



NATIONAL MARINE PROTECTED AREAS CENTER INFORMATION EXCHANGE FOR MARINE EDUCATORS

August 2004

This update is provided as a service 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 try to mention that you learned about it in the MPA Information Exchange.

The information included here has been compiled from many different sources, including SeaSpan, NSTA Express, edinfo at FREE, EE-NEWS@NAAEE, CREEC, EEinGEORGIA, Scuttlebutt, and others. We have attempted to verify web addresses, but make no guarantee of accuracy. 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".

Contact the MPA Center's education coordinator directly at phyllis.dermer@noaa.gov, or by phone at (865) 932-5074, to discuss further enhancements or to contribute information for future issues.

MPA FACTS

The Great Barrier Reef Marine Park

The Great Barrier Reef is widely acclaimed as one of the world's great natural treasures. In 1981, the Great Barrier Reef gained international recognition through its inscription on the World Heritage List. The Great Barrier Reef World Heritage Area is the world's largest, and one of only a few World Heritage Areas that satisfy all four natural World Heritage Criteria (represent major stages of earth's history, represent significant ecological and biological evolutionary processes, contain superlative natural phenomena or beauty, and contain significant natural habitats for conservation). On July 1 2004, the Australian Commonwealth Government implemented a new zoning plan for the Great Barrier Reef which established a comprehensive network of protected areas covering more than 33 percent of the Great Barrier Reef Marine Park.

The charter of the Great Barrier Reef Marine Park Authority's Education Unit is to deliver education programs and activities about the Great Barrier Reef Marine Park and World Heritage Area throughout Australia. To meet this charter, the Education Unit has developed a range of programs and educational activities, including ReefEd, a dynamic educational website featuring a visual library, online curriculum units, the Great Barrier

Reef Explorer, and a page designed specifically for student inquiry. For more information, check out <http://www.reefed.edu.au/>.

For more information on the marine park, ReefEd, and ReefHQ, check out <http://www.gbrmpa.gov.au/> .

Notable Addition to MPA Library

Involving the Public: Legal Requirements for Public Participation

This reference guide highlights legislative mandates related to public participation in environmental decision-making. The guide is intended to help coastal and marine managers in designing and conducting a participatory process.

NOAA National MPA Center Training and Technical Assistance Institute. Involving the Public: Legal Requirements for Public Participation. Charleston, South Carolina, 2004.

<http://www.mpa.gov/redirect.html?newURL=http://www.csc.noaa.gov/mpa/RegulatoryRequirements.pdf> .

Main MPA Library URL:

http://www2.mpa.gov/mpa/mpaservices/virtual_library/virtual_library.lasso .

PROGRAM OF THE MONTH

Weather and Climate Data at the National Climatic Data Center (NCDC)

NCDC is the world's largest active archive of weather data, producing numerous climate publications and responding to data requests from all over the world. NCDC operates the World Data Center-A for Meteorology, in Asheville, North Carolina, and the World Data Center for Paleoclimatology, in Boulder, Colorado.

The National Climatic Data Center provides access to all of the on-line data at no cost to users with .k12.xx.us or .edu domains, with limits as to how much data may be downloaded in each session. For information on free access, go to

<http://ols.ncdc.noaa.gov/phase3/freeaccess.html> .

Free products include, but are not limited to:

- Monthly weather data summaries for a range of sites
- Historical weather maps
- National Weather Service bulletins or observations (raw format)
- Hourly Precipitation data for a range of sites
- NEXRAD data in both map form and in raw data
- Archived GOES satellite imagery
- CO-Op weather station raw data

If you are an academic user and have problems accessing the NCDC site, go to <http://www.ncdc.noaa.gov/servlets/whoami> . It will show you how the host sees your system. If it doesn't show one of the domains mentioned above, contact your system administrator to resolve the problem. For more information about the main website, check out <http://www.ncdc.noaa.gov/oa/ncdc.html> .

WEBSITE OF THE MONTH

Discovery Kits from NOAA's National Ocean Service

NOAA's National Ocean Service (NOS) Discovery Kits describe the scientific principles underlying NOS's major programs. Each Discovery Kit includes

- An *On-line Tutorial*, introducing each science subject with tutorials that incorporate photographs, videos, illustrations, and animations to enhance concepts in the text
- A *Roadmap to Resources*, guiding educators and students to NOAA data and information sources
- A set of *Lesson Plans*, correlated to National Science Education Standards, targeted to educators at the high school level, combining information from the tutorials with data offerings from the roadmaps.

Each module of the kit is designed to work together, but comprehensive enough to be used on its own. Three kits are currently available: *Corals, Tides & Water Levels*, and *Geodesy/Global Positioning*. Additional Kits are in development, including *Estuaries, Non-point Source Pollution*, and *Marine Archaeology*.

The *Coral Discovery Kit* presents an overview of the biology and threats to coral reefs. Topics in the tutorial include coral reproduction and growth forms, where coral reefs are found, threats to coral reefs, and more. Animations portray coral reef growth patterns, and video footage shows rarely observed coral spawning in the Gulf of Mexico. Lesson plans focus on the benefits of coral reefs to humans, the major threats to coral reefs today, and how satellites are used to monitor and maintain the health of these fragile ecosystems.

The *Tides & Water Levels Discovery Kit* presents an overview of the complex systems that govern the movement of tides and water levels. Topics in the tutorial include what causes tides, major tidal variations and their frequencies, tidal measurement, and data collection and transmission. Animations demonstrate the effects of the sun, moon, and earth on tidal variations. The Roadmap directs readers to real-time tidal and current data from more than 3,000 monitoring stations across the United States and its territories.

The *Geodesy/Global Positioning Discovery Kit* presents an overview of the history, essential elements, and modern methods of geodesy, the science of measuring and monitoring the size and shape of the Earth and the location of points on its surface. Topics in the tutorial include the history of geodesy; the figure of the earth; the national spatial reference system; and the global positioning system (GPS). Lesson Plans focus on the importance of geodesy and its practical applications, including how a datum of reference points can be used to describe a location and how geodesy is used to measure movement in the Earth's crust from seismic activity.

For more information, check out <http://oceanservice.noaa.gov/education> .

REQUESTS

Looking for Marine Statistical Analysis Lab Activity

Kim Raccio is looking for recommendations for a good statistical analysis lab or lab activity for high school students. She is interested in labs that introduce Chi-squared

analysis that can be completed in 1-2 class periods. If you have a good example, please contact Kim at kraccio@hamdenhall.org .

Looking for Society of Conservation Biology Writer/Volunteers

The Austral and Neotropical America Section of the Society for Conservation Biology (SCB) would like to encourage Latin American conservation biologists to publish in *Conservation Biology*, by creating a database with SCB members willing to assist authors with their manuscripts by improving clarity, grammar, and refining the writing into idiomatic English appropriate for publication. This will not be a translation service. They seek people with good English and Spanish, Portuguese, or French writing skills. If interested in helping out as a volunteer, please contact Dr. Miguel Ángel Vásquez at biodiversidad1@ecociencia.org.

GRANTS AND OPPORTUNITIES

Braitmayer Foundation Grants

The Braitmayer Foundation funds a broad range of K-12 education programs, with particular interest in curricular reform initiatives and professional development opportunities for teachers. A special focus is on encouraging people of high ability and diverse background to enter and remain in K-12 teaching. All K-12 schools in the United States, as well as independent NGOs with an education focus, are eligible. Application deadline is November 15, 2004. For more information, check out <http://www.braitmayerfoundation.org/guid.htm> .

Brimstone Award for Applied Storytelling

The National Storytelling Network announces the first annual Brimstone Award for Applied Storytelling. Eligible projects include environmental education, community, organizational or institutional programs. This award focuses on the transformational properties of storytelling, and aims to increase understanding of the ways storytelling can promote change in individuals and communities. The grant will support a model storytelling project that is service-oriented, based in a community or organization, and to some extent replicable in other places and situations. Preliminary proposals are due by e-mail by September 13, 2004 and full proposals by October 25, 2004. For more information, check out <http://www.storynet.org/grant/brimstone/index.htm> .

Captain Planet Foundation Grants

The Captain Planet Foundation provides grants to school and community groups to support hands-on environmental projects. The objective of the Foundation is to encourage innovative programs that empower children and youth around the world to work individually and collectively to solve environmental problems in their neighborhoods and communities. Proposal submissions are accepted at any time during the year, and are reviewed the last day of March, June, September, and December. For more information, check out www.captainplanetfdn.org .

Coastal Art Contest for Georgia 5th Graders

The Georgia Conservancy's annual Coastal Art Contest is open to all 5th grade students in Georgia. The 2004 theme is *Making Waves to Protect the Coast*. Judges are looking for bright, colorful designs that show why we should protect Georgia's coast. Submission deadline is September 14, 2004. For more information, including lesson plans and support, check out <http://eeingeorgia.org/page.aspx?s=12934.0.0.4863> .

Coral Reef Conservation Grant

The NOAA Coral Reef Conservation Grant Program provides matching grants of financial assistance for coral reef conservation projects. The mission of the program is to support effective management and sound science to preserve, sustain and restore valuable coral reef ecosystems. The program solicits proposals under six funding categories, including monitoring and conservation. Pre-application deadline is December 10, 2004. For more information, check out <http://www.coralreef.noaa.gov/grants.html> .

Dow Chemical Company General Fund Grants

The Dow Chemical Company supports initiatives concentrating on math and science, teacher training, and parental involvement for K-12 school districts. Grant proposals should focus on giving K-12 students science and engineering experiences, giving teachers the training to provide these experiences, and fostering parental and community involvement. Special attention is given to school districts around communities where Dow is located. For more information, check out http://www.dow.com/about/corp/social/gen_fund.htm .

Environmental Education Evaluation Tool - Request for Proposal from Recreational Boating and Fishing Foundation

The Recreational Boating and Fishing Foundation seeks a contractor to develop a detailed environmental education evaluation tool, in guidebook format, for aquatic educators. The guidebook should allow practitioners to identify the most appropriate methodologies to evaluate their programs based on their program goals and objectives, and should include specific examples of methodologies and survey instruments. This tool will be the newest addition to the suite of Best Practices in Boating, Fishing, and Aquatic Stewardship Education tools (see below). For more information, contact Jen Levin at Jlevin@rbff.org .

Francis P. Collea Teacher Achievement Awards for California K-12 Teachers

The California Postsecondary Education Commission, in cooperation with the University of Southern California, is soliciting proposals for the Francis P. Collea Teacher Achievement Award Program, which provides opportunities for teams of teachers to implement a discipline-specific classroom or school program in their schools. Application deadline is October 15, 2004. For more information, check out <http://www.usc.edu/dept/education/TAAP/index.html> .

Grant Writing Tips

EEinGeorgia has put together a listing of websites with grant writing tips including

- Eisenhower National Clearinghouse (with more useful grant links)
<http://www.enc.org/professional/funding/writing/>
- Basic Elements of Grant Writing <http://www.cpb.org/grants/grantwriting.html>
- Writing Winning Grant Proposals <http://www.polarisgrantscentral.net/tips.html>
- Proposals Writing Short Course (English and Spanish)
<http://fdncenter.org/learn/shortcourse/prop1.html>

Greenworks! Grants

This grant opportunity from GreenWorks! for Project Learning Tree-trained educators supports community action and service-learning projects. GreenWorks! projects should

address an environmental issue and involve students from pre-school to high school in hands-on community action. The program encourages participants to form partnerships with groups, businesses, or organizations within their communities to help implement and sustain their projects. The deadline for submission is September 30, 2004. For more information, check out http://www.plt.org/cms/pages/21_22_21.html .

Keep America Beautiful National Awards

Keep America Beautiful, the community improvement organization, invites you to compete for national recognition by honoring your organization's efforts to deliver a more beautiful, cleaner and improved environment. Eligible activities include Litter Prevention, Beautification, Community Improvement, and Waste Reduction. Application deadline is September 7, 2004. The organization has other awards programs, also. For more information, check out <http://www.kab.org/> .

Linking Girls to the Land Council Grants

Grants are available for Girl Scout councils to develop collaborative projects with federal or state natural resource agencies. These projects will offer Girl Scouts opportunities to participate in environmental education, volunteer conservation service, or outdoor skills development. They will also serve as opportunities for girls to learn about environmental, science and natural resource career options. Application deadline is October 15, 2004. For more information, check out www.epa.gov/linkinggirls .

NSTA Grants Listing

The National Science Teachers Association has prepared a list of funding and grant sources for teachers and students. A quick abstract:

- GrantsAlert <http://www.grantsalert.com/education.cfm>
- School Funding Services Grant of the Week <http://www.schoolfundingservices.org/newsViewer.asp?docId=2546>
- FastWEB (scholarships) <http://www.fastweb.com>
- Fundsnet Services Online <http://www.fundsnet.com>
- Funding Center at eSchool News Online <http://www.eschoolnews.com/resources/funding>
- Philanthropy News Digest—K–12 Funding Opportunities <http://fdncenter.org/funders>
- School Grants <http://www.schoolgrants.org>
- Department of Education Forecast of Funding <http://www.ed.gov/fund/grant/find/edlite-forecast.html>
- School Funding Center <http://www.schoolfundingcenter.com/index.asp>

For more information, check out

http://science.nsta.org/nstaexpress/nstaexpress_2004_06_28_extra.htm .

ReSource Award for Sustainable Watershed Management

The annual Swiss Re ReSource Award is granted to one or several projects selected by an international jury for leadership in implementing the principles of sustainability in watershed management. NGOs, private, scientific or public institutions and similar bodies, singly or jointly, are invited to participate. The granting parties are interested in projects which seek to contribute to raising awareness of the ecological, social and economic significance of water sources and watersheds. Preference will be given to those projects which demonstrate innovative preventive measures of protecting water resources and which involve local communities and/or regional institutions. Such

projects should be based on transferable concepts and thus enable sustained efforts to be made to protect the quality and availability of drinking water in other locations. The deadline for submission is August 31, 2004. For more information, check out www.swissre.com/resource .

Technology & Learning's Portraits of Learning Photo Contest

The theme of this year's *Technology & Learning* magazine's annual digital photography contest for K-12 students is "My Personal Universe." Teachers may submit classroom and/or individual photos or students may submit their own individual photo taken between January 1 and September 20, 2004. The entry deadline is September 20, 2004. For more information, check out <http://techlearning.com/> .

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Shipboard Educator, August–October 2004

Schooner Sound Learning is a non-profit environmental education program dedicated to teaching K-adult about Long Island Sound and its resources. They seek a shipboard educator for the months of August-October, 2004, with a possible extension into November. S/he will be responsible for managing all shipboard educational programs aboard the *S/V Quinnipiack*. Programs include all school and youth groups, the Seafaring Scientists programs, and out-of-port events. For more information, contact educator@schoonersoundlearning.org .

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Applied Environmental Education Program Evaluation Online Course

A new 9-week online course, "Applied Environmental Education Program Evaluation," will be offered through the University of Wisconsin-Stevens Point from October 11-December 13, 2004. The course was developed as a cooperative effort between the Environmental Education and Training Partnership (EETAP) and the U.S. Fish and Wildlife Service (FWS) 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 apply skills in designing evaluation tools such as surveys, observation forms, and interview and focus group guides. There are scholarship monies available for the course. For more information, check out <http://www.uwsp.edu/natres/rwilke/eetap/> .

The Aquatic Resources Education Association Conference

The 2004 conference of the Aquatic Resources Education Association (AREA) will be held September 18-22, 2004, Duck Key, Florida. AREA fosters fishery and aquatic resource educational programs and services. Association members are employed either by state or federal fish, wildlife and natural resource agencies, universities involved in resource education, the fishing tackle industry, and other partners. Funding for these programs often comes from the Sport Fish Restoration Trust fund, administered by the United States Fish and Wildlife Service. Information about the 2006 conference is also available for those who plan ahead. For more information, check out <http://www.aneanet.org/> .

Coastal Zone '05 – Call for Abstracts

Coastal Zone '05, *Balancing on the Edge*, will be held July 18-21, 2005, in New Orleans, Louisiana. The 14th installment of the biennial conference series focuses on balancing the issues and interests of land and sea. Conference tracks include

- Coastal Ecosystem Health
- Communities and Culture
- Hazards
- Resource Management (including education and training)

Submission deadline is October 4, 2004. For more information, check out <http://www.csc.noaa.gov/cz/> .

Coral Reef Task Force Meeting

The U.S. Coral Reef Task Force Meeting will be held September 14-15, 2004 in Miami Beach, Florida, in conjunction with the meeting of the South Florida Ecosystem Restoration Task Force. There will also be a series of seminars and workshops on September 11 and September 13, sponsored by the Task Force. Workshop topics include sustainable SCUBA diving and snorkeling, connecting coral reef science and management, methods for assessing and restoring damaged reef structures, and a teacher training for South Florida educators. The meeting is free and open to the public and exhibit space is available. Meeting attendees and exhibitors should register in advance at <http://www.ces.fau.edu/taskforce> . For more information on the meeting agenda, lodging, and exhibit space, check out the Task Force website at <http://www.coralreef.gov>.

Discovering the Mysteries of Whales Lecture – California

The Center for Ocean Sciences Education Excellence-West (COSEE-West) invites you to learn about whales, October 13, 2004, Los Angeles, California. The guest speaker's research focuses on the evolution, natural history, anatomy and conservation of whales, dolphins and porpoises. K-12 teachers pre-registered for the post-lecture session may receive documentation for professional development hours upon request and may be paid a stipend. Additional content information and classroom materials will be provided in the teachers' session. For more information, contact Peggy Hamner at 310/206-8247 or phamner@ucla.edu .

Estuaries to the Abyss Expedition Professional Development Institute – South Carolina

Become a NOAA Ocean Exploration Educator by participating in a Professional Development Institute, August 14, 2004, Charleston, South Carolina, for the upcoming Estuaries to the Abyss Expedition. The Estuaries to the Abyss Expedition, from August 20-September 1, 2004, focuses on using a variety of tools to map and describe the unique bottom features, faunas, and ecology of the Florida-Hatteras Slope, the Charleston Bump, and Blake Escarpment off the Southeastern coast of the U.S. Scientists will explore faunal change and human impact along a gradient that includes increasing depth and distance from land. In addition to using the Harbor Branch Oceanographic Institution's research vessel Seward Johnson and the Sea Link submersible, scientists will also use dredges, nets and associated oceanographic and photodocumentation equipment to record the findings. For more information, check out <http://oceanexplorer.noaa.gov/explorations/04etta/welcome.html> .

Learning Ocean Science through Ocean Exploration Professional Development Workshop - Alaska

The Alaska Sealife Center, Seward, Alaska, is hosting an Ocean Exploration workshop, August 14, 2004. Teachers will get copies of the OE curriculum and will be connected by phone with scientists on an on-going expedition in Alaskan waters during the workshop. Use inquiry-based exercises in biology, earth, or marine science courses to connect your students to the excitement of NOAA Ocean Exploration as they travel from the Galapagos Rift to the Arctic Ocean, from Alaskan seamounts to those in the Hawaiian Islands. The workshop is open to informal educators and agency educators. There are some funds to support travel to Seward. For more information, contact Lea Paddock at Lea_Paddock@alaskasealife.org.

POW! The Planning of Wetlands Facilitator Training

Build a wetland from start to finish, August 25-27, 2004. Through a grant from The Waterfowl Festival, Environmental Concern will be constructing a demonstration wetland at their facility in St. Michaels, Maryland. Rather than building the wetland as an end unto itself, it will be incorporated into a 3-day POW! Facilitator's Training for those interested in working with schools and communities to build schoolyard habitats as areas for outdoor education. Half scholarships are available through the Waterfowl Festival Grant for the workshop. For more information, check out www.wetland.org.

Seafood Summit

The Seafood Choices Alliance will host its annual Seafood Summit, Chicago, Illinois, October 26-28, 2004. The summit, co-hosted by Shedd Aquarium, will bring together key players in the sustainable seafood movement for informal discussions, information sharing, and strategic planning. For more information, check out www.seafoodchoices.com/summit.

Technology Integration On-Line Courses

The George Lucas Educational Foundation provides a series of teaching modules developed by professional development experts and education faculty. For an understanding of effective technology integration, explore the modules focused on using technology in mathematics, science, language arts, and social studies curricula. An example integrates a digital microscope into pre-K through 5th grade science instruction. For more information, check out www.glef.org/foundation/courseware.php.

Urban Ecotourism Conference - Online

Join this on-line conference, September 20-30, 2004, to review urban conservation and environmental education and alternatives to urban sprawl. Look at the role cities play as gateway communities to parks and protected areas and review how urban tourism can contribute to conservation. Participants will brainstorm alternatives to urban sprawl and examine how urban tourism can be more ecological. Be prepared to share lessons learned – what to repeat and what to avoid. For more information, check out <http://www.planeta.com/ecotravel/tour/urban.html>.

EDUCATIONAL RESOURCES

Alaska Islands & Ocean Visitor Center

The Center, in Homer, Alaska, recently celebrated its grand opening. This interpretive, educational, & research facility is a partnership of the Alaska Maritime National Wildlife

Refuge and the Kachemak Bay Research Reserve, dedicated to the understanding and conservation of the marine environment. The facility offers visitors a window into the world of seabirds and other marine animals, as well as their islands and ocean habitats. For more information, check out <http://www.islandsandocean.org/index.html> .

Best Practices in Boating, Fishing, and Aquatic Stewardship Education Tools

The Recreational Boating and Fishing Foundation developed Best Practices in Boating, Fishing, and Aquatic Stewardship Education, as well as accompanying tools to facilitate implementation. The document includes guidelines in program development, research, and evaluation and is supported by 11 papers on topics ranging from effective minority outreach to program evaluation. For more information, check out <http://www.rbff.org/educational/bestpractices.cfm> .

BirdLife International Database

You can find full accounts of all globally threatened birds on this web database. The accounts include a distribution map and an illustration of each bird. There is a concise account and extended report which gives all of the data held in the BirdLife World Bird Database. For more information, check out http://www.birdlife.org/datazone/search/species_search.html .

Climate, Community and Biodiversity Project Design Standards

The downloadable draft of the Climate, Community & Biodiversity (CCB) Project Design Standards is designed to identify proposed projects likely to deliver measurable climate, biodiversity and community benefits. The standards are primarily designed for land-use carbon markets but can also apply for sustainable development and biodiversity projects more broadly. For more information about the CCB Standards and the alliance behind the first draft, check out www.climate-standards.org . For the pdf, check out http://www.climate-standards.org/images/pdf/ccb_project_design_standards_v1.0.pdf .

Cold-Water Coral Reefs

This report by the United Nations Environment Program World Conservation Monitoring Center (UNEP-WCMC) examines the biology, ecology, and conservation of cold-water coral reefs. Far less known than the coral reefs in warm, shallow waters of the tropics and subtropics, these cold-water reefs are found throughout the world's seas: in fjords, along the edge of the continental shelf, and around offshore submarine banks and seamounts. The report provides an overview of these reefs' biology, ecology, distribution, threats, and status. For more information, check out <http://www.ourplanet.com/wcmc/pdfs/Cold-waterCoralReefs.pdf> .

Coral Reef Education and Outreach Library

This international library is an online catalogue of tools and publications that can be used to increase awareness about coral reefs. The library has been built by organizations from around the world that have contributed their materials to help raise awareness of the need to protect coral reefs. Each entry in the library contains a brief description of the publication and information on how to obtain it. Some publications are available to download directly from the library. In the library you will find descriptions of: brochures, books, posters, fact sheets, materials from marine parks, teacher's guides, videos and other coral reef educational materials. To access the library, go to <http://library.coralreef.org>.

The Coral Reef Alliance (CORAL) manages the Coral Reef Education and Outreach Library as part of the International Coral Reef Information Network (ICRIN), the communications arm of the International Coral Reef Action Network. ICRIN provides internet resources for coral reef conservationists and houses a royalty-free Photobank and the International Directory of Coral Reef Organizations. For more information, check out <http://www.coralreef.org>.

Coral Reef Conservation Program Web Site

The NOAA Coral Reef Conservation Program (CRCP) has just launched a redesigned and updated program website. The site contains several key sections including: News and Highlights, Funding Opportunities, and Outreach and Education, as well as background information about the program, subscription information for the program newsletter and contacts for media inquiries. This is a companion site to NOAA's Coral Reef Information System, <http://www.coris.noaa.gov>, which provides searchable access to data and information derived from CRCP activities as well as extensive background information and essays on coral reefs. For more information, check out the new website at <http://www.coralreef.noaa.gov>.

Creating Coastal Stewardship Through Science Curriculum Guides

The Point Reyes National Seashore website hosts a wide range of educational materials. Of special note are seven curricular guides created by teachers for teachers to provide middle school students with the opportunity to observe natural processes at Point Reyes National Seashore, to encourage a greater interest in science and environmental stewardship. Each guide is designed to facilitate a hands-on learning experience using science and the environment. Easily identifiable and observable natural resources, including Pacific gray whales, northern elephant seals, and the San Andreas Fault, are highlighted. All activities are linked to the California and National Science Standards. For more information, check out http://www.nps.gov/pore/educate_curriculum.htm.

EDGES: Using GIS to Experience Sanctuaries

Channel Islands, Florida Keys, Gray's Reef and Stellwagen Bank National Marine Sanctuaries have teamed up to utilize real scientific data in educational materials for teachers and students to explore America's special ocean areas. Exploring Data using Geographic Information Systems to Experience Sanctuaries (EDGES) lessons include

- Underwater Treasures – explore the locations and characteristics of the thirteen national marine sanctuaries while reviewing basic Cartesian map skills
- Submerged Lands – compare the bathymetry and width of the continental shelf of the Pacific and Atlantic oceans
- Monitoring from Afar – explore how we study oceans using satellites, stationary buoys, and drifting buoys

For more information, and for professional development opportunities around the country, contact Sanctuary.Education@noaa.gov.

Exploring Climate Change Impacts Curriculum Guide

The Union of Concerned Scientists has produced a *Global Warming: Early Warning Signs* map and teaching materials geared towards students and teachers in grades 9-12, exploring the local and regional consequences of global climate change.. Individual exercises are adaptable to different grade levels and engage students in an exploration

of the impacts of global climate change on ecosystems and natural resources. For more information, check out <http://www.climatehotmap.org/> .

Geospatial One-Stop Portal

The Geospatial One-Stop portal helps the public and government agencies access geospatial data and other information from one centralized location. NOAA manages the *Oceans and Estuaries* and *Locations and Geodetic Networks* channels on the portal, and co-manages the *Atmospheric and Climate* channel. For more information, check out <http://www.geodata.gov/gos> .

Gulf of Alaska with NOAA Ocean Exploration

The Gulf of Alaska 2004 Expedition from NOAA's Ocean Exploration, July 30-August 23, 2004, will explore five large seamounts located approximately 200 miles off the Alaska coast. Scientists will focus their investigations on seafloor aging and characterization, deep-sea coral genetics, and community ecology. The explorations will be conducted on board the Woods Hole Oceanographic Institution's research vessel Atlantis, using the manned-submersible Alvin to document their findings. The website hosts essays and lesson plans that tie directly to the expedition, developed for students in Grades 5-12. Logs, Ask an Explorer, videos and more will be added during the expedition. Alaskan teachers: check out the workshop, above. For more information, check out <http://oceanexplorer.noaa.gov/explorations/04alaska/welcome.html> .

Herpetology of Porto Rico

The classic herpetology publication of Leonhard Stejneger is available for downloading online. This book was published in 1902 and it includes drawings of the species as well as new species descriptions. It's a great resource to compare and contrast with some of the available herpetology web offerings. For more information, check out <http://www.coqui.pr.com/herppr/> .

High Tides Documentary

The Weather Channel will premiere its new documentary titled, *High Tides*, August 15, 2004 at 8:30pm and 11:30pm. The 30-minute special is part of the cable channel's Forecast Earth series. The documentary covers land subsidence and storm surges along the Louisiana coast, flooding along the Maryland coast after Hurricane Isabel, and the use of air gap and tide station technology in Tampa Bay. It also tracks the historical use of tide predictions and how modern technology provided by NOAA has improved our understanding of tides.

Hofstra University Marine Lab Handbooks

St Ann, Jamaica-based Hofstra University Marine Lab has developed an array of handbooks available free upon request. The handbooks vary in length and complexity, and have been written to help with lectures, field trips, student projects, and tourist activities. For more information, check out http://people.hofstra.edu/faculty/john_f_morrissey/HUML/Handbooks.htm .

JASON Expedition: Disappearing Wetlands

This year's mission for the JASON expedition to the bayous of Louisiana is to better understand what wetlands are, why they are disappearing, and how to best manage these ecosystems in Louisiana, in your neighborhood, and around the world. As students model the work of real researchers, they will gain proficiency in a range of core

disciplines, including: math, technology, geography, history, language arts, and life, physical, earth and space sciences. For more information, check out www.jason.org .

Journey South Begins

The Journey South begins August 15, 2004. Get ready to track migration across the Northern Hemisphere. Investigate seasonal change, geography, and much more. Students share their own field observations with classmates across North America and analyze data from other classroom and professional scientists. Each study features standards-based lessons and challenges, weekly migration updates, interactive maps, connections with field scientists, and more. They also provide guidance for helping students conduct local observations and inquiries and fit them into a global context. For more information as fall progresses, check out <http://www.learner.org/jnorth/fall2004/index.html> .

Lessons Learned About Collaboration

The Eisenhower Mathematics and Science Consortia and Clearinghouse Network is producing a series of Lessons Learned reports from its 12 years of work in mathematics and science reform. The first publication, *What Experience Has Taught Us About Collaboration*, is completed and available for free. The report looks at how collaboration is characterized in the literature, presents strategies and steps for building effective collaborative relationships, and explores several "deep structure" issues that represent barriers to collaborative work. To download the report, check out <http://www.mathsciencenetwork.org/collaboration.pdf> .

Marine Aquarium Council Certification and Standards

The Marine Aquarium Council's mission is to conserve coral reefs and other marine ecosystems by creating standards and certification for those engaged in the collection and care of ornamental marine life from reef to aquarium. It offers certification, training, outreach, and more. For more information, check out <http://www.aquariumcouncil.org/> .

NASA SCI Files™ and The Case of the Ocean Odyssey

The NASA SCience Files™ is an award-winning series of instructional programs for grades 3-5, integrating mathematics, science, and technology through the use of Problem-Based Learning (PBL), scientific inquiry, and the scientific method. The series seeks to motivate students to become critical thinkers and active problems solvers. Each episode follows the exploits of the tree house detectives as they solve "real world" problems by getting help from NASA experts, searching resources, and consulting with others. Each episode in the series includes a 60-minute instructional broadcast, an educator's guide, a unique interactive online PBL activity, plus instructional resources.

The Case of the Ocean Odyssey starts airing on November 17, 2004. Floating tennis shoes and oil globs wash up on the beach to set the tree house detectives in motion to investigate a unique world under the sea. Join them as they dive into learning about ocean floor topography, currents, tides, oil slicks, and more.

For more information, check out <http://scifiles.larc.nasa.gov> .

National Geographic Xpeditions

The National Geographic Xpeditions website hosts the lesson plan, *Taking Care of Our Oceans*. In this lesson, students consider why so many people live near the coast and

learn about the impacts of this trend on ocean animals. They will make posters to educate coastal residents and visitors about human impacts on marine life. For more information, check out <http://www.nationalgeographic.com/xpeditions/lessons/14/gk2/seascare.html> .

NSTA Resources and Resource Lists

The National Science Teachers Association periodically publishes lists of different web resources (see the grants listing, above). Recent lists include

- Free Opportunities for High School Science Teachers, http://science.nsta.org/enewsletter/2004-06/high_school.htm
- Free Resources For Science Teachers, at http://science.nsta.org/enewsletter/2004-06/news_stories_high.htm
- Summer reading list for books, <http://science.nsta.org/enewsletter/2004-07/highcatalog.pdf>

Check the NSTA website for links to other websites, resources, and educational materials. For more information, check out <http://www.nsta.org/> .

Oceanworld

Oceanworld is a web site for middle-school, high-school, undergraduate, and graduate students and teachers interested in the ocean. It has tutorials for middle-school and high-school students, materials for middle-school teachers, an on-line textbook in physical oceanography, all course material for five college courses, and on-line resources which include links to hundreds of site with on-line data.

The tutorials cover fisheries, weather, Forams, coral reefs, currents and more. The material is tied to Texas standards for teaching science, which are very similar to the national standards. Teacher material includes classroom activities in oceanography. The college courses for undergraduates are problems-based, and could be modified for high-school use.

For more information, check out <http://oceanworld.tamu.edu/> .

Operation DeepScope Expedition

NOAA Ocean Exploration has launched the Operation DeepScope Expedition, August 3-14, 2004. This expedition will go beyond traditional sampling limitations and use advanced technologies, such as the sophisticated Eye-in-the-Sea underwater camera system, to see animals and behaviors never before witnessed by humans. The Harbor Branch Oceanographic Institution's research vessel Seward Johnson and its manned submersible, the Johnson-Sea- Link, will take scientists to an area in the geologically complex northern Gulf of Mexico, consisting of basins, canyons, escarpments and methane seeps. The website includes lesson plans, logs, videos and more. Students can "Ask an Explorer" by submitting questions via the website. For more information, check out <http://oceanexplorer.noaa.gov/explorations/04deepscope/welcome.html> .

Sustainability Education Resources from Facing the Future

Facing the Future: People and the Planet is a non-profit organization providing teachers, students, and the public with global issues education and action opportunities to shape our future. Their programs include curriculum development, teacher workshop, service learning opportunities and more. For more information, check out <http://www.facingthefuture.org/About/index.htm> .

Wayfinders: A Pacific Odyssey

This website is the companion for a PBS film that features a community of Pacific Islanders as they build sailing canoes & follow the stars on a 2,000-mile voyage across the ocean. The site includes a wayfinder game, an essay on navigating "blind," an interview with a wayfinding expert, links to related websites, and more. For more information, check out <http://www.pbs.org/wayfinders/>.

INITIATIVES and JOURNALS

American Zoo and Aquarium Association National Awareness Campaign

AZA's National Awareness Campaign will create a unified voice to position the collective member institutions in the minds and hearts of the public as safe and fun family experiences that are also meaningful. Through implementing tactics such as an annual unified theme, they aim to be perceived as trusted experts and a powerful collective voice on animal care, wildlife conservation, and public education about wildlife and wild habitats. For more information, check out <http://www.aza.org/Publications/2004/03/March04NACTheme.pdf>.

Celebrate National Coastweek

National Coastweek, September 18-25, 2004, is an opportunity to celebrate our coastal resources. National Coastweek is coordinated by the by NOAA's National Ocean Service, with the Coastal States Organization, state Coastweek and Coast Day observances, and in partnership with a variety of federal government agencies and national coastal and ocean organizations. Events are held around the country to celebrate the vibrancy of our coastal communities and beauty of our coastal resources. From clean-ups to nature walks to boating events, National Coastweek provides an ocean of opportunity to join other coastal enthusiasts to explore life on the edge – where land meets water and fragile ecosystems hang in the balance. Start the celebration with the Ocean Conservancy's International Coastal Cleanup, and bring it to a close with National Estuary Day. For more information, check out <http://www.living-edge.org>.

The Science Teacher - Call for Papers on Multicultural Science Education

The Science Teacher, National Science Teacher's Association (NSTA) peer-reviewed journal for secondary science teachers, seeks manuscripts for the upcoming focus issue on Multicultural Science Education. The deadline for submission is September 15, 2004. For more information, check out <http://www.nsta.org/169>.

Seas the Day Initiative

The Ocean Project, together with SeaWeb, is launching a new initiative, called *Seas the Day*. This joint initiative is aimed to promote awareness and elevate importance of the ocean, and also to encourage people to take action to makes a difference for the health of our ocean planet. The initiative will include development of mission-driven products. The first product is a monthly calendar. For more information, check out www.TheOceanProject.org.

Wings Over Water

Wings Over Water, on North Carolina's Outer Banks, celebrates the wildlife and wildlands in eastern North Carolina, drawing visitors from all over the country to experience the unique landscape, dunes, marshes, and inland forests of the Outer

Banks while participating in birding, natural history, outdoor recreation, and paddling programs. The schedule of events brochures for the celebration is now on-line; limited spaces are booked first-come-first-served. Programs run November 2-7, 2004. For more information, check out www.wingsoverwater.org .

World Ocean Passport

The World Ocean Network's (WON) mission is to inspire and foster a change in individual behavior towards a sustainable management of the global ocean, and its task is to coordinate communication to the public about ocean issues and marine resource management. WON seeks to achieve its mission by mobilizing the public through a network of like-minded sites and organizations. Supported by UNESCO's Intergovernmental Oceanographic Commission and UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, WON has been involved in the Global Forum for Oceans, Coasts and Islands since the World Summit on Sustainable Development in Johannesburg in 2002. WON has released a World Ocean Passport as an educational tool for its member organizations to promote ocean awareness and conservation with their visitors. For more info see www.nausicaa.fr/reseau/ .