

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

JANUARY 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.

To subscribe to this distribution list, send a blank message to requests@willamette.nos.noaa.gov with "subscribe infoexchange" in the subject field. Similarly, to remove yourself from the list, send the subject "unsubscribe infoexchange".

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

Rapid Assessment Protocols For Small Vessel Groundings

This paper discusses assessing impacts from small vessel groundings in coral or seagrass habitats. A series of 2-3 page protocols has been developed to provide guidance on collection of key ephemeral data after small vessel groundings, particularly where resources are limited and access is difficult. Contact Jacqui Michel for a copy of the paper.

Contact jmichel@researchplanning.com

The Science of Marine Reserves

The updated *Science of Marine Reserves* is offered by the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO). The booklet is now presented in

two English versions: a U.S. version and an international version. These resources provide the latest scientific information about reserves in an understandable and accessible format. They are designed to be used by natural resource managers, government officials, scientists, and the interested public.

<http://www.piscoweb.org/outreach/pubs/reserves>

State of Deep Coral Ecosystems

The State of Deep Coral Ecosystems of the United States, a peer-reviewed report prepared by NOAA's Coral Reef Conservation Program, documents the biology, distribution, and types of deep-sea corals on the continental shelves and slopes of the U.S. including its U.S. Caribbean and Pacific territories. The report may be downloaded from the website; it is also available in print or on a CD.

<http://www.nmfs.noaa.gov/habitat/dce.html>

JOURNAL OF THE MONTH

Rising Tides

Rising Tides is a new oceanographic education journal for high school science teachers and students. It has been developed as part of the CoastalObs Project, and is a collaboration between NOAA and NASA, along with other partners. The journal focuses on the biological aspects of coastal oceanography with an emphasis on research technology. It offers a collection of cutting-edge research articles as well as classroom and laboratory activities, scientist interviews, further reading, and links to oceanography topics. An advanced section is designed to challenge gifted students. The journal may be downloaded by section or in its entirety.

<http://phytoplankton.gsfc.nasa.gov/risingtides/>

INITIATIVES OF THE YEAR, WEBSITES OF THE MONTH

International Polar Year Resources

The International Polar Year (IPY) is a coordinated effort by the international science and education communities to learn more about the polar regions and how they impact the rest of the world, including people. The campaign runs for two years, from March 2007 to March 2009, to allow for two field seasons of Arctic and Antarctic research.

Here are a few of the websites with materials or links to educational resources:

Earth & Sky International Polar Year Resources

On this website, Earth & Sky editors have compiled radio programs, podcasts, and a photo gallery with content related to polar science to help celebrate the International Polar Year. They will continue to update this website with relevant interviews and sessions with polar scientists.

<http://www.earthsky.org/article/international-polar-year>

IPY in the Classroom

In support of the International Polar Year, NASA scientists are participating in field expeditions to Earth's polar areas and conducting additional research focused on the poles of Earth and other planets and moons. This web page offers convenient links to a variety of NASA and NASA-sponsored projects with IPY-related classroom activities and resources.

http://www.nasa.gov/audience/foreducators/k-4/features/F_IPY_in_the_Classroom.html

Landsat Image Mosaic of Antarctica

A team of researchers from NASA, the U.S. Geological Survey, the National Science Foundation, and the British Antarctic Survey has created a new map of Antarctica, Landsat Image Mosaic of Antarctica (LIMA), which offers geographically accurate, true-color, high-resolution views. The map was created from more than a thousand images from three years of Landsat satellite observations. The website includes links to a flying tour of the McMurdo area, educational materials, eight downloadable versions of the mosaic, and more.

<http://lima.nasa.gov>

International Year of the Reef

The International Coral Reef Initiative (ICRI) designated 2008 as the International Year of the Reef (IYOR 2008). The initiative hopes to strengthen awareness about the ecological, economic, social, and cultural value of coral reefs and associated ecosystems; improve understanding of the critical threats to coral reefs and generate both practical and innovative solutions to reduce these threats; and generate urgent action at all levels to develop and implement effective management strategies for conservation and sustainable use of these ecosystems. The website includes background information about coral reefs, a calendar, news, links to educational materials, and much more. And check out these other coral materials.

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

Coral Discovery Kits

NOAA offers downloadable lesson plans to teach about corals at the high school level. These lessons focus on the biology of coral reefs, the benefits they provide to humans, major threats to coral reefs today, and how satellites are used to monitor and maintain the health of reefs. The resources include an online tutorial, an educational roadmap to resources, and formal lesson plans.

<http://oceanservice.noaa.gov/education/kits/corals/welcome.html>

ICRI IYOR Symposium

The International Coral Reef Initiative will be hosting a symposium on January 25, 2008, showcasing IYOR activities taking place around the world, allowing participants to meet, share, brainstorm, and coordinate their IYOR plans.

<http://www.iyor.org/news/>

Magic Porthole Coral Reef Playing Cards

In advance of the International Year of the Reef, Horizon International has launched its Magic Porthole coral reef playing cards with photographic mirror-images of coral reef creatures. One version of the cards has all the same backs so they can be used to play card games, while a second version has backs with information about the species so they can be used for memory games and flash cards. The website includes a variety of resources, news, and more.

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

Peppy's Coral Kingdom

This children's book is aimed at educating students in Grades 1-5 about threats to coral reefs, with a heavy emphasis on coral disease and anthropogenic stressors. The book was created by a Nancy Lucas in consultation with scientists from the Marine Resources

Center at Fort Johnson. The website includes links to several example pages, along with ordering information.

<http://www.thirdfloorcell.com/peppy.html>

Reefs on the Web

Reefs on the Web is a collection of links to websites on coral reefs and reef-related resources as a result of research conducted for an article on coral reef websites. Still under construction, it currently hosts listings of publications, governmental and non-government sponsored websites, and a section on monitoring and surveys. While the Communication & Education link still remains to be populated, this website offers a quick source of useful information for students and teachers.

<http://barbiemail.googlepages.com/home>

MESSAGE FROM THE BRIDGE

Don't Even Sink about It

The Bridge features a series of over 65 Data Analysis Teaching Activities (DATAs) that can be used to supplement curriculum material in almost every discipline of science. The Bridge's newest DATA, *Don't Even Sink about It*, can be used in not only an oceanography class, but also chemistry and physics classrooms. The DATA utilizes two components of ocean observing systems, AUVs and buoys, to explore density and how it affects the buoyancy of different objects. *Don't Even Sink about It* also uses the M/V Ocean Hope, formerly the Hansa Carrier, to discuss ship characteristics and the effects of salinity and water temperature on commercial shipping. The Ocean Hope is most well-known for losing part of its cargo of Nike sneakers, which became entrained in the world's ocean currents accidentally forming one of the most famous, and largest, oceanography experiments the world has ever known. Students will evaluate archived and real-time water depth data from the Chesapeake Bay, as well as density plots of continental shelf water off of New Jersey to determine if commercial cargo ships can safely pass without running aground or other major shipping incidents.

http://www.marine-ed.org/bridge/index_archive1207.html

REQUESTS

Seeking Curriculum Writers and Reviewers

The San Luis Obispo County Office of Education continues to seek Statements of Qualifications from experienced writers of 1st-12th grade instructional materials, curricula, and/or textbooks to work on the development of the curriculum for California's Education and the Environment Initiative. The deadline for submission is January 7, 2008. They also continue to seek curriculum reviewers.

[http://www.creec.org/stories/storyReader\\$198](http://www.creec.org/stories/storyReader$198)

Internet Scout Project Survey for Social Sciences

Internet Scout Project offers a variety of research and development projects related to connecting educators to authoritative and helpful online resources. The newest area of interest centers on online resources for teaching and research in the Social Sciences. They have created a brief online survey about what you feel is most important as they move forward with this project; opinions from those whose primary field of study or teaching is in the Social Sciences are critical.

<http://scout.wisc.edu/socscisurvey/>

GRANTS AND OPPORTUNITIES

California Sea Grant Program Development Proposals

The California Sea Grant Program Development Proposal program is designed to provide California Sea Grant management with the ability to support short-term activities that represent innovative approaches to addressing marine-resource issues without the long-term lag time inherent in the proposal cycle. Typically, these activities can be categorized as either quick responses to unexpected events or program-development efforts. Projects should emphasize innovative research on ocean and coastal resources and processes with a well-developed rationale and a strong potential for broad application. University-based research that has broad national or international application is appropriate. An educational and/or outreach component of research projects is encouraged, and investigators who have not received prior research support from California Sea Grant are particularly encouraged to apply. The deadline for application is January 29, 2008.

http://www.csgc.ucsd.edu/PROPOSAL/RAPID_RESP/SpecialPDProposal2008.html

Canon Envirothon

The Canon Envirothon, July 28-August 3, 2008 in Flagstaff, Arizona, is an annual competition in which winning state and provincial teams compete for recognition and scholarships by demonstrating their knowledge of environmental science and natural resource management. The 2008 topic is Recreational Impacts on Natural Resources, with the learning objective for students to analyze long term and short term environmental, social, and economic factors relative to recreational impacts upon natural resources and their management. Check the website for links to your state competitions and materials.

<http://www.envirothon.org/competition/Canon2008/index.php>

Community Action Grants

The American Association of University Women Educational Foundation advances educational and professional opportunities for women. Topic areas are unrestricted, but should include a clearly defined activity that promotes education and equity for women and girls. One-year Community Action Grants provide seed money for new projects. Two-year grants provide start-up funds for longer-term programs that address the particular needs of the community and develop girls' sense of efficacy through leadership or advocacy opportunities. Grant projects must have direct public impact, be nonpartisan, and take place within the United States or its territories. Hurry – the application deadline is January 15, 2008.

http://www.aauw.org/education/fga/fellowships_grants/community_action.cfm

Coral Reef Conservation Fund

The National Fish and Wildlife Foundation is accepting proposals to the Coral Reef Conservation Fund for projects that build public-private partnerships to reduce and prevent degradation of coral reefs. Projects should target key threats to reef habitats in coastal watersheds, reef, or associated marine habitats. The deadline for pre-proposal application is February 20, 2008.

<http://www.nfwf.org/coralreef>

Coral Reef Undersea Research Projects Funding

NOAA's Undersea Research Center at the University of North Carolina Wilmington requests pre-proposals for coral reef and reef-related ocean acidification research off the southeast U.S. and Gulf of Mexico in 2008 and 2009. Proposals may be written for one or two years of direct science support and should contain an *in situ* field component. All proposals are strongly encouraged to involve industry, address how data will be disseminated to user communities, and need to have broad scientific and societal impact. Hurry – the pre-proposal deadline is January 14, 2008.

http://www.uncw.edu/nurc/pdf/2008_RFP_ARB_CRCP.pdf

The Diversity Project

The Diversity Project is an NSF funded research opportunity for under-represented minority undergraduate students. In collaboration with Boston University, Old Dominion University, and Duke University, students will integrate hands-on field research in Indonesia, Malaysia, or the Philippines, with cutting edge genetic research. Selected students are fully funded for both living and travel expenses. The deadline for application is January 15, 2008.

<http://people.bu.edu/pbarber/TDP.htm>

DuPont Challenge

The DuPont Challenge offers students in grades 7-12 the chance to write an essay on a scientific discovery, theory, event, or technological application that has captured their interest. The deadline for entry is January 28, 2008.

<http://www.thechallenge.dupont.com/>

Earth Expeditions

The Cincinnati Zoo and Botanical Garden, in partnership with Miami University's Project Dragonfly, offers Earth Expeditions, tuition-free graduate courses open to educators from all disciplines and settings. Different courses and field expeditions are offered and offer inquiry-driven, community-based learning for the benefit of ecological communities, student achievement, and global understanding. The deadline for application is January 28, 2008.

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

Environmental Education and Training Partnership Scholarships

Environmental Education and Training Partnership (EETAP) offers scholarships to community and state environmental education leaders who are interested in taking either the *Applied Environmental Education Program Evaluation* or *Fundamentals of Environmental Education* online course. Scholarship applications will be reviewed upon receipt and considered until the course enrollment limit is reached. Hurry – the deadlines for application are early January, 2008.

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

Funding Opportunity for Coral Reef Research: Hawai'i Undersea Research Laboratory

The Hawai'i Undersea Research Laboratory, a NOAA Undersea Research Program Center, in partnership with the NOAA Coral Reef Conservation Program, is soliciting pre-proposals for coral reef research for FY2009 and FY2010. This funding opportunity is for one- to two-year targeted research projects that address one or more of the following threats facing U.S. coral reefs: fishing, pollution, coastal uses (including invasive

species), climate change, and extreme events. The deadline for submission of pre-proposals is January 18, 2008.

http://www.soest.hawaii.edu/HURL/HURL-CRCP_RFP_2008_Final.pdf

MATE International ROV Competition

Teaming up with Ridge 2000, the Marine Advanced Technology Education (MATE) Center and the Marine Technology Society's Remotely Operated Vehicles (ROV) Committee are organizing the 2008 MATE International ROV Competition. The event, *Diving to the Deep: Uncovering the Mysteries of Mid-Ocean Ridges*, hosted at Scripps Institution of Oceanography and the University of California in San Diego, California in June 2008, focuses on hydrothermal vents found at mid-ocean ridges and the technologies used to study these deep-sea environments. Check the website for complete details.

http://marinetech.org/rov_competition/2008/

National Fishing and Boating Education Grants

The purpose of the Physh Ed National Fishing and Boating Education Grants initiative is to enable public, private, or charter schools to incorporate quality standards-based fishing and/or boating program activities into their physical education curriculum. The Future Fisherman Foundation invites physical education teachers to apply for these funds to incorporate fishing and boating activities into their classrooms as well as to work collaboratively with other subject areas to integrate fishing and boating activities into the broader school curriculum. The deadline for application is January 21, 2008.

http://futurefisherman.org/programs/pegrants_application.php

Science Immersion Workshop for Journalists

The Metcalf Institute for Marine and Environmental Reporting offers fellowships for early-to mid-career journalists to attend a week-long science immersion workshop at the University of Rhode Island's Graduate School of Oceanography on June 8-13, 2008. Each fellowship provides tuition, room and board, and limited travel reimbursement. The deadline for application is January 28, 2008.

<http://www.metcalfinstitute.org/fellowships/sciences.htm>

Smaller Learning Communities Program

The Smaller Learning Communities program awards discretionary grants to local educational agencies to support the implementation of activities to improve student academic achievement in large public high schools with enrollments of 1,000 or more students. Examples include structures such as freshman academies, multi-grade academies organized around career interests or other themes, personalization strategies such as mentoring programs, and more. The deadline for the Notice of Intent to Apply is January 10, 2008.

<http://www.ed.gov/legislation/FedRegister/announcements/2007-4/112607a.html>

Wet Your Appetite - Cuisine for Critters Recipe Contest

World Wetlands Day is February 2, 2008. To celebrate, Environmental Concern Inc. introduces a creative writing competition with a twist. Students in grades 8 -12 in the U.S. and its territories are challenged to write a creative wetland recipe. The recipe will be written for a specific wetland organism living in one of the twenty-two U.S. Ramsar Wetlands of International Importance sites. Twenty-two winners will be chosen, one for each wetland, and their recipes compiled into the 1st annual *Wet Your Appetite*:

Cuisine for Critters Cookbook. Winners will receive two copies of the book, one to keep and one to share with their school. The deadline for application is February 8, 2008.

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

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

American Museum of Natural History's Graduate Science Courses – Online

Deepen your knowledge with Seminars on Science courses from the American Museum of Natural History. Spring Session 1 courses (including The Ocean System, Evolution, Earth: Inside and Out, and more) run January 28-March 9, 2008; the deadline for registration is January 14, 2008. Spring 2 courses (including The Ocean System, The Diversity of Fishes, and more) run March 24-May 4, 2008; the registration deadline is March 10, 2008.

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

Coral Reefs: Bacterial Worlds - Florida

Researchers and educators from the Smithsonian Marine Station at Fort Pierce and Mote Marine Laboratory have joined efforts to create two free professional development workshops for teachers:

- January 19, 2008, Fort Pierce, Florida
- February 16, 2008, Sarasota, Florida

Workshop registration includes an activity guide, PowerPoint presentations, a classroom poster, and more.

Contact Laura Diederick at diederick@si.edu

Education Programs For Youth; School's Out – West Virginia

Education Programs For Youth; School's Out (OUT8162), is offered March 3-5, 2008, by the U.S. Fish and Wildlife Service at the National Conservation Training Center in Shepherdstown, West Virginia. The course presents participants with the elements for designing outdoor programs for youth (e.g. after school, day and residential camps, and weekend programs) in a non-formal setting, such as wildlife refuges and parks. It offers opportunities to create or modify existing resource-focused youth programs that help to connect youth with nature while addressing site missions and/or management objectives. Participants will use a program design model to work on their own youth program during the course, then complete and implement it as a required post-course assignment. The deadline for registration is January 21, 2008.

Contact Georgia Jeppesen at georgia_jeppesen@fws.gov

<http://training.fws.gov/courses.html>

Girl Scouts Climate Change Leadership Institute

Girl Scouts USA is sponsoring a Global Climate Change Leadership Institute for girls entering grades 9-11, August 8-14, 2008 in Briarcliff Manor, New York. The total cost is being kept to a minimum to encourage participation by a diverse group of girls that might not otherwise have the opportunity to attend a destination or travel like this. (Information will be posted on the STUDIO 2B website shortly). The deadline for application is March 3, 2008.

http://www.studio2b.org/escape/destinations/default_02.asp

Contact Kate Pickle at kpickle@girlscouts.org

Joint Southeast Regional Workshop National Association for Interpretation & Association for Living History, Farm, and Agricultural Museums Conference

The theme of this conference, February 19-22, 2008 in Charleston, South Carolina, is *Telling Your Story, Providing Experiences and Making Memories*. Sessions include The Secret Lives of Seashells, Stormwater and You, and other topics of interest to this list. http://www.alhfam.org/index.php?cat_id=231

Learning Ocean Science through Ocean Exploration - California

SeaWorld will host a Learning Ocean Science through Ocean Exploration professional development workshop for grade 6-12 science teachers, January 26, 2008 in San Diego, California, with a follow-up workshop on March 1, 2008. Registration is required and space is limited. Participants will receive the curriculum with CD-ROM's, certificates of participation, and more. The deadline for registration is January 11, 2008. Contact Adrienne Marriott at creec9a@hotmail.com

Learning Ocean Science through Ocean Exploration – South Carolina

A NOAA Learning Ocean Science through Ocean Exploration Professional Development Follow-Up Workshop will be held February 2, 2008 in Charleston, South Carolina. This workshop is for teachers who participated in the September 2007 introductory workshop and other interested science educators of grades 6-12. Join educators during this follow-up session with the curriculum developed by NOAA's Office of Ocean Exploration. Pre-registration is required and space is limited. The deadline for registration is January 18, 2008; priority will be given until January 4, 2008, to those who participated in the introductory workshop in September, 2007. Contact Brian Thill at BThill@scaquarium.org

National Marine Educators Association Conference

NMEA 2008: One World, One Water, July 21-24, 2008 in Savannah, Georgia, will team cutting-edge research with innovative education. Plunge into The International Year of the Reef, ocean literacy, fisheries, and southeastern estuarine ecosystems. The program committee seeks a diverse group of presenters that includes researchers, educators, resource managers, and others to share ideas, programs, and current trends in marine and aquatic education and research. The deadline for submission is February 1, 2008. <http://nmeaweb.org/savannah2008/index.htm>

North American Association for Environmental Education Conference

The 37th North American Association for Environmental Education (NAAEE) Annual Conference, October 15–18, 2008 in Wichita, Kansas, has released its call for proposals. Conference strands include Conservation Education; Energy Education; Environmental Justice, Environmental Health, and Climate Change; and more. The deadline for submission is January 15, 2008. <http://www.naaee.org/conference/2008-conference>

Restore America's Estuaries Conference

Restore America's Estuaries has announced its call for dedicated sessions, presentations, and posters for the 4th National Conference on Coastal and Estuarine Habitat Restoration, *Creating Solutions through Collaborative Partnerships*, October 11-15, 2008 in Providence, Rhode Island. The conference program will address all aspects of coastal and estuarine habitat restoration, in all habitats and at all scales. The deadline for proposals is January 31, 2008.

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

Sea Grant Law and Policy Journal Inaugural Symposium - Mississippi

The National Sea Grant Law center is developing a Sea Grant Law and Policy Journal. It will provide a forum for the timely discussion and exploration of legal topics of relevance to the Sea Grant network of extension agents, researchers, coastal managers and users, and local decision-makers. An inaugural symposium, March 25-26, 2008 in Oxford, Mississippi, from which the Law Center will invite papers for the publication in June, will focus on coastal resiliency. Relevant topics might include land use planning, insurance, emergency management, risk analysis, and mitigation.

<http://www.olemiss.edu/orgs/SGLC/National/SGLPJ/SGLPJ.htm>

Teach at the Beach – New Jersey

The New Jersey Marine Education Association will offer its annual Teach at the Beach, May 16, 2008 in Pomona, New Jersey. The workshop is designed to provide educators of all grades and disciplines with ideas, resources, lesson plans, and programs dedicated to utilizing marine and aquatic environments as a background to classroom teaching. The deadline for registration is April 15, 2008; the event is limited to the first 125 registrants.

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

Volunteers and Invasive Plants: Learning and Lending a Hand

This e-learning website from the U.S. Fish and Wildlife Service provides science-based, introductory information about invasive plants. The five self-study modules address the purpose and history of the National Wildlife Refuge System, how volunteers help in invasive plant management, how refuges manage invasive plants, and tips for community outreach. The program is part of a larger U.S. Fish & Wildlife Service program in conjunction with partners to engage volunteers in managing invasive species on National Wildlife Refuges.

<http://www.fws.gov/invasives/volunteersTrainingModule/index.html>

EDUCATIONAL RESOURCES

Avian Index

Teachers, students, and others can find useful resources through the Avian Index, from Environment for the Americas. Curriculum, workshops, books, speaker's lists, and more, are available through this easy-to-search database.

http://www.birdiq.com/learn/Resource_Dir/index.php#

Coastal Land Cover and Change Maps

Coastal land cover and change maps, circa 1996-2001, are available for the conterminous U.S. from NOAA's Coastal Services Center. In addition, land cover updates for 2006 and their corresponding change maps are available for the Gulf Coast region and parts of the Northeast.

<http://www.csc.noaa.gov/crs/lca/locateftp.html>

Data Explorer

Online access to NOAA's National Ocean Service spatial data collections, such as nautical charts, coastal maps, environmental monitoring records, and more, is available

through this website. The material can be searched by geographic area, keyword, or topic.

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

Environmental Health Resources

National Environmental Education Week is continuing to expand their online curricula library and has just added links to many lessons on environmental health. Curricula and lesson plans from many sources are easily accessible from this website. Materials range from water and air quality through the spread of infectious diseases to societal issues and much more. While on the website, check out the expanded listing of lessons and other materials in the library, including lessons on climate change and energy, green reading, newsletters, and more.

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

Estuaries SciGuide

The Estuaries SciGuide was developed collaboratively by NOAA's National Estuarine Research Reserve System (NERRS) and NSTA. As a strictly on-line resource, there are no printed materials and each guide can be accessed from any computer with internet access. The Estuaries SciGuide can help your students discover why estuarine environments are so unique; how they interact with the surrounding environment; the effects humans and estuaries have on each other; and more. The SciGuide can save you time by providing resources that have been pre-evaluated and aligned to the National Science Education Standards. The Estuaries SciGuide is free; registration is required.

http://learningcenter.nsta.org/product_detail.aspx?id=10.2505/5/SG-21

Explorations Into Water Teaching Curriculum

Rain Bird's *Explorations Into Water Teaching Curriculum* is an educational tool providing teachers and parents with lesson plans and related course work geared to students in grades 3-6. This downloadable elementary curriculum motivates students to think about the part each person plays and the actions they can take in using and conserving water, through hands-on outdoor activities and classroom demonstrations.

<http://www.rainbird.com/iuow/community/curriculum.htm>

Galveston Bay Information Center Resources

The Galveston Bay Information Center and the Galveston Bay Estuary Program have teamed up to provide resources you can use to teach the science of the bay area in your classroom. The website offers curriculum focusing on oceans, estuaries, and bays. The Resources for Teachers webpage contains free resource materials for use in your classroom including links to locally designed curriculum, classroom presentations, links to local field trip opportunities, and more. Additional links bring you to science sites of interest and other websites. You can also order free hard copies of books, videos, curricula, and other resources.

<http://gbic.tamug.edu/>

Hidden Depths: Atlas of the Oceans

Explore the oceans through unique photographs from the ocean depths and state-of-the-art maps, with expert contribution from NOAA and the Smithsonian Institute. Previously unpublished 3D views and images of the oceans developed by NOAA will help reveal the amazing structure of the oceans. The impact the ocean has on the land we live is evident from the topical issues presented, including hurricanes, pollution, tsunamis, and

sea level rise. Man's history with the sea is also outlined from old sea charts and wrecks to the latest in submersible technology, satellite imagery and echo sounding. Check out the YouTube overview.

<http://uk.youtube.com/watch?v=4SkSI1m-By8>

ide@s

The Interactive Dialogue With Educators Across the State (ide@s) website from the University of Wisconsin Extension program offers educator resources that have been aligned to the state education standards and are readily available on the Internet. The materials are identified by grade, subject, and standard, and can be searched for by key word. The website brings together teacher-reviewed and tested lessons, interactive tools, video, and other resources which can be used in the classroom or for curriculum development purposes. The subject list includes environmental education, science, service-learning, and more.

<http://www.ideas.wisconsin.edu/>

The Island Institute

Since 1983, the Island Institute has employed a wide range of individuals, including photographers, artists, policy experts, and others, all in the name of maintaining the viability of the fifteen year-round island communities in the Gulf of Maine. Website resources include information about fellowship opportunities, working waterfront initiatives, links to initiatives of interest, educational resources, and much more.

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

Papahānaumokuākea Expedition 2007

From August through September of 2007, an expedition with archaeologists from the Maritime Heritage Program, the Pacific Islands Region, and the Papahānaumokuākea Marine National Monument contributed to our understanding of maritime heritage resources in the Northwestern Hawaiian Islands. Scientists conducted non-invasive surveys on shipwreck sites at Midway Atoll, Pearl and Hermes Atoll, and French Frigate Shoals in the Papahānaumokuākea Marine National Monument. The archaeology team's goal was to locate new wreck sites and continue the documentation of known sites. The website offers information about the mission and the wrecks.

<http://sanctuaries.noaa.gov/maritime/welcome.html>

Publications Catalog – University of Delaware Sea Grant

This online catalog is designed to inform browsers of the wealth of publications and videos available from the University of Delaware Sea Grant College Program. Categories include Children's Activities, Hot Topic Fact Sheets, On-Line Expeditions, Videos, and more. Some are available for free downloading, others may be ordered.

<http://www.ocean.udel.edu/seagrant/publications/pubcatalog.html>

Science Animations

Created by staff at North Harris Community College, this website offers animations in a number of topics, including plants, ecology, geology, and more. Each section contains links to animations from various institutions.

<http://science.nhmccd.edu/biol/animatio.htm#ecology>

SECORE Website

Focusing on sexual reproduction of reefbuilding corals around the world, SECORE (SExual COral REproduction) provides tools for live stock management in public

aquaria. They promote cooperation between top scientists in coral reproduction biology and related fields.

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

Worksheet Library

This website features printable worksheets for teachers of grades K-6. The worksheets are aligned to National Standards and can be searched by grade level, subject, or standards. Some worksheets are free for downloading; others are available to members.

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

INITIATIVES, JOURNALS, and MORE

Christmas Bird Count

The 108th Christmas Bird Count, December 14, 2007-January 5, 2008, continues the tradition of counting birds across the Americas. Check the website for historical results, how to get involved, photo galleries, and much more.

<http://www.audubon.org/bird/cbc/>

Coastal Roots

Coastal Roots: Seedling Nursery Program for Wetland Restoration is a program of the Louisiana State University. Students from 4th grade through high school in south Louisiana are taking part in this project by establishing wetland plant nurseries at their schools. Students grow native plant seedlings that they will plant in a coastal habitat restoration project in south Louisiana. The primary goal of the program is to assist students in cultivating an attitude of stewardship toward our natural resources and to provide an active learning situation in which they can explore a variety of strategies for sustaining our coastal habitats.

<http://coastalroots.lsu.edu/>

Focus The Nation "Teach-in"

Focus the Nation, a national teach-in on January 31, 2008, is designed to engage faculty and students across the country, with a focus on global warming solutions, for participants to get educated, organize, engage civic leaders, vote on solutions, and act. The website includes links to educational materials and more.

<http://www.focusthenation.org/nationalteachin.php>

LIFE Program

Learning in Florida's Environment (LIFE) is an initiative to establish a series of field-based, environmental-science, education programs around Florida. Each program will represent a partnership between the Florida Department of Environmental Protection and a local school district. The goal of each program site is increased student achievement and teacher professional development in science. The website offers news, contact information, and more.

<http://www.dep.state.fl.us/secretary/ed/>

Oceanus

Oceanus, the oceanography magazine produced by Woods Hole Oceanographic Institution (WHOI), continues to publish a free version on-line. The magazine explores ocean research, engineering, and education at WHOI. You can read the current issue or

search retrieve articles by topic, including ocean policy, resources, sound in the ocean, and much more. The website includes information about research, interviews, fast-loading multimedia, and more.

<http://oceanusmag.whoi.edu>

San Francisco Ocean Film Festival

San Francisco Ocean Film Festival is celebrating its 5th anniversary, February 2-3, 2008 in San Francisco, California. It is dedicated to using film to enhance the public's appreciation for the ocean's multifaceted importance to our planet. By screening a wide variety of films from all over the world, the audience is able to experience works that are largely unavailable to the general public. Participants will walk away entertained, better educated, and motivated to actively participate in ocean conservation.

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

Whale Watch Weekend and Intertidal Life Festival

The National Park Service is hosting the 21st Annual Whale Watch Weekend and Intertidal Life Festival at Cabrillo National Monument, January 19-20, 2008. Participants can explore tidepools and observe sea anemones, sea hares, and more; witness the return migration of Pacific gray whales en route from Alaskan feeding waters to their Baja California, Mexico breeding lagoons; and listen as authors, researchers, and educators discuss the latest information concerning Pacific gray whales and intertidal life. Enjoy additional activities, including the film *On the Edge of Land and Sea: the Tidepools of Cabrillo National Monument*, a puppet show, and more.

<http://www.nps.gov/cabr/>