

**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**  
**INFORMATION EXCHANGE FOR MARINE EDUCATORS**

**JUNE 2006**

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.

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## **Notable Article**

### **Natural Resources Year in Review**

The 2005 National Park Service Natural Resources Year in Review is now available. It contains news of the Natural Resource Challenge programs, a preliminary overview of impacts to national parks from the 2005 hurricane season, and articles on other natural resource issues. The report can be accessed on-line.

<http://www2.nature.nps.gov/YearInReview/>

## **INITIATIVE OF THE MONTH**

### **Conference on Ocean Literacy**

The Conference on Ocean Literacy (CoOL) is a two-day forum, June 7-8, 2006, that will bring together key participants to discuss the essential principles of ocean literacy and the current challenges and opportunities for both formal and informal education efforts in educating the public to make informed, responsible decisions about the ocean and its resources. CoOL will feature a combination of plenary sessions, keynote speakers, and panel discussions. Panelists will identify priorities that will be forwarded to the Education Working Group under the U.S. Ocean Action Plan.

In addition, Regional Workshops will be hosted at five aquariums around the country (listed below) to discuss opportunities at the local and regional level. Each site will view portions of the presentations via satellite and discuss regional challenges and opportunities for promoting ocean literacy principles. Check out the website for more detail about how to participate in the regional workshops or observe the proceedings online.

- Aquarium of the Pacific, Long Beach, California
- John G. Shedd Aquarium, Chicago, Illinois
- J.L. Scott Aquarium, Ocean Springs, Mississippi
- National Aquarium in Baltimore, Baltimore, Maryland
- National Mississippi River Museum and Aquarium, Dubuque, Iowa

<http://www.nmsfocean.org/chow2006/cool.html>

## **WEBSITE OF THE MONTH**

### **Aegean and Black Sea 2006 Expedition**

NOAA's Ocean Explorer offers information and educational materials for the 2006 Aegean and Black Sea expedition, the first mission of a multi-year geological and archaeological study in the Sea of Crete, at <http://www.oceanexplorer.noaa.gov/explorations/06blacksea/welcome.html>. An interdisciplinary research team of archaeologists and oceanographers from the University of Rhode Island, the Institute of Oceanography of the Hellenic Centre for Marine Research in Greece, and the Ukraine will pursue major mission goals of finding well-preserved marine archaeological sites, studying ancient maritime trade, and exploring the history of the Thera volcano.

Immersion Presents will feature numerous live broadcasts during the expedition; log onto their website (<http://www.immersionpresents.org>) and click on "Channel" to view the following:

- Ancient Eruptions; June 3-June 8, 2006; 30-minute shows from the Aegean Sea
- Updates from the Sea of Crete; June 10-June 15, 2006; featuring expedition scientists

From June 3-8, 2006, the Ocean Explorer website will feature live streaming video 24 hours a day from remotely operated vehicles as they explore the Thera caldera. The University of Rhode Island websites will also offer live video feeds, at [www.uri.edu/endeavor](http://www.uri.edu/endeavor) and [www.uri.edu/endeavor/thera/index](http://www.uri.edu/endeavor/thera/index).

The Ocean Explorer Expedition Education Module includes a summary of the purpose of this expedition; lesson plans designed specifically for this expedition; interactive multimedia presentations and Learning Activities on Plate Tectonics, Mid-Ocean Ridges, and Subduction Zones; profiles of scientists representing careers featured during this mission; and a list of other resources and links related to the 2006 Aegean and Black Sea mission.

<http://www.oceanexplorer.noaa.gov/explorations/06blacksea/welcome.html>

## **MESSAGE FROM THE BRIDGE**

### **The Bridge to Highlight NOAA Education Resources**

The Bridge and NOAA have joined forces to more effectively disseminate NOAA's web-based ocean education resources and better serve the ocean sciences education community. During 2006-2007, the Bridge will work to bring NOAA education products to the forefront by highlighting them as a special collection of reviewed websites for educators. This collection will be featured on a special gateway page which will include annotated links to NOAA education resources that have been evaluated through the Bridge's Teacher Reviewer of On-Line Learning (TROLL) program. Look for the special collection coming soon.

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

## **REQUESTS**

### **Seeking Lab and Field Activities Recommendations for Texas**

The Texas state education agency is creating a supplement to state education standards to recommend "signature" or "core" labs and/or field experiences that every student should have at each specific grade level. The agency seeks examples of recommended inquiry-based, real world field experiences that support Texas learning standards.

Contact Cappy Manly at [Cappy.manly@tpwd.state.tx.us](mailto:Cappy.manly@tpwd.state.tx.us)

## **GRANTS AND OPPORTUNITIES**

### **American Honda Foundation Grants**

The American Honda Foundation makes grants to K-12 schools, colleges, universities, trade schools, and others for programs that benefit youth and scientific education, and programs pertaining to academic or curriculum development that emphasize innovative educational methods and techniques. The foundation seeks programs that are scientific, creative, humanistic, innovative, and more. Grants are awarded on a quarterly basis; the next deadline for application is August 1, 2006.

<http://corporate.honda.com/america/philanthropy.aspx?id=ahf>

### **Emergency Response and Crisis Management Grant Program**

The Emergency Response and Crisis Management grant competition supports efforts by local educational agencies to improve and strengthen their school emergency response and crisis management plans, including training school personnel and students in emergency response procedures; communicating emergency plans and procedures with parents; and coordinating with local law enforcement, public safety, public health, and mental health agencies. The deadline for application is June 22, 2006.

<http://www.ed.gov/legislation/FedRegister/announcements/2006-2/051106a.html>

### **Environmental Education Grants – New Jersey**

The PSEG Environmental Education Grant Program is open to educators of grades K-9 who teach in Public Service Enterprise Group's electric or gas service areas in New Jersey. The program helps to inspire teachers to implement an interdisciplinary approach to teaching about the environment, and fosters new ideas. Grants may be used to purchase materials and equipment, take field trips, and develop curriculum-related activities. The deadline for application is June 16, 2006.

<http://www.pseg.com/community/grants.jsp>

### **Environmental Excellence Awards**

The 2007 SeaWorld/Busch Gardens/Fujifilm Environmental Excellence Awards program is now soliciting applications. Since 1993, the awards have recognized the outstanding efforts of students, teachers, and community groups across the country who are working at the grassroots level to protect and preserve the environment. Project applicants should be able to demonstrate significant accomplishments that have occurred prior to the submission deadline; the deadline for application is November 30, 2006.

<http://www.buschgardens.org/conservation-matters/eea/about.htm>

### **Groundwater Foundation Awards**

The Groundwater Foundation offers four awards for educating and motivating people to care for and about groundwater. The Groundwater Educator Award recognizes educators who understand the importance of groundwater, motivate others to protect groundwater, and lead by personal example. The W.C. Foxley – E.P. Taiganides Award for Excellence and Leadership in Groundwater is open to any student, age 12-17, in the U.S. that gives time, energy, and knowledge to promote the protection of groundwater in his or her community. Additional awards recognize groundwater heroes and government service promoting groundwater stewardship. The deadline for nominations is July 14, 2006.

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

### **Hope for Education**

Samsung's Hope for Education is an educational philanthropy program designed to better educate U.S. elementary, middle and high schools through the delivery of new digital technologies and software. This year's program includes an online Essay Contest. The deadline for application is June 30, 2006.

[http://www.hopeforeducation.com/cgi-bin/nabc/campaign/hfe/hfe\\_home.jsp](http://www.hopeforeducation.com/cgi-bin/nabc/campaign/hfe/hfe_home.jsp)

### **International Foundation for Science Research Grant**

International Foundation for Science research grants are available for young scientists in developing countries to do research on the sustainable management, use, or conservation of biological or water resources. Check the website for deadlines and complete details.

<http://www.ifs.se/index.asp>

### **Judith A. Towle Environmental Studies Fund – Virgin Islands, St. Kitts and Nevis**

Applications are now being accepted by the Community Foundation of the Virgin Islands for the Judith A. Towle Environmental Studies Fund. The Fund supports activities that address environmental concerns which transcend the boundaries of a single island or island state, particularly in the U.S. and British Virgin Islands and in the dual-island state of St. Kitts and Nevis. Any individual who is a resident of, or a not-for-profit institution

based in, the U.S. or British Virgin Islands or in the Federation of St. Kitts and Nevis may submit a grant application. Graduate students whose research focuses on the Virgin Islands or St. Kitts and Nevis may also submit grant applications.

<http://mailman.intermedia.net/pipermail/sswg/2006-May/000139.html>

### **Marine Education Curriculum Contract – Hawai'i**

The Hawaiian Islands Humpback Whale National Marine Sanctuary has a requirement for the development of marine education curriculum for the Hawaii Department of Education (DOE) system. This will be done in conjunction with the Department of Education curriculum specialists. All materials will be standards based and aligned to the DOE Scope and Sequence. The contract recipient will be required to develop, produce, duplicate, and distribute education curriculum to schools throughout Hawai'i to encourage teachers to participate in in-service classes on the marine curriculum. The purpose of this contract is to extend the sanctuary's education efforts to reach into Hawaii's schools and use the oceans and beaches as a classroom to teach science to children. The primary goal is to produce strong science-based curriculum that capitalizes on the wealth of resources in Hawaii's oceans and coasts and will increase the number of children who pursue marine science and policy as adults both locally and nationwide.

<http://www2.fbo.gov/spq/DOC/NOAA/WASC/AB133C%2D06%2DRP%2D0122/SynopsisP.html>

### **NAAEE Awards**

The North American Association of Environmental Educators (NAAEE) offers awards in five different categories, recognizing outstanding individuals and organizations that excel in environmental education. The categories include awards for leadership, service, contribution to research, outstanding NAAEE affiliate, and K-12 Great Lakes region educator. The awards will be presented at the NAAEE annual conference. The deadline for nomination is June 15, 2006.

<http://naaee.org/news/naaeeawards06.doc>

### **National Geographic Teacher Grants**

Teacher Grants are given directly to educators to facilitate their work in promoting and increasing geographic literacy in the classroom, school, district, and/or community. Teacher Grant applications are accepted from any current teacher or administrator in an accredited K-12 school within the United States and Canada. Projects that have outreach to urban areas are particularly encouraged. The deadline for application is June 9, 2006.

[http://www.nationalgeographic.com/foundation/grants\\_teacher.html](http://www.nationalgeographic.com/foundation/grants_teacher.html)

### **National Weather Association Sol Hirsch Teacher Grants**

The National Weather Association awards Sol Hirsch Teacher Grants for teachers in grades K-12 to improve students' education in meteorology. Teachers selected will be able to use the funds to take an accredited course in atmospheric sciences, attend a relevant workshop or conference, or purchase scientific materials or equipment for the classroom. The deadline for application is August 1, 2006.

<http://www.nwas.org/solhirsch.html>

### **NSF Informal Science Education Grants**

The National Science Foundation offers Informal Science Education (ISE) program grants. The ISE program seeks to develop and implement informal learning experiences

that are designed to increase their interest, engagement, and understanding of science, technology, engineering, and mathematics, as well as projects that advance the theory and practice of informal science education for individuals of all ages and backgrounds. The ISE program expects to make approximately 50 awards as project grants, planning grants, conference, symposia, and workshop grants, and grant supplements. Check the website for preliminary and full proposal deadlines.

<http://www.nsf.gov/pubs/2006/nsf06520/nsf06520.htm>

#### **Road Scholar Teacher Awards**

Road Scholar, an initiative of Elderhostel, offers Road Scholar Teacher Awards to deserving educators throughout the United States. Educators eligible for the awards include active teachers, principals, superintendents, school nurses, school librarians and guidance counselors with a minimum of 20 years' experience in K-12 education. The deadline for application is June 30, 2006.

<http://www.roadscholar.org/why/teacher.asp>

#### **Society for Underwater Technology Scholarships - Texas**

The Houston Chapter of the Society for Underwater Technology (SUT Houston) offers a scholarship program for undergraduate and graduate scholarships. The deadline for applications is June 15, 2006.

[http://www.southouston.com/education\\_scholarship.htm](http://www.southouston.com/education_scholarship.htm)

#### **Special Grants from the Department of Education**

The U.S. Department of Education offers grants for Strengthening Institutions, American Indian Tribally Controlled Colleges and Universities, and Alaska Native and Native Hawaiian-Serving Institutions Programs. These grants are offered to eligible institutes of higher education to enable them to improve their academic quality, institutional management, and fiscal stability, and increase their self-sufficiency and strengthen their capacity to make a substantial contribution to the higher education resources of the nation. The deadline for application is July 3, 2006.

<http://www.ed.gov/legislation/FedRegister/announcements/2006-2/051906f.html>

#### **TeachNet Disseminator Grant - New York**

Teachers Network offers grants to support teachers who have developed exemplary web-based curriculum units for classroom use. The program rewards projects that integrate the Internet and involve students with technology tools in a meaningful and authentic context for New York City K-12 public school teachers.

[www.teachersnetwork.org/grants/grant\\_disseminator\\_about.cfm](http://www.teachersnetwork.org/grants/grant_disseminator_about.cfm)

#### **Tellabs Foundation Grants for Education and the Environment**

The Tellabs Foundation provides Education grants to support education programs with a particular focus on local and national programs and curricula for engineering, science, mathematics, and technology. The Tellabs Foundation Environment grants support programs to encourage understanding and the protection of the environment.

<http://www.tellabs.com/about/foundation.shtml>

#### **Toshiba America Foundation Grants**

The mission of Toshiba America Foundation is to contribute to the quality of science and mathematics education in U.S. communities. Applications for grants for projects in math and science designed by classroom teachers to improve instruction for students in grades K-12 are accepted on a rolling basis. The website lists past grants, many of

which have supported environmental science. The application deadline is October 1, 2006; projects must be completed by May 1.

<http://www.taf.toshiba.com>

## **INTERNSHIPS AND TEMPORARY OPPORTUNITIES**

### **Beam Reach Marine Science and Sustainability School Fall Session**

Beam Reach is a marine science and sustainability school focused on science, sustainability, and the marine environment that offers students the opportunity to design their own research projects during five week research voyages in the Pacific Northwest. During the fall session, August 21-October 30, 2006, students will study orcas, acoustics, and marine protected areas in the San Juan Islands.

<http://beamreach.org>

### **Science of the Sound - Alaska**

Prince William Sound Science Center in Cordova, Alaska offers summer education programs for youth and adults in the heart of the Copper River Delta. The goals of the programs are to provoke inquiry into the natural world, to increase science and ecological literacy, and to foster responsibility for the sound use of our natural resources. The programs use hands-on learning and outdoor education to inspire personal connections to the natural world and responsible decision making to sustain it. Programs include weekend workshops, overnight youth camps, and a teacher workshop with credit available from the University of Alaska Anchorage.

<http://www.pwssc.gen.ak.us/pwssc/educ/education.shtml>

### **Texas A&M University at Galveston Summer Programs**

Texas A&M University at Galveston offers educational outreach programs to people of all ages. Sea Camp is a week-long residential adventure exploring marine and estuarine environments for campers ages 10-18. Sea Campus Kids is a marine oriented day program for campers ages 6-11. Talented & Gifted is a residential summer program for high ability students in grades 8-12. Elderhostel at Texas A&M University at Galveston is just one of many possible learning adventures for adults. Check the website for details, along with additional outreach programs such as field trips, teacher workshops, and more.

<http://www.tamug.edu/outreach/index.html>

## **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. Session Two summer classes run July 3-August 13, 2006; registration ends June 19, 2006. Offerings include the integrated science course on the Ocean System, the Diversity of Fishes, Sharks and Rays, and more. Each 6-week course immerses the learner in a collaborative investigation of a current topic within one of the life, Earth, or physical sciences. All courses are taught by museum scientists and educators, and highlight current, cutting-edge research.

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

### **Coastal Curricula Workshops - Louisiana**

The Barataria-Terrebonne National Estuary Program is partnering with the Louisiana Department of Wildlife and Fisheries to offer free summer wetland teacher training workshops for educators who teach grades K-4. The Louisiana Department of Wildlife and Fisheries is also offering stipends to teachers who participate in the training. Teachers can learn more about Louisiana wetlands through interactive Coastal Curricula Workshops. Teachers will receive information and instruction on Louisiana's wetlands during this one-day workshop along with standards-based lessons and activities <http://www.btnep.org/newsletter/newsletters.asp>

### **Coast Alive! Teacher Institute**

Coast Alive! Offers an 8-day teacher institute, helping teachers learn ways to incorporate inquiry-based, hands-on, and interactive multimedia activities in their middle and high school science classrooms, using a comprehensive curriculum that integrates Ocean Literacy with California Content Standards. Educators in all subjects and grade levels are encouraged to apply. The deadline for application is June 30, 2006. <http://eurekaeries.org/coastalive/land-sea-interface/>

### **COSEE Great Lakes Professional Development**

The Centers for Ocean Sciences Education Excellence (COSEE) is a network of regional centers created to promote the development of effective partnerships between research scientists and educators; disseminate effective ocean sciences programs and the best practices that do not duplicate but rather build on existing resources; and promote a vision of ocean education as a charismatic, interdisciplinary vehicle for creating a more scientifically literate workforce and citizenry. COSEE Great Lakes, the only Center on America's North Coast, serves an area that is the home of more than 1/4 of the U.S. population and shares marine sciences through freshwater research. COSEE Great Lakes offers a variety of professional development workshops throughout the summer, and links to valuable curriculum for Great Lakes classrooms. <http://coseegreatlakes.net/>

### **Digital Science Workshops**

Ed.gov from the U.S. Department of Education offers online professional development for teachers in math and science, language arts, and other areas. Watch presentations on inclusive classrooms, using data to improve instruction, inquiry in the classroom, and more. <http://www.paec.org/teacher2teacher/>

### **Environmental Education Methods Course**

Environmental Education Methods is a 4 day course offered by the U.S. Fish and Wildlife Service on September 11-14, 2006 in Shepherdstown, West Virginia. The course teaches effective planning and evaluation strategies to target specific resource management issues to the right audiences. The course offers activities and sessions about working with students, teachers, youth groups and their leaders both on and off public lands. Participants will begin developing a planning document for their site during the course then complete and implement it as a post-course assignment. The deadline for registration is July 17th, 2006. All participants should register on-line using DOI-Learn through the National Conservation Training Center using course number OUT8160.

Contact Georgia Jeppesen at [georgia\\_jeppesen@fws.gov](mailto:georgia_jeppesen@fws.gov) if you have questions. <http://training.fws.gov/catalog/coursecontents.html>

### **Monterey Bay Aquarium Teacher Institutes – California**

The Monterey Bay Aquarium offers two teacher institutes this July that will give teachers a chance to stimulate their sense of wonder and expand their passion for discovery and science. The Splash Zone Institute, July 10-14, 2006 is for Pre-K - 2nd grade teachers. Teachers will have an opportunity to explore schoolyard and rocky shore habitats, share inquiry-based activities and implement new teaching strategies. The Coastal Systems Institute, July 24-28, 2006 is for 3rd - 5th grade teachers. Teachers will use living coastal ecosystems as a unifying theme to teach standards, integrate content and process skills and facilitate language acquisition. Institutes are free; a stipend is available upon completion of the program. The deadline for registration is June 12, 2006.

[http://montereybayaquarium.org/lc/teachers\\_place/edu\\_program.asp](http://montereybayaquarium.org/lc/teachers_place/edu_program.asp)

### **National Marine Educators Association Annual Conference**

Save the dates, July 15-22, 2006. The New York State Marine Education Association is hosting the National Marine Educators' Association's 30th annual conference in Brooklyn. Join hundreds of marine educators and regulators for a total immersion into marine science explorations with concurrent sessions, field trips, boat trips, keynote speakers, and a day devoted to NOAA scientists at Kingsborough Community College. Special events include receptions at the New York Aquarium and the American Museum of Natural History. Registration and conference details are on the website.

<http://www.nysmea.org/con06/index.htm>

### **Natural Resource Communications Techniques and Technologies – West Virginia**

The U.S. Fish and Wildlife Service offers Natural Resource Communications Techniques and Technologies (OUT8106), designed to help natural resource professionals communicate more effectively with both general and technical audiences through oral presentations using dynamic visual aids, July 17-21, 2006, in Shepherdstown, West Virginia. Topics include developing communication strategies for specific audiences, creating computer-generated PowerPoint images, Photoshop tools, and solving equipment problems. Participants will learn skills in planning, preparing, delivering, and evaluating oral presentation. A special session entitled "Verbal Victories" (SM) provides hints for handling difficult or hostile audiences. The course combines lecture, role-playing, demonstration, and practice in making presentations on natural resource topics. Contact Juanita Gustines at [Juanita\\_Gustines@fws.gov](mailto:Juanita_Gustines@fws.gov)

<http://training.fws.gov/catalog/coursecontents.html>

### **NSTA Web Seminar – Coral Ecosystems**

NSTA Web Seminars are 90-minute, live professional development experiences that use online learning technologies to allow participants to interact with nationally acclaimed experts, scientists, education specialists, and others from NSTA government partners such as NASA and NOAA. NOAA: Coral Ecosystems will be presented on June 7, 2006. Registration is required.

<http://institute.nsta.org/Anaheim/coral/webseminar.asp>

### **Ocean Adventures Workshops - California**

KQED Public Broadcasting has partnered with The Oakland Zoo and River of Words to present educator workshops for upper elementary, middle school, and high school teachers to celebrate the PBS series, *Jean-Michel Cousteau: Ocean Adventures*. Learn

about marine debris and invasive species and the educational materials available on the series website. The workshops are free but pre-registration required.

- Making Sense of Marine Debris; June 17, 2006; Berkeley;  
[www.kqedrow.mollyguard.com](http://www.kqedrow.mollyguard.com)
- Invasive Species around the World; June 22, 2006; Oakland;  
[www.kqedoaklandzoo.mollyguard.com](http://www.kqedoaklandzoo.mollyguard.com)

Additional workshops will include The Gray Whale Obstacle Course in August and Sharks at Risk and America's Underwater Treasures in September, 2006.

For more information on the workshops in the San Francisco Bay Area, contact [ScienceEd@kqed.org](mailto:ScienceEd@kqed.org).

### **Sea Turtle Workshop for Educators - Georgia**

The Sapelo Island National Estuarine Research Reserve presents a Sea Turtle Workshop for educators, June 26-29, 2006, on Sapelo Island, Georgia. Work with sea turtle biologists from Georgia and South Carolina who share their research in physiology, behavior, and conservation. Learn why the Georgia Coast is so important to these magnificent animals, and ways you can help through educating your students.

Participants will receive resource and curriculum materials. The deadline for application is June 5, 2006.

<http://eeingeorgia.org/net/calendar/details.aspx?c=28886&s=40374.0.68.4863>

### **Shipwreck Archaeology Workshop for Students – North Carolina**

The Graveyard of the Atlantic Museum offers its third Shipwreck Archaeology Workshop to be held June 18-24, 2006 in Hatteras, North Carolina. The Shipwreck Archaeology Workshop is designed for ten students from eighth grade and above. The workshop will provide a glimpse of what it is like to study a shipwreck and use skills learned in math, science, history, social science and writing in a real life, hands on situation. This year students will also participate in a Remote Operating Vehicle project sponsored by the Monitor National Marine Sanctuary. Scholarships are available for those students who need assistance.

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

### **Using Marine Biology to Teach Biology and Ecology - Florida**

The Institute for Biomedical Philosophy's teacher workshops and field trips in the Florida Keys offer teachers and students the opportunity to explore national standards-based biology and ecology concepts using hands-on marine biology models. Teachers and students will snorkel the coral reef, swim with dolphins, and participate in beach programs. The material includes extensions for statistics, computer science, and mathematics as well as for information technology, language arts, fine arts, library science, reading, and psychology. The program is open to middle and high school teachers, students and their families. Custom programs and dates are available for groups of 16 or more.

Contact Melissa Demetrikopoulos, Ph.D. at [mdemetr@BioPhi.org](mailto:mdemetr@BioPhi.org)

<http://www.biophi.org/pages/1/index.htm>

### **USS Monitor Professional Development Workshop - Virginia**

NOAA's National Marine Sanctuaries and Office of Ocean Exploration, along with Nauticus, The National Maritime Center offer a professional development workshop for science and social studies teachers in grades 4-8, July 21, 2006, in Norfolk, Virginia. Join educators, historians, and ocean explorers in this one-time specially developed workshop for teachers related to exploration of the *USS Monitor* shipwreck site off the

Virginia Capes. Teachers will participate in hands-on social studies and science activities related to the Battle of Hampton Roads, the *Monitor* shipwreck, remotely-operated vehicles used in deep-sea exploration, and metal degradation as it relates to marine archaeology. Pre-registration is required and space is limited; the deadline for registration July 3, 2006

Contact Brent Rudmann at [brent.rudmann@noaa.gov](mailto:brent.rudmann@noaa.gov)

### **Western Upper Peninsula Center Professional Development – Michigan**

The Western Upper Peninsula Center for Science, Mathematics and Environmental Education offers a variety of programs focused on enhancing the teaching and learning of science and mathematics in Michigan's Upper Peninsula. The center's primary goal is to build an educated workforce by providing quality student, teacher and community programming to improve K-12 science and mathematics education throughout the state. Check the website for a variety of watershed and lake-based professional development opportunities along with a myriad of other useful information.

<http://wupcenter.mtu.edu/>

### **Wetland Courses for Educators**

Environmental Concern, Inc. offers a variety of courses designed for formal and non-formal educators who are interested in learning more about wetlands, and who would like to bring the excitement of wetland education into their classroom. Courses include WOW! The Wonders of Wetlands, Wetland Plants – Know'em and Grow'em, Schoolyard Wetland Habitats, and much more. Check out their schedule on-line, or contact the education department to learn how to arrange for a course in your area. They can also design a custom course to meet your needs. Scholarships are available.

[http://www.wetland.org/EC%20main/edu\\_schedule.htm#](http://www.wetland.org/EC%20main/edu_schedule.htm#)

## **EDUCATIONAL RESOURCES**

### **Australian Biological Resources Study**

The mission of the Australian Biological Resources Study is to document which plants and animals are found in Australia, map their locations, and provide information this information to the general public. The website includes material on research activities and administration, and offers a series of online databases, including fauna, flora, species bank, and more.

<http://www.deh.gov.au/biodiversity/abrs/>

### **Coral Reef Multimedia Project**

The Coral Reef Multimedia Project is an interdisciplinary effort to illustrate and explain coral reef dynamics and threats. The project goal is to make this knowledge accessible by combining the visual arts with a scientific background. The project is divided into two categories, Short Movies and Mini-Documentaries. Short Movies explain a concise subject with documented footage while Mini-Documentaries explore a broader biological theme with cinematography, photography, and visual effects. Check this one out!

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

### **Distance Education Clearinghouse**

The University of Wisconsin System offers the Distance Education Clearinghouse, a comprehensive website bringing together distance education information from Wisconsin, national, and international sources. The website hosts general information

about distance education, research findings on its effectiveness, pedagogical support for teachers, financial aid information, and links to many additional websites and resources.  
<http://www.uwex.edu/disted/home.html>

### **EducationAtlas.Com**

This website provides links to many educational resources for K-12 teachers, students, higher education, homeschoolers, bilingual education, and more.  
<http://www.educationatlas.com/>

### **EstuaryLive 2006**

Preparations have begun for the September 29, 2006 EstuaryLive Internet broadcast, and educators are invited to sign up for this year's event. EstuaryLive is hosted by the National Estuarine Research Reserve (NERR) System in collaboration with the National Estuary Programs. EstuaryLive is a free virtual estuarine field trip where students around the country can experience the nation's coasts without ever leaving their classrooms. The program is broadcast each year in conjunction with National Estuaries Day. This year four field trips will be offered:

- New York - New Jersey Harbor Estuary Program, New Jersey
- Padilla Bay NERR, Washington State
- Peconic National Estuary Program, Long Island, New York
- South Slough NERR and Tillamook Bay National Estuary Program, Oregon

[www.estuaries.gov](http://www.estuaries.gov)

### **Expedition to the Deep Slope**

Now available on NOAA's Ocean Explorer website is the *Expedition to the Deep Slope* mission, the first systematic exploration of hydrocarbon seep communities deeper than 1000 meters in the Gulf of Mexico. The scientific team includes geologists and geochemists working alongside microbiologists, physiologists, and ecologists to maximize what can be learned about the deep Gulf of Mexico cold seeps and coral communities. Web coverage for this mission includes web logs, including video and images, and background essays, written by scientists and other explorers at sea chronicling daily activities and discoveries, along with an extensive education module.  
<http://www.oceanexplorer.noaa.gov/explorations/06mexico/welcome.html>

### **Fish and Habitat Photos**

NOAA's National Center for Coastal Monitoring and Assessment hosts on-line photos of reef fish, reef habitat, and aerial images from Hawai'i and the U.S. Virgin Islands. The fish photo website offers the ability to select by location, date, and type of fish.  
[http://www8.nos.noaa.gov/biogeo\\_public/](http://www8.nos.noaa.gov/biogeo_public/)

### **Global Challenges**

Earth Day Network offers a new curriculum called *Global Challenges, an Introductory Climate Change Curriculum* that provides four lesson plans suitable for middle school classrooms. The lesson plans are activity driven and work together to cover the broad topic of climate and climate change. These resources are available for free to members of the Teacher's Corner.  
<http://www.earthday.net/>

### **Hurricane Preparedness**

The goal of the Hurricane Preparedness website is to inform the public about hurricane hazards and provide knowledge which can be used to take action. This information can be used to save lives at work, home, while on the road, or on the water. The site includes information about storm surge, high winds, tornadoes, flooding, and more. It offers information about how individuals and families can better prepare for possible disasters.

<http://www.nhc.noaa.gov/HAW2/english/intro.shtml>

### **Losing Louisiana**

This multi-media website offers a visual look at Louisiana after Hurricane Katrina. The site offers an aerial view of the region, complete with interactive elements that allow users to click on a number of locations. Within each section are a series of photographs, augmented by audio that include interviews with coastal restoration experts and locals affected by the hurricane, videos offering explorations of some of the sites are profiled. Also included is a history of the levees as well as information about subsidence.

<http://digitalartwork.net/wetlands/losinglouisiana/index-ie.html>

### **Marine Debris Program**

NOAA's Marine Debris Program supports a national effort focused on preventing, identifying, removing, and reducing the occurrence of marine debris and protecting and conserving our nation's natural resources and coastal waterways from the impacts of marine debris. The program works on a national and an international level and has identified four strategies to address marine debris: identification, monitoring, research, and information transfer; reduction through removal; prevention, including education and outreach; and emergency response. The website includes background information, a glossary, links to education and outreach programs, a glossary, and more.

<http://marinedebris.noaa.gov/welcome.html>

### **My Wonderful World**

The GLOBE Program has joined a coalition led by the National Geographic in a public-engagement campaign designed to give students tools to become more informed global citizens, improving the geographic literacy of young people ages 8-17 by motivating parents and educators to expand geographic learning in school, at home and in their communities. The website provides a variety of resources, including suggestions for family activities, links to geography games and online adventures for kids and teens, classroom materials for educators, and more.

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

### **Northwestern Hawaiian Islands Research Expedition**

From May 19 through June 11, 2006, the NOAA ship *Hi'ialakai* ("embracing pathways to the sea") will be conducting a research expedition to the Northwestern Hawaiian Islands (NWHI). The expedition includes ecosystem connectivity research, apex predator tagging and movement studies, as well as coral health assessment missions. The ship will travel to Nihoa and French Frigate Shoals in the NWHI, then 500 miles south to Johnston Atoll. Johnston Atoll is the closest shallow water habitat south of the isolated NWHI and is believed to be a "stepping stone" by which organisms from the South Pacific have spread to the Hawaiian Archipelago. Many species, such as *Acropora* table corals common in the South Pacific, are only found at French Frigate Shoals and the surrounding areas in the Hawaiian Archipelago. Visit the website to read the expedition logs and see pictures of the NWHI expedition from the ship daily. Also stay tuned for

web coverage of the upcoming NOAA ship Hi'ialakai 30-day expedition to conduct mapping, maritime heritage archaeology, and education and outreach in the NWHI from June 23 through July 20, 2006. Visit <http://sanctuaries.noaa.gov> in mid-June to follow along with the second expedition.

<http://hawaiianatolls.org/research/May2006/index.php>

### **Ocracoke Shipwreck Explorer**

The Ocracoke Shipwreck Survey has two main objectives: creation of a database of submerged cultural resources along North Carolina's Outer Banks, and educational outreach to the public. The website is designed to assist students, teachers and the community in understanding the processes involved in creating this database. Underwater archaeology, historical research, and remote sensing technologies are being used first to locate and identify submerged cultural resources (shipwrecks and sites) off the coast of North Carolina, after which the project researchers assess their research potential and historical significance. The website includes background information, methodology and fieldwork links, educational resources, and more.

<http://www.ecu.edu/maritime/Projects/OcracokeWebSite/index.htm>

### **Project-Based Learning Newsletter**

*Project-Based Learning* is a weekly resource for tools and information published by The George Lucas Educational Foundation. Each issue features original stories, as well as links to relevant news features, with a special focus on how K-12 students explore real-world problems, leading to a deeper knowledge of subject matter, greater motivation, and improved research and problem-solving skills. Issues in May explored a watershed project and a fish hatchery project.

<http://www.edutopia.org/php/keyword.php?id=037>

### **Reef Encounter On-Line Game**

The SpielByWeb website provides a way for people to play various strategy games on the web. One of the offerings is Reef Encounter, whose aim is to grow the largest and strongest corals on the reef and then to feed these to your parrotfish in the brief time available. Points are awarded at the end of the game for the number and type of polyps that your parrotfish has consumed. Extensive rules are provided. A similar board game is also available for purchase at

[http://www.zmangames.com/boardgames/reef\\_encounter.htm](http://www.zmangames.com/boardgames/reef_encounter.htm).

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

### **Road to Recovery**

The Center for Biological Diversity has created a website detailing the conservation efforts that caused the populations of 100 endangered species in every U.S. state and territory to increase. The website includes information about the conservation efforts along with a chart of the species' population over time. Citations allow those interested to research deeper into each species' recovery.

[www.esasuccess.org](http://www.esasuccess.org)

### **Sea Stories**

The Sea Stories Project, an international initiative of the Blue Ocean Institute, accepts first-person writing and art about the sea, coast, and sea-life from ocean-lovers of all levels and backgrounds. Memoirs, essays, poetry, and imaginative nonfiction are all welcome, as are photographs, drawings, or other visual arts. The inaugural issue of Sea

Stories is now online, devoted to nurturing appreciation and concern for the world's oceans through writing, art, and conversation.

<http://www.seastories.org/current.html>

### **Tides and Currents Web Data Portal**

The Center for Operational Oceanographic Products and Services (CO-OPS) offers an Integrated Ocean Observing System (IOOS) oriented web portal to provide access to the National Data Buoy Center's and CO-OPS' observational oceanographic data. Users will find improved methods for observational data retrieval, useful IOOS links, and related information. Navigation is clearly marked with links to products, programs, education, and more.

<http://tidesandcurrents.noaa.gov/opensap.html>

### **Tread Lightly Geocaching Recommendations**

Tread Lightly!<sup>(R)</sup> is a national nonprofit organization whose mission is to empower generations to enjoy the outdoors responsibly. Tread Lightly!'s strategic educational message, along with its training and restoration initiatives, are designed to instill an ethic of responsibility in outdoor enthusiasts and the industries that serve them. The program is long-term in scope with a goal to balance the needs of the people who enjoy outdoor recreation with the needs of the environment. The program offers recommendations for both users and managers involved in a variety of different recreational activities, including geocaching.

<http://www.treadlightly.org/edu.mv?edu=Recreation%20Tips>

### **Weather, Climate, and Energy**

Hurricane season in the Atlantic is June 1-November 30, 2006. Hurricanes Katrina, Dennis, Emily, Rita, and Wilma made 2005 the costliest hurricane season ever, as well as one of the deadliest on record. Scientists are predicting another difficult season. Annenberg Media offers online programs that can help your students better understand the forces that influence our weather

Weather - <http://learner.org/redirect/june/weather32.html>

Planet Earth Program 3, The Climate Puzzle -

<http://learner.org/redirect/june/planet33.html>

Science in Focus: Energy, Workshop 6, Energy and Systems -

<http://learner.org/redirect/june/energy34.html>

### **Webcast.Berkeley**

A number of colleges and universities offer some of their course materials online for the general public. Berkeley offers a number of webcasts and podcasts of select courses and campus events on this website. Visitors can learn about each event in the information section, and for some, users have the option to download the audio portion of the event. The course section provides webcasts, and users can also download podcasts. The selection of courses includes lectures on wildlife ecology, natural resources and population, animal behavior, and more.

<http://webcast.berkeley.edu/>

## **INITIATIVES and JOURNALS**

### **BioBlitz – Rhode Island**

Sponsored by the Lincoln Land Trust and the Blackstone River Watershed

Council, BioBlitz 2006 will be held June 9-10, 2006 in Cumberland, Rhode Island. The BioBlitz will involve scientists and volunteer naturalists who will tally as many species as possible in a 24-hour period to increase awareness of the variety of life on even the most mundane-looking land.

<http://www.uri.edu/ce/rinhs/bioblitz.htm>

### **Project POWER**

The New York Aquarium launched Project POWER, a national training seminar sponsored by the EPA with support from the New York State Department of Environmental Conservation. Participants at the initial seminar included environmental educators from aquaria and zoos, along with their corresponding regional wetlands regulators. Participants represented 13 states with regulators from a broad range of agencies. The project stresses the need for a commitment to public education to protect our national wetland heritage and infuse marine science and wetlands conservation not only into a school's curriculum, but also into a community's curriculum. Project POWER is working to create the beginnings of a national network of state agency-environmental center partnerships with the capacity to provide educational workshops to wetland violators as well as to community members who live in environmentally sensitive areas so that violations can be avoided before they occur.

Contact Merryl Kafka at [mkafka@wcs.org](mailto:mkafka@wcs.org)

### **World Ocean Day – June 8**

World Ocean Day is June 8, 2006, when organizations and individuals from around the world come together to celebrate our world ocean; reflect on the ocean's importance in our lives; and take time to do something good for our blue planet. The Ocean Project sponsors this site to coordinate World Ocean Day events. Suggested resources, tools, and activities are listed on the website.

[www.worldoceanday.org](http://www.worldoceanday.org)