



**NATIONAL MARINE PROTECTED AREAS CENTER
INFORMATION EXCHANGE FOR MARINE EDUCATORS**

NOVEMBER 2005

This update is provided with support from NOAA's Office of Education and Sustainable Development, and web hosted 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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The current newsletter and collected archives of the information presented in past newsletters are available at http://www.mpa.gov/information_tools/education.html#InfoExchange.

Notable Article

Lessons Learned from Large Scale Environmental Restoration

The Northeast Midwest Institute has released *Large-Scale Ecosystem Restoration: Lessons for Existing and Emerging Initiatives*. The report provides analysis and identifies lessons learned from several large-scale activities, including the Chesapeake Bay, Coastal Louisiana, South Florida Everglades, Great Lakes, Upper Mississippi, and more. The downloadable report outlines the importance of multi-stakeholder collaboration and consensus; understanding local and regional governance; comprehensive planning that includes science, economics, and partnership; implementation strategies; and accounting methods that include projecting and tracking expenses, enforcement of actions and ecosystem health status.

Large-Scale Ecosystem Restoration: Lessons for Existing and Emerging Initiatives -- Karen Vigmostad, Nicole Mays, Allen Hance & Allegra Cangelosi (2005). Northeast-Midwest Institute, Washington DC.

http://www.nemw.org/restoration_products.htm

PROGRAM OF THE MONTH

Education through Cultural and Historical Organizations (ECHO)

The Education through Cultural and Historical Organizations (ECHO) Act is a federally funded educational and cultural enrichment initiative, serving children, teachers, and adult continuing learners in Alaska, Hawai'i, and Massachusetts. ECHO brings to culturally diverse audiences programs collaboratively produced by five regional cultural institutions: Alaska Native Heritage Center and Iñupiat Heritage Center in Alaska; Bishop Museum in Hawai'i; New Bedford Whaling Museum and New Bedford Oceanarium; and Peabody Essex Museum in Massachusetts. Working with partners such as the National Park Service, schools, and community-based organizations, ECHO programs amplify educational benefits, foster greater appreciation of local and national history, and assist communities in maximizing the social benefits of new technologies.

Together, ECHO partner institutions represent more than four centuries of experience serving the educational needs of communities. While varying in their individual missions, all embrace common goals: to enhance appreciation of regional heritage, to facilitate dialogue and understanding between communities and individuals, and to provide life-enhancing educational, social and personal development opportunities beyond those provided by traditional classrooms.

The communities served by ECHO programs are culturally, geographically and economically diverse, touching on the farthest corners of the United States. First brought into contact with each other through tall ships – traders and whalers – today's partner regions share threads of common history. This shared heritage serves as the basis for initiating new contacts and conversations, facilitated by today's digital communication tools. Through this dialogue, communities become better equipped to engage in the global marketplace, bridging divides of geography, culture, and generation, while maintaining better awareness of local culture and identity.

Information about the myriad of ECHO projects can be found on the ECHO partner web sites. Materials include *The First Whaling Trip*, a publication written and illustrated by first and second graders from Nuiqsut Trapper School; background information about whales, whalers, and whaling; the New Trade Winds project linking culturally distinct and historically linked communities; a downloadable storytelling curriculum; and much more. The two links given here are for your convenience to begin to explore this extensive project. A contact is also provided for more information.

Contact Bob Rocha at brocha@whalingmuseum.org or (508) 997-0046 x149

www.echonsb.org

www.echospace.org

WEBSITE OF THE MONTH

Ocean Race Adventure

This education website uses extreme ocean sail racing as a context for educating students about oceans, weather, and world cultures. The Volvo Ocean Race is a round the world sailing race which covers 32,500 nautical miles, makes port in 9 countries, and travels through 4 oceans over a period of eight months. It will begin in November 2005, arriving in the U.S. in April 2006 and ending in June 2006.

Using the curriculum materials and information on the race from this site, teachers can use ocean sail racing as a tool to give students an appreciation of the oceans and the Chesapeake Bay, while tracking the progress of the boats. The curriculum materials were developed for middle school students, but elements are appropriate for other grades, as well. The teaching materials are accessed by clicking on the diagram of the boat. Then scroll over the numbers (starting with "1" for the overview). The website includes background material, lesson plans, resource materials, environmental images of the week, and weather data. Other information will be added during coming months.

Schools and clubs will be invited to compete in predicting the exact time the first boat will cross the finish line of leg 5, from Rio de Janeiro, Brazil, to Baltimore, Maryland. To make this prediction, students will need to examine weather, tides and currents, aerodynamics, and geography. The group with the winning prediction will be treated to a visit to the race village at the Inner Harbor in Baltimore, with an overnight stay onboard the USS Constellation.

For more information, contact Betsy Kulle at betsy.kulle@oceanracechesapeake.org.
www.oceanraceadventure.net

MESSAGE FROM THE BRIDGE

Ocean Observing from the BRIDGE

The Bridge Data Activities have taken a new shape this fall by featuring real-time data from ocean observing systems throughout the coastal United States and the Great Lakes. Traditionally, these classroom-friendly activities have used static, case study data sets to illustrate important ocean science topics. The September Data Activity focuses on real time conductivity data and evaluates how changes in water's abiotic characteristics affect the water's ability to conduct electricity. The October Data Activity investigates wave energy as a possible alternative, renewable energy source in the United States. In the coming months, the Bridge will be adding several more Data Activities using ocean observing systems and also feature a special section devoted to ocean observing systems and their role in education.

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

REQUESTS

Great Lakes Water Quality Agreement Review

Residents of the Great Lakes and the St. Lawrence River basin can provide their input to the Great Lakes Water Quality Agreement as part of an initiative between the governments of the United States and Canada. Participate in a meeting or Internet dialogues, or provide input by phone, fax, or mail. Submit comments by November 30, 2005.

<http://www.ijc.org/en/activities/consultations/glwqa/index.php>

NASA Product Review

The NASA Science Mission Directorate-Earth Science education review occurs every six months and includes formal and informal education products. The notice of intent to submit is due November 11, 2005, and products are due by November 21, 2005.

http://science.hq.nasa.gov/education/ed_product_review.html

Seeking High School Teachers for Curriculum Evaluation

Kara Johnson, a graduate student at College of the Atlantic in Bar Harbor, Maine has written a marine science curriculum that developed out of research on marine mammal distribution and oceanographic processes. She seeks high school teachers around the Gulf of Maine to pilot and evaluate the curriculum. The project is designed for grades 9-12 but can be applied to marine education camps or other informal education venues where the instructor has extended time with the students. It is composed of six parts and is expected to take approximately one week. This project is an on-line curriculum for high school students around the Gulf of Maine that uses Geographic Information Systems (GIS) to teach about oceanography and whale distribution. Within part of the curriculum, students role-play regarding whale threat issues in the Gulf of Maine.

Contact kjohnson@coa.edu

GRANTS AND OPPORTUNITIES

Advanced Technology Environmental Education Center Fellows Institute for Teachers

The mission of the Advanced Technology Environmental Education Center (ATEEC) is the advancement of environmental technology education through curriculum development, professional development, and program improvement in the nation's community colleges and high schools. Applications are now available for the 12th ATEEC Fellows Institute, June 15-21, 2006, in Cedar Falls, Iowa. High school science, math, and technology education and two-year college math, science, and environmental technology teachers are eligible for one of 20 awards. The deadline for application is February 4, 2006.

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

Canon Envirothon

The theme of the 2006 Canon Envirothon is *Water Stewardship in a Changing Climate*. The theme focuses on the role that water plays in our lives now and in the future, and includes such aspects as water quality, supply, use and allocation, conservation and management. Water is a key consideration in each of the four Envirothon disciplines - forestry, soils, wildlife and aquatics.

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

CAPCO Science Class Challenge

For teachers with classes in grades 4-9, including home-schoolers, the CAPCO Science Class Challenge is meant to encourage students and teachers to learn about the Earth's protective upper ozone layer, CFCs, and the environment by using provided activities or their own creative methods. The deadline for application is May 8, 2006.

<http://www.nocfcs.org/scc/scchome.htm>

CICEET Request for Proposals

The Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET) invites preliminary proposals to its Environmental Technology Development Program. This program is open to U.S. scientists and innovators from academia, private industry, and the public sector who seek to develop tools that meet the priority needs of coastal management. Research focus areas are land use/habitat change, nutrient enrichment and eutrophication, microbial contaminants, and toxic contaminants. The deadline for preliminary proposal submission is Monday, November 21, 2005.

<http://ciceet.unh.edu/rfp/rfp.html>

Coastal Art and Poetry Contest - California

The California Coastal Commission encourages youth to reflect on the beauty and spirit of California's beaches and ocean, while hoping to inspire a greater sense of stewardship for these natural places. The contest is open to all California students, kindergarten through 12th grades. Entries must have a California coastal or California marine theme. The deadline for entry is January 31, 2006.

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

Connect-4: Air, Land, Water and Life Art Contest for Grades 2-4

The Institute for Global Environmental Strategies is holding its 10th Annual Art Contest for children in grades 2-4. This year's theme is Connect-4: Air, Land, Water and Life. The contest deadline is November 9, 2005. The website includes National Education Science content standards for K-4.

http://www.strategies.org/ArtContest/2005_ContestAnnounce.html

Earthwatch Student Challenge Awards Program

The Earthwatch Student Challenge Awards Program offers students aged 16-18 gifted in the arts and humanities an opportunity to spend two to three intensive weeks during the summer at a scientific research station. The aim is to excite the students' imagination, expand their potential, and stimulate their curiosity about science and technology. This is a competitive fellowship program that rewards creative thinkers and risk takers. The program also supports the research and education initiatives of scientists by providing mentoring opportunities, research grants, and the participation of talented high school students. The deadline for nomination is November 19, 2005. While on the Earthwatch website, also check out the lesson plans and educator opportunities.

<http://www.earthwatch.org/education/student/scap.html>

Environmental Fellows Program at Harvard University

The Harvard University Center for the Environment offers a post-doctoral fellowship to enable recent doctorate recipients to use and expand Harvard's resources to tackle complex environmental problems. The Environmental Fellows will work for two years with Harvard faculty members in any school or department to create new knowledge while also strengthening connections across the university's academic disciplines. The deadline for application is January 15, 2006.

<http://www.environment.harvard.edu/navigation2/funding.htm>

EPA Environmental Education Grants

The EPA's Office of Environmental Education grant program supports environmental education projects that enhance the public's awareness, knowledge, and skills to make informed decisions that affect environmental quality. Educational institutions,

environmental and educational public agencies, and not-for-profit organizations are eligible to apply. The deadline for application is November 23, 2005.

<http://www.epa.gov/enviroed/grantsols.html>

Harriett G. Jenkins Pre-Doctoral Fellowship Program

NASA and the United Negro College Fund Special Programs Corporation offer the Harriett G. Jenkins Pre-doctoral Fellowship Program, which supports the training of the "next generation of explorers." The program works to eliminate the shortage of skilled workers in scientific disciplines and develop an inclusive, multi-cultural, and sustainable workforce by providing access and opportunity to those underrepresented and underutilized persons of society who want to earn advanced degrees. The application deadline is February 1, 2006.

<http://esse21.usra.edu/JenkinsFLIER04-05.pdf>

Kinder Excellence in Teaching Award.

A cash prize will be awarded to an extraordinary teacher in an underserved community. The Kinder Excellence in Teaching Award seeks to recognize innovative and results-oriented teaching and to raise public awareness of the importance of effective and committed teachers. Nominees must be currently employed in a K-12 school, public or private, in the U.S. where at least 50 percent of students qualify for the free-and reduced-price meal program. Other restrictions apply. The deadline for nomination is December 31, 2005.

www.kinderaward.org

Leifur Eiríksson Foundation Scholarships

The Leifur Eiríksson Foundation funds scholars from U.S. universities for graduate research or study at universities in Iceland, and scholars from universities in Iceland to conduct research or study at universities in the United States. Opportunities exist in many fields that are common in the universities of both countries, including oceanography, climate studies, and other disciplines. General instructions, eligibility requirements, and application information can be found on the website. The deadline for application is January 16, 2006.

<http://www.leifureirikssonfoundation.org/scholarship.php>

National Wetlands Awards

The National Wetlands Awards Program celebrates individuals who have demonstrated extraordinary dedication, innovation, or excellence in wetlands conservation. Their work covers programs or projects on the regional, state, and local levels, and their efforts to educate the public and surrounding communities about the value of wetlands, the programs that are available to protect and restore wetlands, and the value of cooperation among grassroots organizations, educational organizations, private landowners, and government agencies lead to the successful protection of wetland resources. Categories include education and outreach, conservation and restoration, wetland community leader, and more. The deadline for nomination is December 16, 2005.

<http://www2.eli.org/nwa/nwaprogram.htm>

NOAA Minority-Serving Institution Scholarship Program

NOAA's Educational Partnership Program with Minority Serving Institutions is open to undergraduate and graduate students in NOAA-related fields. The program's goal is to encourage students and faculty at minority serving institutions to pursue applied

research and education in atmospheric, oceanic and environmental sciences and remote-sensing programs. The application deadlines are January 31, 2006.

<http://epp.noaa.gov>

NSF Geoscience Education Program Solicitation

Proposals Due: Nov. 17, 2005

The NSF Geoscience Education program will consider proposals submitted under one of two tracks: Pilot Projects and Integrative Collaborations. The goals of the program include improving the quality of geoscience education at all educational levels; increasing the number of students drawn from groups underrepresented in science, technology, engineering and mathematics fields in geoscience courses and degree programs; and more. The deadline for proposals is November 17, 2005.

<http://www.nsf.gov/pubs/2005/nsf05609/nsf05609.htm>

NSF Science, Technology, Engineering, and Mathematics Talent Expansion Program

The Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP) seeks to increase the number of students receiving associate or baccalaureate degrees in established or emerging fields within science, technology, engineering, and mathematics. Letters of Intent are due January 5, 2006 or August 15, 2006, depending upon the type of proposal. See the website for full details.

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf06502

TE@CH Emergency Response Program

Best Buy will offer gift cards to K-12 schools that have enrolled students displaced by hurricanes Katrina and Rita for the 2005-06 school year. All public and private K-12 schools are eligible. Grants will be awarded based on the number of enrolled evacuees, their length of stay, and how a school plans to use the funds. Hurry – the deadline for application is November 4, 2005.

www.bbycommunications.com/cr/hurricane/applogin.asp.

Texas Environmental Excellence Awards

Presented by the Texas Commission on Environmental Quality, the Texas Environmental Excellence Awards recognize the efforts of citizens, communities, businesses and organizations to preserve and protect the Texas environment. The awards honor the state's most outstanding waste reduction and pollution prevention projects and ensure clean air, clean water, and the safe management of waste. The awards are in 10 diverse categories including youth and educational initiatives. Hurry - the deadline for application is November 4, 2005.

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

Tips and Resources for Successful Grant Writing

Education World's "Show Me the Money: Tips & Resources for Successful Grant Writing" helps educators apply for classroom grants for class projects, field trips, special curriculum needs to enhance their students' educational experience. The website also includes links to additional resources.

http://www.educationworld.com/a_curr/profdev/profdev039.shtml

Volvo Adventure Awards

The Volvo Adventure is an environmental award for teams of young people ages 10-16 that rewards environmental action. Awards are given for practical action plans in the

categories of biodiversity, waste, water, and energy. The deadline for submission is January 31, 2006.

<http://www.volvoadventure.org/site/locationchoice.asp>

Young Naturalist Awards

The American Museum of Natural History is holding a researched-based essay contest for students in grades 7-12 to promote participation and communication in science. The Young Naturalist Awards program invites students to plan and conduct their own scientific expedition that will provide questions, data, observations and conclusions on a topic in the field of biology, earth science or astronomy. You do not have to travel far from home. Take your expedition to a park, a lake, stream, beach, backyard, or through the lens of a telescope as you look at the planets and stars. The deadline for application is January 6, 2006.

<http://www.amnh.org/youngnaturalistawards>

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Global Environmental Teachings - Teacher Exchange

The goals of Global Environmental Teachings (GET) are accomplished through innovative educational programs using a combination of computer technology and travel courses to elevate awareness and knowledge about environmental education among diverse populations. GET invites teachers to join together next summer to explore the environments of Puerto Rico or South Africa. Workshops, excursions, and field expeditions will take you over mountains, under the earth, and into the sea. Learn about diverse cultures and customs, unique geological features, and specific habitats for endangered species. Develop rich relationships with educators internationally and exchange teaching methods to bring your experience back to your classroom.

www.uwsp.edu/get

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Applied Environmental Education Program Evaluation – Online

The online course, *Applied Environmental Education Program Evaluation*, will be offered this spring through the University of Wisconsin-Stevens Point, February 20-May 5, 2006. This course was developed as a cooperative effort between the Environmental Education and Training Partnership (EETAP) at the University of Wisconsin-Stevens Point and the U.S. Fish and Wildlife Service National Conservation Training Center. The course is designed to assist environmental educators and natural resource professionals in evaluating their education programs. Participants have the opportunity to develop and apply skills in designing evaluation tools such as surveys, observation forms, and interview and focus group guides.

<http://www.uwsp.edu/natres/rwilke/eetap/>

Climate Science in Support of Decision Making Workshop - Virginia

The U.S. Climate Change Science Program is hosting a workshop entitled *Climate Science in Support of Decision Making*, November 14-16 2005, in Arlington, Virginia. The workshop will address the capability of climate science to inform decision-making. The workshop will include a discussion of decision-maker needs for scientific information on climate variability and change, as well as expected outcomes of the program's

research and assessment activities that are necessary for sound resource management, adaptive planning, and policy formulation.

<http://www.climatescience.gov/workshop2005/default.htm>

Coastal Services Center Online Training Courses

NOAA's Coastal Services Center has two e-learning training courses available online. The *Public Trust Doctrine* course provides an overview of the physical, legal, and administrative aspects of public trust lands. The *Web Content Design and Evaluation* course is designed to help coastal organizations develop better web content and determine its effectiveness.

<http://www.csc.noaa.gov/bins/training.html>

Earthworks: Earth System Science Workshop - Colorado

The Cooperative Institute for Research in Environmental Sciences at the University of Colorado at Boulder offers *Earthworks*, a free, one-week workshop designed to help secondary teachers create earth system science research projects for their students. *Earthworks*, June 24 - July 1, 2006 in Boulder, Colorado, is primarily designed for new teachers, but highly-experienced and mid-career teachers are also encouraged to apply. Teachers will work in small groups with scientists in designing and conducting research projects and investigating Earth system science at the local level through the interconnections between the geosphere, atmosphere, biosphere, and hydrosphere. Applications are due April 14, 2006.

<http://cires.colorado.edu/education/k12/earthworks/>

Energy for a Sustainable and Secure Future

The National Council for Science and the Environment has announced its 6th National Conference on Science, Policy and the Environment, *Energy for a Sustainable and Secure Future*, January 26-27, 2006 in Washington, D.C. Conference participants will explore the intersection of energy, science, policy and the environment, and help develop a science agenda to guide the future of energy development. Concurrent sessions include "Expanding Understanding", with a focus on education for K-12, decision-makers, and professional capacity building.

<http://www.ncseonline.org/ncseconference/2006conference/>

Environmental Education Council of Ohio Conference

The Environmental Education Council of Ohio will convene *TREE - Tomorrow's Reality in Environmental Education*, April 6-9, 2006 in Beachwood, Ohio. This annual conference brings together environmental education stakeholders to initiate collaboration and to celebrate progress. These partnerships strengthen EE in Ohio, leading to a more environmentally literate population and a healthier environment. Conference strands include green building design; Lake Erie watershed, natural history and Great Lakes basin; and more. The deadline for proposals is November 24, 2005.

<http://www.eeco-online.org/conferences/conferences.html>

Environmental Educators of North Carolina Annual Conference

Environmental Educators of North Carolina's 15th Annual Conference, *Connecting Through EE for a Greener Future – a Natural Convergence at the Scuppernon*, November 4-7, 2005 in Columbia, North Carolina, will allow participants to explore some of the area's best natural areas, visit neighboring EE Centers, and more. Sessions include Advanced Project WILD, Global Warming and Effects on the Inuit, and Caught in the Drift: Sea Beans and Ocean Currents.

<http://www.rtpnet.org/eenc/conference.html>

Estuary Escapades - Georgia

Join the University of Georgia Marine Education Center and Aquarium on November 5, 2005, in Savannah, Georgia for the *Estuary Escapades Workshop*. Explore the world of Georgia's estuaries during the SouthEast Center for Ocean Sciences Education Excellence's third annual Ocean Awareness Day. This workshop includes an aquarium tour, hands-on activities on mapping, the Grays Reef education program *Rivers to Reefs*, and more.

<http://eeingeorgia.org/net/calendar/details.aspx?c=27711&s=34956.0.68.4863>

Fundamentals of Environmental Education - Online

This 10-week online course, *Fundamentals of Environmental Education*, was developed by the Environmental Education and Training Partnership and will be offered February 6–April 21, 2006. The course is appropriate for both classroom teachers and for non-formal educators who work with students and/or teachers. It provides educators with the knowledge and skills necessary to incorporate quality environmental education into their instruction. Participants discuss the history, definition, and goals of environmental education; develop an understanding of the professional roles and instructional methods of environmental educators; and interact with other educators from across the country.

<http://www.uwsp.edu/natres/rwilke/eetap/>

Georgia's Shorebirds Conservation Workshop

Join birding experts and biologists for an exciting weekend of learning, December 2-4, 2005, on Sapelo Island, Georgia. Venture out to the beach to probe the sands as the birds do, take a close look at what they're feeding on, and create your own shorebird nest. This workshop is open to K-12 teachers.

<http://eeingeorgia.org/net/calendar/details.aspx?c=27712&s=34959.0.68.4863>

Glaciers and Global Sea Level Rise – California and Online

The Center for Ocean Sciences Education Excellence-West invites you, your colleagues and students, family and friends, to learn more about the ocean's impact on our changing world. The *Glaciers and Global Sea Level Rise* lecture will take place November 16, 2005 in Los Angeles, California. The public lecture will be followed by session for K-12 teachers and informal educators. A related workshop on November 19, 2005 will provide K-12 teachers and informal educators with additional content and inquiry-based classroom activities. More information about the lecture and workshop is available on the COSEE website. The lecture can be accessed online after logging in to the College of Exploration website.

<http://www.usc.edu/org/cosee-west/>

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

Green Eggs and Sand Workshop - Georgia

The Green Eggs and Sand Horseshoe Crab and Shorebird Education Workshop co-sponsored by Sapelo Island National Estuarine Research Reserve and the University of Georgia Marine Education Center, will be held April 28-30, 2006 in Savannah, Georgia. Participants will receive training to educate middle and secondary students about the horseshoe crab/shorebird phenomena.

<http://eeingeorgia.org/net/calendar/details.aspx?c=27719&s=34995.0.68.4863>

International Symposium on Marine Conservation Biology

The Society for Conservation Biology will welcome participants to its 20th annual meeting, *Conservation Without Borders*, June 24-28, 2006, in San Jose, California. The Third International Symposium on Marine Conservation Biology will be integrated into the greater annual SCB meeting. A primary objective of the 2006 meeting is to transcend real and perceived boundaries of ecology, sociology, politics, and human behavior that impede conservation science and its application. Major topic areas will range from partnerships with private landowners to marine and freshwater conservation to transboundary conservation. The deadline for proposals is January 10, 2006.

<http://www.conservationbiology.org/2006/>

International Sea Turtle Symposium

The 26th annual international Sea Turtle Symposium, to be held April 3-8, 2006 in Crete, Greece, is now open for early registration. The website includes general information, registration, abstract submission procedures, travel grant information, and hotel reservations. The deadline for early registration, travel grant application, and abstract submission is November 15, 2005. Thematic sessions include ecology and evolutionary biology; conservation, management and policy; social science research; education, outreach and advocacy; and more.

<http://iconferences.seaturtle.org/>

Interpreting to Diverse Audiences - California

Be part of this interagency workshop for journey-level interpreters who have at least two years of experience. Join fellow interpreters for this 36-hour workshop, January 23-27, in Pacific Palisades, California, and explore new ways to connect your agency's resources and stories to increasingly diverse audiences. See interpretation to diverse audiences in action at the Rancho Sierra Vista/Satwiwa Native American Indian Culture Center, Long Beach Aquarium of the Pacific, and the Skirball Cultural Center. Call now, as enrollment is limited.

Contact Wes Chapin at wchap@parks.ca.gov or (805) 585-1845

Marine Mammal Seminars - California

Camp Ocean Pines is hosting three weekend retreats focused on marine mammals. Leading scientists will share their latest research and discoveries.

- Tagging of Pacific Pelagics, Dan Costa, January 6-8, 2006
- Sleuthing Mother Nature with Seals: Revelations from Long-Term Study, Burney LeBoeuf, January 13-15, 2006
- Sea Otters, Terrie Williams and Jim Estes, January 20-23, 2006.

The retreats feature lectures and activities with the leaders in the field, food, and lodging. Participation is limited to the first 25 registrants.

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

National Service Learning Conference

The 17th Annual National Service-Learning Conference, *We the People*, March 22-25, 2006 in Philadelphia, Pennsylvania, will be the largest gathering of youths and practitioners involved in the service-learning movement. This event draws nearly 2,900 educators, state and federal officials, youth leaders, program coordinators, policy-makers, and representatives from community-based organizations. Early bird rates are in effect until December 21, 2005.

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

NASA and GLOBE Earth's Atmosphere Educator Workshop - Virginia

CALIPSO, CloudSat, and Aura are three satellite missions that will provide students worldwide with a link to NASA research through their education and outreach programs. These satellites will fly in close proximity, providing combined, detailed observations about the condition of Earth and assisting scientists with making predictions related to climate change. An educator workshop, *NASA Satellites Study Earth's Atmosphere: CALIPSO, CloudSat and Aura Partner with the GLOBE Program*, will be held July 9-15, 2006 in Hampton, Virginia. This workshop primarily targets middle school educators who will work with the missions by involving their students in collecting and reporting cloud observations and sun photometer data at the GLOBE Program Website. Applications are due March 10, 2006.

<http://calipsooutreach.hamptonu.edu/va2006.html>

NSTA Conferences - Call for Presentations

Proposals are being accepted to present a session at NSTA's 2006 fall conferences in Omaha, Nebraska, October 19–21; Baltimore, Maryland, November 2–4; and Salt Lake City, Utah, December 7–9, 2006. The deadline for submission of proposals for the 2006 area conferences is January 15, 2006. Proposals are also being accepted for NSTA's 2007 national conference in New Orleans on April 12-15, 2007. The submission deadline is April 15, 2006.

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

NSTA Web Seminars

NSTA Web Seminars are free, 90-minute, live professional development experiences that use online learning technologies to allow participants to interact with subject matter experts and education specialists. Seminars are conveniently scheduled to allow educators from all U.S. time zones to participate. The programs are live and interactive and all online tools are provided. Seminars may be archived and available for viewing after the live event has occurred. *Watershed Dynamics* will be offered December 8, 2005 and February 16, 2006.

http://institute.nsta.org/web_seminars.asp

Reef Rendezvous - Texas

The Houston Zoo and the Flower Garden Banks National Marine Sanctuary offer this one-day workshop, November 12, 2005, in Houston, Texas. Come explore the life that lives just below the surface of the ocean. Learn the basics of coral reef biology and ecology and tie it in to what you'll see at the zoo. There will be activities and plenty of resources for participants. This workshop is for elementary and middle school teachers.

http://www.houstonzoo.org/index.asp?page_ID=344

Regional Oceans Conference for Students and Teacher Preconference - Florida

The Florida Aquarium will be hosting the Regional Oceans Conference for Students (ROCS), on December 7, 2005. The teacher pre-conference workshop will be held on November 9, 2005. ROCS is a one-day workshop to ignite the curiosity and imagination of young people and to instill a sense of ownership and stewardship for the environment, specifically our marine and estuarine resources. Our topic, *Estuary Action*, will challenge students to explore the various local, state, and national environmental agencies involved in estuary education. What are the important messages? Are they being received? How can students promote sound "estuary ethics" in Tampa Bay? This year, Suncoast Earth Force strategies and a Six Step Process for action will be included. Contact Debbi Berger at Dberger@flaquarium.org

Teach at the Beach – New Jersey

New Jersey Marine Educator's Association hosts this professional development workshop for educators, May 19, 2006, in Stone Harbor, New Jersey. The workshop will take place amidst 6,000 acres of coastal wetlands. Bring the ocean into any classroom - lessons and other hand-out materials will be distributed during each activity. NJ Core Content Standards will be listed in these materials. The deadline for registration is April 15, 2006. Register early for discounts; this popular program is limited to 125 participants.

<http://hometown.aol.com/newjerseymea/register.html>

Water Quality Service Learning Program - Online

Join the California Water Boards for free training on their new water quality service learning program, November 15, 2005. This student-centered science investigation is designed to teach specific California Content Standards for grades four through six. Raise a student's awareness of polluted runoff and how it impacts them, local waterways, and the environment. Teachers will guide students through a campus audit to learn how water flows through school grounds collecting pollutants as it leads to other waterways. Students will learn how to reduce water pollutants through community-oriented projects. Lesson plans and teacher support are posted on the new website,

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

<http://www4.scoe.net/ims/webcasts/cf/index.cfm>

EDUCATIONAL RESOURCES

4empowerment

4empowerment is dedicated to making a positive difference in the lives of individuals, communities, and our environment. They offer e-learning programs that provide the means for educators, communities, organizations, and companies to research, learn, collaborate, and take action on issues affecting their world. For example, *Project Connect* provides students impacted by Hurricanes Katrina and Rita the opportunity to express their voice and stay connected with friends and family. The *Cyberways and Waterways Program* offers a bi-lingual supplemental science program that integrates technology into the classroom through inquiry-based, authentic learning activities and lesson plans facilitated through the 4empowerment website.

<http://www.4empowerment.com/en/index.ihtml>

Caribbean Coral Reef Ecosystem Monitoring Program

Scientists from the National Centers for Coastal Ocean Sciences Biogeography Program recently publicized an online database that serves ecosystem monitoring data gathered over the last five years from field studies in southwestern Puerto Rico and the U.S. Virgin Islands. You can download the entire dataset or query the database to provide specialized reports on species biomass, richness, abundance, and diversity. In addition to the data products, a second querying function was developed to serve both fish and habitat photos that have been collected over time. Besides the database, the website includes monitoring protocols, habitat maps, and links to some audiovisual materials.

http://biogeo.nos.noaa.gov/projects/reef_fish/

Children's Environmental Literature Bibliography

The Children's Environmental Literature Bibliography is available online courtesy of Wisconsin's Project WILD, Project Learning Tree, and Project WET programs. This popular resource was initially developed in 1997 and has been revised as a reading list for early childhood providers and to help teacher's meet the requirements of the No Child Left Behind legislation. The bibliography contains more than 400 books, over 300 of them new additions. For easy teacher reference, the books are grouped according to topic area (including Aquatic Ecosystems and the Water Cycle and Fish) and age group. <http://www.dnr.state.wi.us/org/caer/ce/eeek/teacher/childlit.htm>

Earth Gauge

Earth Gauge is a weekly environmental information service from the National Environmental Education and Training Foundation currently provided to TV meteorologists in seven states (GA, OH, MI, FL, RI, CA, and DC). Earth Gauge is designed to increase the amount of environmental information used on-air and make it easy to explain the environmental implications of weather events. Because of the connections between weather and environmental sciences and the popularity of the weather report, this offers a unique opportunity to bridge the environmental information gap by conveying important environmental information that is relevant to people's daily lives.

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

Earth Revealed

Annenberg Media presents *Earth Revealed*, a video instructional series for high school and college which explores earth's continuing evolution, scientific theories, and human impacts. Upcoming broadcasts include weathering and soils; running water; waves, beaches and coasts, and more.

<http://www.learner.org/channel/series78.html>

eBird

The Cornell Lab of Ornithology and the National Audubon Society offer eBird, which provides a simple way for you to keep track of the birds you see anywhere in North America. Users can retrieve information on personal bird observations, access the entire historical database to find out what other eBirders are reporting from across North America, and more. . Scientists can use the cumulative eBird database to know more about the distributions and movement patterns of birds across the continent.

<http://www.ebird.org/content/>

Environmental Ethics Curriculum

Environmental Ethics: Examining Your Connection to the Environment and Your Community, a new curriculum geared towards middle and high school, is now available. The curriculum has been endorsed by educational and environmental organizations including the National Wildlife Federation, the National Environmental Education and Training Foundation, and others. It includes teacher and student guides aligned to national education standards and is organized by major topics: environmental ethics, air, water, forests, wildlife and minerals. The curriculum guides are free to download. A companion video series is available for a nominal cost.

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

Project FLOW: Fisheries Learning on the Web

Project FLOW is a Great Lakes curriculum series developed by Michigan Sea Grant with support from the Great Lakes Fishery Trust. The online lessons are designed to help educators teach students about the Great Lakes through hands-on activities. The 15 downloadable lessons cover the aquatic food web and invasive species, water quantity and quality, and Great Lakes fisheries. Each lesson is aligned with state and national curriculum standards for science and social studies.

www.projectflow.us

Florida Keys and Field Guides

The Florida Department of Environmental Protection, Bureau of Laboratories offers an online list of downloadable identification keys and field guides to a wide variety of organisms found in the state. These include amphipods, clams, leeches, snails, ferns, venomous snakes, and more. The web page also links to checklists of amphibians and reptiles and to a checklist of vascular plants of north central Florida. While the guides offer technical information, just reading the lists might keep your students entertained and intrigued enough to look through them and learn.

<http://www.dep.state.fl.us/labs/cgi-bin/sbio/keys.asp>

Global Warming Facts and Our Future

The Marian Koshland Science Museum explores the latest scientific information from the National Academy of Sciences about global warming. Learn about the greenhouse effect, the carbon cycle, and past changes in our climate. See predicted changes and how they could affect sea levels, agriculture, and ecosystems. The website also presents options for reducing CO2 emissions.

<http://www.koshlandscience.org/exhibitgcc/index.jsp>

Global Positioning System Guide

The NOAA Pacific Services Center offers an informational guide, *Where Am I Going? A Manager's Guide to GPS*. Meant for the coastal and marine resource management community, it provides a good introduction to the Global Positioning System (GPS), illustrates the benefits of GPS, and discusses considerations for purchasing GPS equipment.

<http://www.csc.noaa.gov/psc/prodsvc.html>

Guide to Good Environmental Management Practices for Marinas in Mexico

The Guide to Good Environmental Management Practices for Marinas in Mexico is the result of an open collaboration among a diverse group of people, organizations, and institutions who are committed to the idea that environmental protection is a key function of marina operations. This initiative identifies and supports the voluntary adoption of good marina management practices through preparing codes of conduct, technical manuals, pilot projects, and training. The guidelines were prepared with the assistance of a working group of experts and marina professionals in the business, government, and non-profit sectors. The result offers an innovative approach to fostering sustainable development by reflecting a consensus view of what the marina industry can and wants to do. This will be aided by building a robust network of researchers, investors, and associates whose commitment over the long term will make possible a transition to sustainable uses for coastal resources. Providing information and advice on good practices in siting and operations of marinas to public officials will also aid in avoiding the negative environmental impacts and enhance the flow of economic benefits of

recreational boating to local communities. The guidelines are downloadable in English and Spanish.

<http://www.crc.uri.edu/mxgmp/>

Hawaii's Outer Kingdom

National Geographic Interactive Edition features *Hawaii's Outer Kingdom*, with an excerpt of the National Geographic article, a brief photo gallery, links to additional websites for more information, and beautiful video and a narrated video clip by the researchers and photographers of the article.

<http://www7.nationalgeographic.com/ngm/0510/feature4/index.html>

Illustrated Coral Glossary

The Coral Reef Information System (CoRIS) Glossary of Scientific and Technical Terminology contains nearly 3,000 technical terms, with their definitions, explanations, and illustrative materials where appropriate. The aim of the CoRIS glossary is to help people to understand the complex language and terminology of coral reef ecosystem science when accessing any part of the database, including the scientific and technical literature and data. The glossary contains terms concerned with ecology, biogeography, morphology, mapping, fisheries, oceanography, geosciences, conservation programs, and much more. The glossary is organized alphabetically and is also available as a downloadable document. Literature sources are listed on the References Page.

<http://www.coris.noaa.gov/glossary/welcome.html>

Journey South with the Whooping Cranes

Follow the flight of whooping cranes south to the Gulf Coast wetlands. Lessons, activities, and information are available on the Journey North website. The Journey North program airs on the Learner Channel on November 3, 2005.

<http://learner.org/redirect/november/jnorth90.html>

Kentucky PRIDE

Kentucky PRIDE (Personal Responsibility in a Desirable Environment) unites volunteers with government resources to clean the region's waterways, end illegal trash dumps, and promote environmental awareness and education. PRIDE's educational projects include Project Clean Streams, a campaign to teach students about the importance of good water quality; and Water Quality Assessment and Stream Monitoring training for teachers with free curriculum and water monitoring equipment to be used with their students.

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

Marine Ornithology

Marine Ornithology presents peer reviewed contributions concerning international seabird science and conservation. *Marine Ornithology* is supported and published biannually through a partnership between global seabird societies including the African Seabird Group, the Pacific Seabird Group, the Australasian Seabird Group, the Seabird Group (U.K.), and the Dutch Seabird Group. A reference site, it offers complete, downloadable peer reviewed articles on seabirds, covering such subjects as population dynamics, marine debris issues, diseases, and more.

<http://www.marineornithology.org/index.html>

The Marsh Project

Environmental Concern, Inc. has expanded their schoolyard habitat curriculum into the Marsh Project, a comprehensive approach to schoolyard wetland habitats design, construction and utilization that involves the entire school – administration, faculty, facility managers, and most importantly students. Environmental Concern coordinates and facilitates the effort. The five-step process includes teacher training; habitat design; on-going technical support and guidance; wetland construction; and AZA certification as a wildlife friendly schoolyard. The WOW! And POW! curriculum guides for wetlands instruction and construction are used, and Environmental Concern's wetlands experts are involved throughout the project for guidance.

http://www.wetland.org/EC%20main/edu_marsh.htm

National Fire Plan

The National Fire Plan was developed with the intent of actively responding to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future. The plan addresses five key points: firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability. The website also includes success story case studies, a state-by-state project list, and a link to Firewise, with community education materials. There are many fire related lesson plans available on the web. Check out the Mammoth Cave National Park's Fire Curriculum for grades 4-8. It can be easily adapted to your region.

www.fireplan.gov

<http://www.nps.gov/macaca/FireCurriculum.pdf>

National Service-Learning Partnership

National Service-Learning Partnership is a national network of members dedicated to advancing service-learning as a core part of every young person's education. Service-learning is a teaching method that engages young people in solving problems within their schools and communities as part of their academic studies or other type of intentional learning activity. The website includes background information, lesson plans, professional development opportunities, and a professional services directory that offers information about service-learning organizations.

<http://www.service-learningpartnership.org/>

Nonformal Environmental Education Programs: Guidelines for Excellence

The National Project for Excellence in Environmental Education, an initiative of the North American Association for Environmental Educators, has published *Nonformal Environmental Education Programs: Guidelines for Excellence*. The guidelines provide a tool that can be used to ensure a firm foundation for the development of new programs or to trigger improvements in existing ones. The downloadable guidelines will help you design and implement effective nonformal environmental education programs.

www.naaee.org/npeee

NSF Special Reports

The National Science Foundation has developed a number of special reports that showcase the latest research done under their general direction. Many of these features deal directly with a host of issues of interest to this group, including predicting seasonal weather, disasters, seafloor science, the chemistry of water, and more.

http://www.nsf.gov/news/special_reports/

Oceans Alive!

The Museum of Science, Boston and the Science Learning Network offer the Oceans Alive website. It features information about our water planet, including physical features and the water cycle; currents, waves, and tides; life in the sea; and an introduction to scientific exploration. Additional links to resources are included.

<http://www.mos.org/oceans/>

Our Wetlands, Our World

Our Wetlands, Our World, a high school activity guide, is available for downloading from the California Coastal Commission. While site specific to Upper Newport Bay, it is easily adaptable to your region. The guide provides information and activities to help high school students learn about the importance of wetlands and to become involved in the restoration of these valuable, unique environments. California educators can also participate in upcoming professional development orientation workshops.

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

SciLinks about Squids

SciLinks are normally available to NSTA members only, but links to a variety of marine animal information have been made available to all for a brief period of time. Browse through the links for animal diversity, mollusks, squid, pond scum, and more. Be sure to look at "Octopus Walking".

[http://www.scilinks.org/retrieve_outside.asp?sl=74456611444466\\$7445773311\\$9911551066](http://www.scilinks.org/retrieve_outside.asp?sl=74456611444466$7445773311$9911551066)

SCUBA Scouts

The SCUBA Scouts were started in 2001 and provide project leadership for the Coral Reef Evaluation and Monitoring Program in the Tampa Bay, Gulf of Mexico, and Florida Keys. The SCUBA Scouts train in advanced SCUBA and scientific diving to observe underwater phenomena relating to artificial coral reefs and to acquire the scientific data. They receive training and mentorship from Florida Fish and Wildlife Research Institute and other professional research scientists and graduate students conducting research as part of the National Marine Sanctuary Program. Over 300 science collection and training dives have been led and conducted by nearly young divers between the ages of 12 and 18. They have conducted research on Tequesta reefs and in the Florida Keys as well as natural springs and rivers throughout Florida. Other marine research activities include REEF fish count database surveys, coral transplant operations on damaged reefs, coral disease surveys and species documentation as well as coral reef monitoring throughout the Keys.

<http://scubascouts.org/>

Sea Turtle Migration-Tracking Education Program

The Sea Turtle Migration-Tracking Education Program is an educational service of the Sea Turtle Survival League, part of the non-profit Caribbean Conservation Corporation. Through this website, you can view maps showing the migratory movements of endangered sea turtles being tracked by satellite. In addition, the site offers a downloadable Educator's Guide, background information about sea turtles; tips on how to make the best use the program; and classroom activities.

<http://www.ccturtle.org/sat1.htm>

SeaTrek

SeaTrek brings multimedia science programming right into the classroom using videoconferencing and Internet technology. These programs feature scientists working in the field with interviews showing how their interests led them to their careers. Any school that has a videoconference system can connect with Mote to receive programs. The programs include Sharks: Devouring the Myths; Mammals, Mammoths, Manatees; Sea Turtles: Amazing Reptiles of the Sea; Coral Reefs, Coastal Habitats, Ocean Fisheries; and more. Each program is supported by a free, downloadable, companion curriculum, aligned with National and Sunshine State Science Education Standards, hosted on the Mote website.

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

Spanish Galleon Trail

The Florida Bureau of Archaeological Research, Underwater Archaeology Program offers their latest website addition, the *1733 Spanish Galleon Trail*, which interprets the sites of thirteen 1733 Spanish shipwrecks along the Florida Keys as destinations for heritage, recreational, and ecological tourism. The ships of the 1733 Spanish Plate Fleet wrecked in a variety of environments along 80 miles of the Florida Keys. The larger ships grounded on the outer reef and now rest in clear water surrounded by coral. Smaller merchantmen managed to get inside the reef but, damaged and leaking, sank in the darker water of Hawk Channel where visibility is often limited. A few of the smallest vessels were nearly pulled through the channels between islands and foundered where currents run swift and treacherous. Descriptions presented here of each shipwreck include its environment, water depth, site plan, photos, and more.

<http://dhr.dos.state.fl.us/archaeology/underwater/galleontrail/>

Star Thrower Educational Multimedia

This website from Dr. Bill Bushing includes still images of marine life, archived newspaper columns about marine life with full color images, links to a number of scientific publications on kelp forest ecology research, and more. The images of marine life on the site may be used by teachers and students in non-commercial educational materials, reports and on web sites if they include a copyright notice (e.g. ©2005 Dr. Bill Bushing).

<http://www.starthrower.org/home.htm>

TsunamiReady

Tsunami-ready is a program sponsored by the National Oceanic and Atmospheric Administration and the National Weather Service. It sets minimum guidelines for a community to be awarded tsunami-ready recognition. The requirements include establishing an emergency operations center; having the capability to provide tsunami warnings using sirens and local media; developing a tsunami hazard plan and community awareness program; and the ability to receive tsunami warnings from the weather service. While no funding is attached to the program, participation will improve a community's chances of receiving state and federal funds. The NOAA website includes tsunami and earthquake safety advice, contact information, and more.

For an example of a TsunamiReady community workshop, check out the South Slough National Estuarine Research Reserve website. The website hosts a workshop agenda and evaluations. It includes suggestions for creating a family disaster kit, regional evacuation routes, and a press release describing the workshop.

<http://egov.oregon.gov/DSL/SSNERR/resourcelibrary.shtml>

<http://www.tsunamiready.noaa.gov/>

INITIATIVES and MISCELLANEOUS

America Recycles Day

America Recycles Day is November 15, 2005. The America Recycles Day website offers background information through *Recycling 101*, a contest (entry deadline is America Recycles Day), and an easy-to-use search function for recycling activities in your state. For example, a Trash to Treasure Kid's Fair in Culver City, California on November 19, 2005 includes a recycled art competition (see <http://www.ecostation.org/>). <http://www.americarecyclesday.org/home.html>

DonorsChoose

Teachers ask. People choose. Students learn. DonorsChoose is a simple way to provide students in need with resources that our public school often lacks. Here, teachers submit ideas for materials or experiences that their students need to learn. Individuals can choose a project and make it a classroom reality.

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

Fort McHenry Field Day

The National Aquarium in Baltimore, in partnership with the National Park Service and others, announces a community volunteer field day on December 3, 2005 at Fort McHenry, Maryland. Volunteers will work together to remove debris, maintain trails, restore habitat, record wildlife observations, and more. Space is limited, so please register in advance.

Contact the Conservation Department at conserve@aqua.org or (410) 659-4274.

Green Media Toolshed

Green Media Toolshed is a nonprofit organization that works with the environmental community to provide online media and communications tools. Tools include access to a comprehensive, searchable online media database that features over 350,000 domestic media contacts and more than 150,000 international media contacts. The media database also features email and fax outreach abilities and custom pitching tips to help groups build relationships with reporters. Other assets include over 6,000 photos that members can use in their media work as well as on their own website, a fully branded online press room, a community calendar and several web enhancement tools that allow groups to manage campaigns and volunteers in a secure, online area. Yearly membership fees are a sliding scale based on budget and scope of outreach.

<http://www.greenmediatoolshed.org/aboutus/goalsandstrategies.acs>

Marine Job Postings

If you have a job related to marine or coastal environmental issues for any career background (e.g. educators, oceanographers, marine biologists, anthropologists, lawyers, engineers), please email it to: oar.sg.knauss.joblist@noaa.gov. This listserv is distributed to over 300 people in these fields (many who are Knauss Sea Grant Fellowship alumni) and numerous marine and coastal societies and universities.

Contact Nikola Garber at Nikola.Garber@noaa.gov

Teacher to Teacher Initiative

The U.S. Department of Education's Teacher-to-Teacher Initiative is helping teachers strengthen their skills by increasing their opportunities to engage in frequent professional development. It provides convenient access to free professional development activities and keeps teachers informed of new policies and best practices vital to their craft. The initiative offers online digital workshops, an e-learning website, and teacher-to-teacher workshops. The next round of Teacher-to-Teacher summer workshops begins in Atlanta, Georgia in 2006.

<http://www.ed.gov/teachers/how/tools/initiative/index.html>