide models, mapping deep ocean bathymetry, monitoring and forecasting El Niño Southern Oscillation, measuring the rate of global sea level rise, and charting surface currents. The deadline for registration is May 30, 2008.

<http://endeavours.org/sec/>

National Science Teachers Association's 2009 Conference

Submit a session proposal for NSTA's 2009 conferences, March 19-22, 2009 in New Orleans, Louisiana (March 19-22, 2009). The deadline for submission is April 15, 2008.

http://science.nsta.org/sessions/proposal_submission.asp

Ocean Observing Educator Institute Workshop – New Hampshire

The University of New Hampshire Coastal Observing Center and the Gulf of Maine Ocean Observing System will cosponsor an Educator Institute, *Understanding Seasonal Change in the Ocean Using Ocean Observing Data*, July 7-11, 2008 in Durham, New Hampshire. The workshop will focus on understanding how ocean observing data can

explain seasonal changes in the ocean. Teachers of grades 7-12 will collect data at sea, learn how to interpret various types of ocean observing data, and practice using cutting-edge materials that connect the ocean to the larger earth/sun system. Teachers will be asked to translate this new knowledge to learners through creating effective lessons for their classrooms. This workshop aims to provide a deeper understanding on how the Gulf of Maine works, how it changes, and how we can monitor these changes by studying ocean observing data. The deadline for application is April 25, 2008. Check the website for materials from previous workshops.

<http://www.cooa.unh.edu/education/workshops.jsp>

Science at Sea Talk - Delaware

The University of Delaware will present the annual faculty lecture sponsored by the University of Delaware Library Associates, *.Ships, Submersibles and Underwater Habitats: Diving into the Adventures of Science at Sea*, by Nancy M. Targett, dean and professor in the College of Marine and Earth Studies, on April 10, 2008 in Newark, Delaware. The lecture will focus on the multiple research platforms that scientists use to conduct work on the surface and under the sea and the unexpected adventures they sometimes encounter. A reception follows the lecture. Both the lecture and reception are free and open to the public.

<http://www.udel.edu/PR/UDaily/2008/mar/sea031708.html>

Teacher Workshop on Geoscience Time Scales & Global Climate Change - Wisconsin

Supported by UW-Madison's Atmospheric and Oceanic Sciences Department, teachers can look backward and forward in time by studying weather for 1 day, 1 week, 1 month; climate for a year, 30 years, 400,000 years; and geology for millions of years. Workshop sessions, July 9-10, 2008 in Madison, Wisconsin, will include hands-on activities utilizing real-time satellite imagery in Google Earth to study the Earth System and detailed discussions of the Intergovernmental Panel on Climate Change 2007 Summary for Policy Makers. The deadline for registration is May 30, 2008.

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

Texas Bays and Estuaries Meeting - Texas

The Texas Bays and Estuaries Meeting, April 16-17, 2008 in Port Aransas, Texas will focus on work being done in the bays, estuaries, and near-shore Gulf of Mexico. The meeting provides an opportunity for both natural and social science researchers working in the Texas coastal zone to share information, results, and insights into this diverse coastal environment. The deadline for abstract submission is April 4, 2008.

<http://www.utmsi.utexas.edu/its/tbem2008/tbem2008.htm>

Working Effectively with Tribal Governments - Online

The online training course for federal employees, *Working Effectively with Tribal Governments*, is available to the public free of charge until April 30, 2008. While the one-hour training is geared towards federal employees, others who might benefit from the training are encouraged to register.

<http://www.golearn.gov/MaestroC/>

EDUCATIONAL RESOURCES

Climate Change: Connections and Solutions

Facing the Future offers the 2-week curriculum unit, *Climate Change: Connections and Solutions*, free through funding from the Hewlett-Packard Company. The unit is available for grades 6-8 and 9-12. Students are encouraged to think critically about climate change and to collaborate to devise solutions. Students learn about climate change within a systems framework, examining interconnections among environmental, social, and economic issues. Check the website for additional free or for fee curriculum. <http://www.facingthefuture.org/Curriculum/BuyFacingtheFutureCurriculum/tabid/59/Default.aspx#Curriculum%20Unit>

Data in the Classroom

Data in the Classroom is a new online resource for teachers interested in using real scientific data in their teaching. 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.

<http://dataintheclassroom.org/>

Earth Gauge Courses - Online

Earth Gauge is a weather and environment program of the National Environmental Education Foundation and the American Meteorological Society. Earth Gauge provides free environmental education materials to broadcast meteorologists that they can use on-air in their TV or radio forecasts and in other media. In addition, they offer free online courses developed in partnership with the Cooperative Program for Operational Meteorology, Education and Training (COMET), designed to train meteorologists, but are also useful tools for educators. Weather and the Built Environment explains the history of urban development in the U.S. and impacts on watersheds, air quality, and weather. Watersheds: Connecting Weather to the Environment provides an understanding of a watershed as the local environment in which people's actions and decisions play against the background of daily and seasonal weather to affect the quality and health of the local watershed in which they live, as well as the larger system of watersheds of which their watershed is one part.

<http://www.earthgauge.net/wp/courses>

Encyclopedia of Life

The first 30,000 pages of a massive online Encyclopedia of Life (EOL) are available. Intended as a tool for scientists and policymakers and a fascinating resource for anyone interested in the living world, the EOL is being developed by a unique collaboration between scientists and the general public. By making it easy to compare and contrast information about life on Earth, the resulting compendium has the potential to provide new insights into many of life's secrets. Drawing upon its collaboration with the Catalogue of Life and Tree of Life projects, EOL's infrastructure now includes placeholder pages for 1 million species, of which 30,000 have been populated with detailed information. In addition, about two dozen highly developed multimedia pages are presented as examples of what to expect in time throughout the EOL.

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

Feet Wet, Hands Dirty

The book *Feet Wet, Hands Dirty: Environmental Projects in Maryland Public Schools*, highlights 15 different elementary school student-developed environmental projects. Maryland's EE program provides students with the opportunity to investigate environmental issues and take action to preserve or restore the environment. The website offers a preview of the first 15 pages of the book.

<http://www.blurb.com/bookstore/detail/111841>

Fire Education Resources

The National Wildfire Coordinating Group Wildland Fire Education Working Team has recently completed a reference document to fire education products which are available on the web or through the symbols cache.

<http://www.myfirecommunity.net/NeighborhoodPosts.aspx?ID=468&Topic=1820&Category=1>

Frogwatch USA

Frogwatch USA is a frog and toad monitoring program that gives volunteers the opportunity to help scientists conserve amphibians. This long-term amphibian study, managed by the National Wildlife Federation in partnership with the United States Geological Survey, will increase awareness of amphibian decline and will give participants the opportunity to be directly involved in gathering information that can ultimately lead to practical ways to help stop the decline of these important species. The website offers frogwatching tips, field guides, and much more. The website offers very easy-to-access frog call identification for your state through links to the eNature website.

<http://www.nwf.org/frogwatchUSA/>

GEF Lessons Learned Project

The GEF-funded project *Knowledgebase for Lessons Learned and Best Practices in the Management of Coral Reefs* seeks to formalize the experiences and lessons learned from previous GEF projects, as well as major non-GEF initiatives, involving coral reefs and associated ecosystems. The project aims to identify, analyze, and translate lessons into good practices and information resources, and then disseminate this information globally for use in future project design and development. The downloadable *GEF Lessons Learned and Best Practices Toolkit* is a place to find information about how to design and implement coral reef management strategies; it will be updated quarterly.

<http://www.reefbase.org/gefill/>

Geology of National Parks

This website from the U.S. Geological Survey draws on thousands of historic and contemporary photographs, views, documents, and other items, creating 3D and photographic tours of dozens of national parks. Visitors will find an alphabetical list of the parks, along with links to the 3D image galleries, standard image galleries, and selected online field guides. Dig out your 3D glasses and check out Puuhonua o Honaunau National Historic Park and Point Reyes National Seashore, among others.

<http://3dparks.wr.usgs.gov/>

Global Warming 101 Expedition with Will Steger - Online

National Geographic Explorer Will Steger and a team of young adventurers from Norway, Great Britain, Canada, and the U.S. will bring their High Arctic dogsled expedition to educators and learners through multimedia dispatches. The website includes standards-linked multidisciplinary lesson plans appropriate for middle school

and older students that explore how climate shapes the past, present, and future for members of the High Arctic community. In addition, the site includes discussion starters that challenge students to think critically and form well-supported opinions.

<http://www.globalwarming101.com/>

Gulf of Mexico Alliance Environmental Education Network Clearinghouse

The U.S. Geological Survey, National Wetlands Research Center in Lafayette, Louisiana, offers the Gulf of Mexico Alliance Environmental Education Network Clearinghouse. The site is searchable by issue and state. Information is included on reducing nutrient inputs, restoration, water quality, habitats, and much more. Check out the image galleries and links to science careers.

<http://www.nbii.gov/gomaeen>

MPAs – Local and Traditional Fishing Community Perspectives

The International Collective in Support of Fishworkers has launched a new website on MPAs, providing perspectives from local and traditional fishing communities. The website currently includes an overview of MPAs, an outline of international legal instruments protecting the resource rights of local communities, and summaries of case studies from five countries: Brazil, India, Mexico, South Africa, and Thailand.

<http://www.icsf.net/icsf2006/jspFiles/mpa/>

NASA Data Lesson Plans

Four new lesson plans on climate have been developed by teachers who are alumni of the 2007 MY NASA DATA summer workshop. MY NASA DATA is a project to enable K-12 teachers and students, as well as citizen scientists, to explore the large volumes of data that NASA collects about the Earth from space. Students use scientific inquiry and math skills as they access and display microsets of the Earth System. Additional lessons explore coral bleaching, Great Lakes snow analysis, and many more. Check these lessons out.

http://mynasadata.larc.nasa.gov/User_lessons.html

NASA Presentation Series – Washington, DC

NASA Goddard Space Flight Center and the Library of Congress continue a series of free public presentations by NASA scientists on current science topics. All programs will be held in Washington, DC. Webcasts are typically posted for each program a couple of months after the event.

<http://www.loc.gov/rr/scitech/events/events.html>

North American Environmental Atlas

The Commission for Environmental Cooperation works with key mapping agency partners in Canada, Mexico, and the United States to promote understanding of significant continental-scale environmental issues through the North American Environmental Atlas. Available map layers include renewable energy capacity, priority conservation areas, and other environmental themes. The CEC is also exploring innovative mapping techniques for these layers, including the industrial pollutant mapping tool recently released for use with Google Earth. New map layers are under development, including marine ecoregions and land cover. Users can download the shapefiles for the layers.

<http://www.cec.org/naatlas/>

NWF and Nim's Island

The National Wildlife Federation is partnering with Walden Media for the national release of the family movie, *Nim's Island*, to reach millions with a story, conservation education, and opportunities for action to protect wildlife. Check out the Our World Environmental Challenge (deadline for application, April 11, 2008), downloadable educator's guide, and more.

<http://www.nwf.org/nimsisland/>

Ocean Guardians

NOAA invites your students to become members of the National Marine Sanctuary Program's Ocean Guardian Kid's Club, and get your class involved as an Ocean Guardian Classroom. The **Ocean Guardian Kid's Club** offers children an opportunity to express their insights, observations, and understanding of their natural environment through the creation of original stories, poetry, and visual art. All K-8 students are eligible and encouraged to join. The **Ocean Guardian Classroom** can help your class make a difference and promote environmental conservation at your school or in your local community,

http://sanctuaries.noaa.gov/education/kids_club.html

http://sanctuaries.noaa.gov/education/ocean_guardians.html

Pole-to-Pole Web Forum

GLOBE Seasons and Biomes is an inquiry- and project-based initiative that monitors the interannual variability of seasons in different biomes. Students from around the world will be able to join in a webchat and forum on April 10-11, 2008. They will be able to ask scientists questions about current polar and boreal forest research, their own research interests, and topics that will lead to successful school/student research projects.

http://globe.gov/fsl/html/templ.cgi?ipy_video08&lang=en&nav=1

Potomac Highlands Watershed School

The Potomac Highlands Watershed School is a website where students in the Potomac Highlands and the rest of the Chesapeake Bay region can learn about local watershed issues, and teachers can come for educational support with lesson plans and ties to curriculum standards. The interactive website offers separate sections for elementary, middle, and high school students, along with a teacher site linked to activities, educational programs, references, and more.

http://www.cacaponinstitute.org/e_classroom.htm

Rock the Boat

The University of California Sea Grant Extension Program offers a myriad of online resources for boating environmental education. Recreational boaters enjoy using clean waters with abundant marine life, and the program has published a variety of materials on how boaters can help to protect water quality and native marine life. The website offers information on clean boating practices, reducing pollution from antifouling paints, and preventing invasive species from riding on boat hulls. The website focuses on boats kept in saltwater. Materials include technical reports and fact sheets, video-documentary and radio PSAs in English and in Spanish, and more. Links to websites on fisheries, aquaculture, and seafood quality are also available.

<http://seagrant.ucdavis.edu>

ROV Competition

Teachers interested in learning about Remotely Operated Vehicle (ROV) technology and its application in ocean studies, and in learning how to build a ROV with students and pull together a student team to participate in a regional ROV competition, can join NOAA's Monitor National Marine Sanctuary and others for the 3rd Annual Mid-Atlantic Regional MATE Remotely Operated Vehicle Competition, April 19, 2008 in Hampton, Virginia.

http://marinetech.org/rov_competition/regional_contests/regional_contest.php?rov_competition_id=48

Sanctuaries Fun Pages

The National Marine Sanctuaries For Fun website offers games and downloads for young students. Download the new Ocean Guardian Activity Book, play the Kure Waste Chase game, go on a virtual submersible dive into Monterey Bay, work puzzles, and much more. Students can spend hours here, learning about the ocean all the while.

<http://sanctuaries.noaa.gov/education/fun/>

Satellites and Bleaching

NOAA Coral Reef Watch offers an online tutorial that takes the student through coral bleaching, satellite technology, and how we use satellite data to monitor for the conditions that cause bleaching. The main audience is coral reef managers and scientists, who need to know when corals they manage or study are at risk for bleaching. However, the tutorial uses non-technical language so the resource will be useful for students, teachers, and others wanting to learn more about coral reefs and satellite technology. The lessons are tied to National Science Education standards for use in the classroom.

<http://coralreefwatch.noaa.gov/satellite/education/tutorial/welcome.html>

S'COOL - Students' Cloud Observations On-Line

Students' Cloud Observations On-Line (S'COOL) is a project which involves school children in real science. The CERES (Clouds and the Earth's Radiant Energy System) is a high priority scientific satellite instrument orbiting the Earth as part of NASA's Earth Science Enterprise. Scientists use it to study the ways in which clouds may affect the Earth's climate. Students in the S'COOL project provide ground truth measurements to assist in the validation of the CERES instrument. They can also compare the surface- and space-based observations to learn more about clouds and climate. Science, math, and geography are used as students observe, compute, and locate vital information through ground truth observations for the CERES instrument.

<http://asd-www.larc.nasa.gov/SCOOL/pamphlet.html>

<http://asd-www.larc.nasa.gov/SCOOL/SCOOL.html>

Sea Talk

As a public service in conjunction with more than 35 area radio stations, Delaware Sea Grant produces SeaTalk, a bimonthly series of 30- and 60-second radio announcements on subjects ranging from sharks to sand dunes to current marine science research. The series has been in production at the University of Delaware for more than 30 years. You can download audio clips, read the scripts, and subscribe to podcasts.

<http://www.ocean.udel.edu/seagrant/seatalk/>

Seabean Website

The purpose of this web site is to educate people about sea-beans - their identification, source, travels, variety, beauty, and the plants that they produce. This website contains images and information about sea-beans (drift seeds) commonly found on the beaches of the Northwest Atlantic Ocean. The primary source for these sea-beans is the Atlantic side of South America, Central America, and the Caribbean. This site contains images and information to help people identify sea-beans from any locality in the world, but the expertise available and typical visitor to this site is for help with tropical Western Atlantic and Caribbean species.

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

Seafloor Characterization Cruise

Join NOAA for the latest National Centers for Coastal Ocean Science (NCCOS) research cruise to explore conservation areas in Puerto Rico. Visitors can watch video clips and access a wealth of supporting information and images for cruises from 2004 through the recent 2008 seafloor characterization cruise. The website includes background information, video, data, and scientist profiles. Some materials are also available in Spanish.

http://ccma.nos.noaa.gov/products/biogeography/usvi_nps/details.html#

Wandering Wetland Travelling Trunk

The Wandering Wetland Travelling Trunk from Environmental Concern in St. Michaels, Maryland, contains artifacts and activities designed to introduce elementary students to wetland ecology. Filled with skulls, rubber track molds, numerous curricular resources, and more, the trunk provides teachers with materials for experiential learning and structured lessons about the environment. As an added bonus, included in each trunk is a copy of the national curriculum guide WOW! The Wonders of Wetlands, for each teacher to keep.

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

Western Hemisphere Migratory Species Initiative Pathway

The Western Hemisphere Migratory Species Initiative Pathway website offers a myriad of information and useful links for those interested in studying migratory species. The website links to projects, resources and data, stories from the field, lessons learned, funding sources, and more. It is available through the Rainforest Alliance and is offered in English and Spanish.

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

Western Waters Digital Library

The vast reserves of water within the Western United States have been the cause of both great excitement and concern. This digital library brings together a wide range of documents, including legal transcripts, water project records, video collections, and personal papers documenting the Columbia, Colorado, Platte, and Rio Grande river basins.

<http://harvester.lib.utah.edu/wwdl/>

INITIATIVES, JOURNALS, and MORE

Digital Library of the Caribbean

The Digital Library of the Caribbean, administered by Florida International University in partnership with the University of the Virgin Islands and the University of Florida, aims to build a cooperative digital library among partners within the Caribbean and circum-Caribbean, providing scholars, students, and citizens around the world with open on-line access to Caribbean cultural, historical and scientific materials. Collections include newspapers, photographs, archives of Caribbean leaders and governments, official historical documents, and historic and contemporary maps. Future collections will feature numeric data for local ecosystems, oral and popular histories, travel accounts, literature, and musical expressions. Outreach initiatives currently in planning include arranging a Teacher Training Workshop, web-hosting a Caribbean Lectures series, and funding the creation of Educational Web Modules.

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

Discovery Day at the Dauphin Island Sea Lab - Alabama

Discovery Day at the Dauphin Island Sea Lab offers free children's admission to the Estuarium on April 19, 2008, from 10:00am to 2:00pm, on Dauphin Island, Alabama. This family event includes a variety of environmentally-themed children's activities; an Open House at the lab research facilities where the public can meet the scientists; and free kids' admission to the Estuarium, the aquarium at the lab.

<http://estuarium.disl.org/>

Earth Day

Celebrate Earth Day on April 22, 2008. Check out happenings around your area or register your program. The website offers "Earth Day in a Box" under the Resources link.

<http://ww2.earthday.net/~earthday/>

National Environmental Education Week

National Environmental Education Week promotes understanding and protection of the natural world by actively engaging K-12th grade students and educators of all subjects in a week of environmental learning and service before Earth Day. To date, over 650 schools, nature centers, zoos, museums, and aquariums from around the country have pledged to implement EE Week activities through this Canon EE Week website. This year will focus on Carbon Footprints. Participants can access a wide variety of free environmental education resources, including standards-based environmental education lessons and activities.

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

Ocean Artist

Deidre Sassano is an artist offering design and production of ocean-themed arts projects and workshops. Her "Ocean Arts" encourages creativity and conservational awareness for the oceans and their inhabitants and promotes the use of environmentally sensitive materials by utilizing recycling/recycled materials for projects.

Contact Deidre at hollow_arts@yahoo.com

Seal Watch and Prudence Island Tour – Rhode Island

Explore Prudence Island, see seals at one of the best haul-out spots in Narragansett Bay, and learn about cutting edge ecological research in the bay. Narragansett Bay

National Estuarine Research Reserve offers these outreach opportunities in April for groups of six to ten participants; registration is required.

<http://www.nbnerr.org/seals.htm>

SLO Take Back Program

The San Luis Obispo County Integrated Waste Management Authority announces the implementation of the *SLO Take Back Program* for household batteries, fluorescent tubes, and compact fluorescent light bulbs. Nearly every retailer throughout San Luis Obispo County who sells household batteries or fluorescent tubes and compact fluorescent bulbs will now take those items back from the public for free. More than 300 local businesses are providing this free service to the public. Participants range from national chain stores to local stores. Consumers who want to shop green can now safely and easily recycle these products.

<http://www.iwma.com/directory-aj/fluorescent%20tubes%20and%20bulbs.html>

Solar Eclipse Webcast

NASA's Sun-Earth Day team is partnering with the San Francisco Exploratorium to produce a live total solar eclipse webcast and broadcast from China, on August 1, 2008. The website hosts webcasts from previous eclipses going back to 1998 in Aruba, a world map of future eclipses, and links to more information.

<http://www.exploratorium.edu/eclipse/>

Thank You Ocean Report Podcasts

The California *Thank You Ocean* public awareness campaign has launched a new podcast feature. The podcasts discuss how the public can protect the ocean and highlight issues important in ocean and coastal management. The first podcast focuses on the Thank You Ocean campaign itself, followed by podcasts on marine debris, marine protected areas, and more. A new podcast will be posted approximately every 2 weeks.

<http://www.thankyouocean.org/podcast/>