

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

**NOVEMBER 2007**

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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Collected archives of the information presented in past newsletters are available at [http://mpa.gov/helpful\\_resources/education\\_training.html](http://mpa.gov/helpful_resources/education_training.html). Contact the editor directly at [phyllis.dermer@noaa.gov](mailto:phyllis.dermer@noaa.gov), or by phone at (865) 932-5074, to discuss further enhancements or to contribute information for future issues.

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### **Notable Reference**

#### **The Broad Benefits of Restoring the Great Lakes**

Collectively, the Great Lakes account for 90 percent of the United States' and 20 percent of the world's surface fresh water. In addition, the lakes represent an enormous economic and cultural resource to the region. The Brookings Institution offers this paper addressing the benefits of restoring the Great Lakes ecosystem from numerous threats, summarizing the major findings of a more in-depth study, *Developing America's North Coast: A Benefit Cost Analysis of a Great Lakes Infrastructure Program*, of the benefits and costs of the federal-state Great Lakes Regional Collaboration

[http://www3.brookings.edu/metro/pubs/20070904\\_gleiecosystem.pdf](http://www3.brookings.edu/metro/pubs/20070904_gleiecosystem.pdf)

## **A Quick Guide to Conducting Marine Ecological Gap Assessments**

Published by The Nature Conservancy, *A Quick Guide to Conducting Marine Ecological Gap Assessments* offers advice on analyzing gaps in conservation coverage for use in planning marine protected area networks. Featuring brief case studies from four nations (Ecuador, Grenada, Jamaica, and Palau) and best practices learned to date, the guide serves as an introduction and overview to ecological gap analyses.

<http://conserveonline.org/workspaces/patools/resources/gapassessment/gapdocs/marinegapquickguide>

## **OPPORTUNITY OF THE MONTH**

### **NOAA's Teacher at Sea Program**

Gain first-hand research experience on a government ocean research vessel. NOAA's Teacher at Sea program gives teachers a clearer insight into our ocean planet and a greater understanding of maritime work and studies, and fosters an interdisciplinary educational experience that provides a unique environment for learning and teaching. The program is for currently employed K-16 teachers. Teachers may select a cruise aboard one of NOAA's 19 ships, of which there are three main types. Fisheries research vessels perform biological and physical science studies in support of fisheries research. Oceanographic and coastal research vessels perform physical science studies in support of physical oceanography, atmospheric studies, and bathymetric mapping. Hydrographic survey vessels scan the coastal sea floor with side-scan sonar and sophisticated bottom sounding systems to locate submerged obstructions and navigational hazards for the creation or update of the nation's nautical charts. The deadline for application is December 31, 2007.

<http://teacheratsea.noaa.gov>

## **MESSAGE FROM THE BRIDGE**

### **Saving Sturgeon**

With the 400th anniversary of the Jamestown settlement, why not learn about a fish that was integral to the survival of the early settlers, the Atlantic sturgeon? Sturgeon are unusual fish that have changed very little since prehistoric times. They can live to be 60 years old and up to 14 feet in length. Learn about this living dinosaur and their fight for survival in the Bridge Data Analysis Teaching Activity (DATA), *Saving Sturgeon*. Students will explore Virginia Institute of Marine Science data that evaluates the interaction of sturgeon with the commonly used gill net. These nets, which can stretch for tens to hundreds of meters, trap fish by entangling them as they try to swim through the net. This DATA can also be used to investigate by-catch and its effect on slow-to-mature species.

[http://www.marine-ed.org/bridge/index\\_archive1107.html](http://www.marine-ed.org/bridge/index_archive1107.html)

## **REQUESTS**

### **Marine Wildlife Communications Survey**

The Ocean Conservancy has developed a survey on *Communicating Science for Conservation of Marine Wildlife*. This survey is designed to investigate attitudes and opinions of those involved in the marine wildlife field regarding how scientific results are applied in the conservation of marine wildlife. The results of the survey will be used to

help improve the effectiveness of communications regarding marine wildlife conservation issues.

[http://www.surveymonkey.com/s.aspx?sm=q0CKI\\_2blknAIFQNCj0KI28Q\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=q0CKI_2blknAIFQNCj0KI28Q_3d_3d)

### **Sea Stories Now Accepting Music**

The online journal *Sea Stories* is an international initiative of the Blue Ocean Institute. They accept first-person writing and art about the sea, coast, and sea-life from ocean-lovers of all levels and backgrounds. They also seek music submissions - original vocal and/or instrumental songs inspired by the sea and submitted in mp3 format.

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

### **Seeking Teachers to Pre-Test Estuaries 101 Curriculum**

Estuaries 101 curriculum materials were developed at TERC, a nonprofit educational research and development organization, under the guidance and direction NOAA's National Estuarine Research Reserve System (NERRS). They seek high school teachers to pre-test this draft curriculum and provide feedback via an online survey. The website includes information about the development of the curriculum, background information, and how to participate in the pre-test. The completed high school *Estuaries 101* curriculum will be finalized in the spring of 2008.

<http://estuaries.gov/estuaries101.html>

## **GRANTS AND OPPORTUNITIES**

### **Apprentice Ecologist Initiative**

The Apprentice Ecologist Initiative is engaging youth, parents, and teachers from around the world in environmental stewardship and conservation projects. The goals of the initiative are to elevate young people (especially at-risk and low-income kids and teens) into leadership roles by engaging them in environmental stewardship projects, empower volunteers to rebuild the environmental and social well-being of our communities, and improve local living conditions for both citizens and wildlife. The annual cycle runs January 1-December 31.

[http://www.wildernessproject.org/volunteer\\_apprentice\\_ecologist.php](http://www.wildernessproject.org/volunteer_apprentice_ecologist.php)

### **California Coastal Art and Poetry Contest**

The California Coastal Commission invites California students in kindergarten through 12th grade to submit artwork or poetry with a coastal or marine theme to the annual Coastal Art and Poetry Contest. The deadline for entry is January 31, 2008.

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

### **County Conservation Program Awards**

The Annual Trust for Public Land and the National Association of Counties awards recognize leadership, innovation, and excellence in local land conservation and park creation by county leaders across the United States. Three awards will be presented based on small, medium, and large county populations. The deadline for entry is November 28, 2007.

[http://www.tpl.org/tier3\\_cdl.cfm?content\\_item\\_id=18657&folder\\_id=2867](http://www.tpl.org/tier3_cdl.cfm?content_item_id=18657&folder_id=2867)

### **HP Technology for Teaching Grant**

The K-12 HP Technology for Teaching Grant initiative is designed to support innovative and effective uses of mobile technology in the classroom setting. Hewlett-Packard will

grant awards to K-12 public schools and two- and four-year colleges and universities that are using a collaborative, team-based approach to implementing technology integration projects. The deadline for submission is February 15, 2008.

[http://www.hp.com/hpinfo/grants/us/programs/tech\\_teaching/index.html](http://www.hp.com/hpinfo/grants/us/programs/tech_teaching/index.html)

### **Knauss Fellowship**

The Knauss Fellowship provides a unique educational experience to students who have an interest in ocean, coastal, and Great Lakes resources and in the national policy decisions affecting those resources. The program matches highly qualified graduate students with hosts in the legislative and executive branch of government located in the Washington, D.C. area, for a one-year paid fellowship. The deadline for application is February 29, 2008.

<http://www.seagrant.noaa.gov/knauss/>

### **Nature Conservancy Photo Contest**

The Conservancy invites you to enter your favorite images of lands, waters, plants, animals, and people in nature. They seek original digital images of beautiful nature photography representing the diversity of life on Earth. The contest is open to all participants age 18 and older, regardless of residence or citizenship. The deadline for entry is December 31, 2007.

[http://support.nature.org/site/PageServer?pagename=contest\\_ph6](http://support.nature.org/site/PageServer?pagename=contest_ph6)

### **Ocean Science Leadership Awards - California**

The QuikScience COSEE-West Ocean Leadership Awards recognize educators who make outstanding contributions to K-12 ocean science education. Nomination categories include Formal Teaching Excellence, Informal Teaching Excellence, Early Career, and Commitment to Education. The deadline for nominations is February 1, 2008.

<http://www.usc.edu/quikscience>

### **Oil Spill Recovery Technology Education Grant**

The Oil Spill Recovery Institute wants to demonstrate to and involve students with the technologies associated with oil spills. It is accepting proposals for a grant to design and demonstrate a school activity that incorporates technologies related to oil spill detection, response, and ecological assessment in Arctic and Subarctic marine environments.

They seek a hands-on activity engaging students in the field of oil spill technologies that is transferable to other locations in arctic and subarctic waters. Possible activities include, but are not limited to: have students work with existing spill recovery equipment; build and test small-scale oil recovery equipment of the student's design; use a remotely operated vehicle to map a portion of the seafloor, build an oil detector; and/or test organisms for the presence of hydrocarbons. The deadline for proposals is December 3, 2007.

<http://www.pws-osri.org/grants/rfp.shtml>

### **Outdoor Classroom Grants**

Lowe's, International Paper, and National Geographic Explorer partner in an outdoor classroom grant program for K-12 public schools to provide schools with additional resources to improve their science curriculum by engaging students in hands-on experiences outside the traditional classroom. Grants may be used to create new outdoor classrooms and/or enhance existing outdoor learning environments. Grants will be reviewed three times a year; the next deadline February 15, 2007.

<http://www.lowes.com/lowes/lkn?action=pg&p=AboutLowes/outdoor/index.html>

### **P3 Award – Student Design Competition for Sustainability**

This national student design competition for sustainability focuses on people, prosperity, and the planet. The P3 Award competition encourages student teams to achieve mutual goals of economic prosperity while protecting the natural systems of the planet and providing a higher quality of life for its people. Teams will address an environment issue while providing economic opportunities and maintaining economic growth. This year's teams might work on developing alternative energy sources, providing clean water to rural communities, new methods of recycling, novel options for green buildings, designing sustainable buildings, and more. The deadline for application is December 20, 2007.

<http://es.epa.gov/ncer/p3/>

### **PADI Foundation Funding**

The PADI Foundation encourages and supports underwater science, environmental projects, and education. The foundation funds and assists projects that increase mankind's understanding of the aquatic environment and encourages sensitivity to and protection of the delicate ecological balance of underwater life. In addition, the foundation also funds projects to increase understanding of sport diving physics and physiology that benefit the general diving public and add to the scientific understanding of man's relationship and ability to survive in the underwater environment.

<http://www.padifoundation.org/index.htm>

### **Protect Our Reefs License Plate Grants - Florida**

Mote Marine Laboratory offers *Protect Our Reefs License Plate* grant funding. Eligible organizations shall be based in Florida and engaged in reef research, education, and/or conservation. The deadline for proposals is December 14, 2007.

<http://www.mote.org/4reef>

### **QuikScience Music Challenge – Southern California**

Middle and high school students can get their musical group tuned up and create an original prize winning song about the oceans and be featured at QuikScience events and on the web. The USC Wrigley Institute and Quiksilver, Inc. have created the Music Challenge, seeking young people to compose ocean-inspired music. Help promote ocean understanding and appreciation through music. The deadline for entry is February 8, 2008.

<http://www.usc.edu/quikscience>

### **Science and Technology Policy Fellowships**

The American Association for the Advancement of Science is recruiting for Science and Technology Policy Fellowships. These year-long fellowships provide scientists and engineers with a unique public policy learning experience and an opportunity to apply their knowledge and analytical skills to national and international issues in the policy realm. Opportunities are available with Congress and other agencies, including NOAA, NSF, EPA, and more. The deadline for application is December 20, 2007.

<http://fellowships.aaas.org/>

### **Seaspace Scholarships**

Seaspace, Inc., an annual underwater film festival, symposium, and exposition, offers marine-related scholarships. The Seaspace Permanent Education Fund earnings and

private donations endow undergraduate and graduate scholarships specifically in support of marine-related courses of study. The deadline for application is February 1, 2008.

<http://www.seaspace.org/schship.htm>

### **Southeast Climate Witness Program**

The World Wildlife Fund and the Allianz Foundation for North America are offering the opportunity for 25 high school students displaced by Katrina to assess the climate change vulnerability of the southeastern United States. Selected students will receive a stipend, laptop computer for their college studies, attend Climate Camp in June 2008, and a Youth Summit in Washington, D.C., in July 2008. In addition to the nomination form, the website offers resources, a glossary, and a climate curriculum for high school students. Students currently residing in Louisiana, Mississippi, Alabama, Tennessee, and Georgia may apply. The deadline for nomination is January 6, 2008.

<http://www.worldwildlife.org/climate/seclimatewitness/>

### **Walter B. Jones Memorial and NOAA Excellence Awards**

The hallmarks of the Walter B. Jones Memorial and NOAA Excellence Awards are innovation, resourcefulness, leadership, and a commitment to balancing the human use of America's coastal and ocean resources with the needs of the resources themselves. Honor the people and organizations dedicated to ensure the nation's coasts and oceans remain treasured places to live, work, and play. The categories include coastal steward, excellence in coastal and marine graduate study, volunteer, non-governmental organization, and others. Hurry - nominations are due by November 15, 2007.

<http://oceanservice.noaa.gov/programs/ocrm/jones-noaa-awards.html>

### **Youinnovate21 – It's Your Environment Challenge**

This contest is open to students in grades 6-10. The contest involves environmental innovation through a four-stage process: exploration, creation, solution, and expansion. The deadline for submission is December 15, 2007.

<http://www.youinnovate21.net/>

## **INTERNSHIPS AND TEMPORARY OPPORTUNITIES**

### **Puerto Rico Program for Educators**

Global Environmental Teachings offers K-12 educators a 2-week summer course in Puerto Rico following an online course January 30-March 3, 2008. The mission of Global Environmental Teachings is to connect K-12 educators and students worldwide through environmental/conservation education. The program offers the opportunity to develop new curriculum for your classroom with international flare; science, social studies, Spanish, and other teachers interested in environmental education are encouraged to apply. Ten educators each from the mainland U.S. and Puerto Rico will be selected for participation on a first-come, first-served basis. The deadline for application is December 21st, 2007.

<http://www.uwsp.edu/cnr/wcee/get/puertorico.asp>

## **CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT**

### **American Meteorological Society Annual Meeting**

The theme of the American Meteorological Society's (AMS) annual meeting, January 20-24, 2008 in New Orleans, Louisiana, is *Enhancing the Connectivity between Research and Applications for the Benefit of Society*. This topic will shape our weather, ocean, climate, and environmental enterprise for many years to come. Our nation's economy, well-being, and safety will depend on successful efforts in this area from all sectors - academia, private, and government - and will require all of us to participate in and be engaged in discussing how we might enhance mutual interactions between research and applications. There will be a special two-day Hurricane Symposium, career fair, short courses, and much more. The AMS Student Conference will be held January 19-20, 2007 at the same location.

<http://www.ametsoc.org/meet/annual/>

### **Certified Interpretive Guide Training - Texas**

The Houston Zoo is offering Certified Interpretive Guide Training, December 3-6, 2007, in Houston, Texas. Participants will learn to use interpretation to create meaningful experiences, participate in activities, and receive curriculum and materials. The deadline for registration is November 15, 2007.

Contact Tara Tucker at [TTucker@houstonzoo.org](mailto:TTucker@houstonzoo.org)

### **Environmental Communication for Behavior Change - Online**

The Duke Environmental Leadership Program offers the online course, Environmental Communication for Behavior Change, January 15-February 24, 2008. The course provides environmental professionals with an introduction to the strategies and tools of environmental communication that effectively lead to changes in behavior. The environmental social marketing tools gained will benefit all practicing environmental professionals faced with the challenge of changing behaviors.

<http://www.nicholas.duke.edu/del/continuinged/envcommunication.html>

### **Farallones Teacher Workshops - California**

The Farallones Marine Sanctuary Association is offering a series of teacher workshops throughout the 2007-2008 school year. Workshops are geared for middle and high school teachers, though all are welcome. All workshops are free and continuing education credits are available.

[http://www.farallones.org/education/teacher\\_workshops.php](http://www.farallones.org/education/teacher_workshops.php)

### **Forecast Earth Summit**

In cooperation with The Weather Channel, Forecast Earth invites high school students to apply for participation in the Forecast Earth Summit, December 7-9, 2007 in Washington D.C. The summit event will focus on environmental education and will afford 20 students the opportunity to engage in-depth with numerous environmental leaders and scientists. The deadline for entry is November 11, 2007.

<http://climate.weather.com/>

### **International Conference on Education and Information Systems, Technologies and Applications: EISTA 2008**

The 6th International Conference on Education and Information Systems, Technologies and Applications will take place June 29-July 2, 2008 in Orlando, Florida. The

conference will provide a forum for the presentation of both solutions and problems of the application of information communication technologies in education and training. The deadline for abstract submission is November 14, 2007.

<http://www.socioinfocyber.org/eista2008>

### **Partners in Flight Conference**

The Partners in Flight Conference, *Tundra to Tropics: Connecting Birds, Habitat, and People*, will be held February 13-16, 2008 in McAllen, Texas. The theme will be shared with International Migratory Bird Day for 2008. There will be sessions and workshops devoted to education issues. The deadline for abstract submission is November 16, 2007.

<http://www.partnersinflight.org/events/mcallen/>

### **Wiese Distinguished Lecture Series - Alabama**

The University of South Alabama and the Dauphin Island Sea Lab present *Global Coastal Change* for the 14th annual Wiese Distinguished Lecture Series, November 13, 2007 in Mobile, Alabama.

[http://press.disl.org/10\\_05\\_07wieselec.htm](http://press.disl.org/10_05_07wieselec.htm)

## **EDUCATIONAL RESOURCES**

### **Amphibian Poster**

Omaha's Henry Doorly Zoo, together with other zoos and organizations, has launched the Amphibian Conservation Initiative to address amphibian extinctions on a global scale. A downloadable poster includes activities on the back.

<http://www.omahazoo.com/exhibits/index.asp?page=/exhibits/amphibiancrisis.htm>

### **Back the Brookie Learning Module**

The *Back the Brookie* Learning Module was created by Tennessee educators and includes a DVD and teacher packet for use in grades 7-12. The module helps students learn about clean air and clean water, and their effects on brook trout habitat as well as on humans. It includes information on brook trout biology, watersheds, acid rain, the water cycle, pH, and how students can help participate in conservation efforts. The teacher packet is complete with a pre/post test, enrichment activity suggestions, teacher notes, and more.

<http://www.eeintennessee.org/net/content/go.aspx?s=56894.0.0.37935>

### **Digital Image Library**

The USGS-National Biological Information Infrastructure offers a new website for its rapidly growing Digital Image Library. Containing thousands of images donated by photographers and organizations, the library links images to detailed information such as location, scientific and common names, and habitat and behavior descriptions to support research, education, and decision-making. Currently offering 30,000 images, the website allows multiple ways to browse the collections and select images. Additional tools are being developed to support advanced searching, related content discovery, collaboration, and more.

<http://images.nbii.gov/>



### **Discovery of Sound in the Sea**

The University of Rhode Island's Office of Marine Programs has launched an update to the Discovery of Sound in the Sea website, an online resource about the science and use of sound in the ocean. In addition to new content and updates throughout the website, a new main section offers a Frequently Asked Questions and a Facts and Myths section, useful for educators and students. New on-line tutorials on the Science of Sound and the Effects of Sound on Marine Animals, new content in the People and Sound section, and new entries in the Audio Gallery are also available. In addition, check out updated material under *How do marine animals hear sounds?* under Animals and Sound.

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

### **Down Under, Out Yonder Highlights**

The 13th annual Down Under, Out Yonder (DUOY) Advanced Educators Cruise brought 18 teachers to the reef for a three-day trip on a live-aboard dive boat. DUOY is a joint venture between the Gulf of Mexico Foundation and the Flower Garden Banks National Marine Sanctuary, with funding from ConocoPhillips. Photographer Franklin Viola documented this year's trip in photos, along with a brief log and links to more information.

<http://gulfmex.org/gallery/duoy2007/index.html>

### **Earth Science Education Catalog**

NASA's Earth Science Education Program offers a diverse array of programs and resources for formal classroom instruction, informal education, and professional and workforce development. The complete listing of earth science education programs, products and resources, along with NASA-wide resources for educators, is provided in this online catalog. The Elementary and Secondary, Higher Education, and Informal Education sections feature regional and national programs. Products and Resources identifies earth science products and resources for these three educational communities.

<http://science.hq.nasa.gov/education/catalog/index.html>

### **Ecology by Inquiry**

NOAAA's Northwest Fisheries Science Center offers a new series of seven lessons designed to teach fundamental ecological principles using an inquiry-based approach to middle-school students. They cover a wide range of scientific skills and ecological concepts: quantitative versus qualitative observations, food webs, predators and prey, mapping, habitats and adaptations, watershed ecology, and much more. Many of the lessons are designed around animals and ecosystems found in the Pacific Northwest, but the lessons can be customized and adapted to incorporate local wildlife and habitats. While concepts in later lessons build on concepts in earlier lesson, each lesson is designed to stand alone and can be used out of sequence and/or in coordination with other science activities.

<http://www.nwfsc.noaa.gov/education/>

### **EDUCAUSE Live!**

EDUCAUSE Live! is a series of free, hour-long interactive web seminars on information technology topics in higher education. In the Archives area, visitors can view previous programs; many include slides and other supplementary materials.

<http://www.educause.edu/live>

### **Energy Lesson Plans and Activities**

The Department of Energy offers this K-12 Energy Lesson Plans and Activities website, with 350 lessons on energy efficiency and renewable energy. Organized by grade level and topic, the website allows students and teachers to study biomass, ocean energy, energy efficiency and conservation, and much more

<http://www.eere.energy.gov/education/lessonplans/>

### **Environmental History Modules for Teachers**

The Environmental Literacy Council, with the support of the National Endowment for the Humanities, has produced a set of professional development modules in environmental history for high school teachers. Their goal is to provide teachers with resources linking fundamental historical concepts to important environmental issues. The modules can help teachers improve their own understanding of the connections between history and the environment, and provide them with effective teaching strategies and materials to use with their students. Modules include War and the Environment; Urbanization; Ordinary Landscapes; and more.

<http://www.enviroliteracy.org/subcategory.php/314.html>

### **Fifty Facts about Wider Caribbean Coral Reefs**

Compiled for the International Year of the Reef, *Fifty facts about Wider Caribbean Coral Reefs* offers interesting facts about coral reefs in the wider Caribbean. There are also links to additional resources, news, events, and more.

[http://www.iyor.org/focalpoints/orgs/unep-car/Caribbean\\_Coral\\_Reefs.asp](http://www.iyor.org/focalpoints/orgs/unep-car/Caribbean_Coral_Reefs.asp)

### **Glossopedia**

Glossopedia is an online multimedia science encyclopedia that students can use to learn more about animals, habitats, science, technology, and more. Founded by a core team from the publishing, technology, business, and education communities, it is dedicated to offer safe and quality content that kids of all ages can enjoy.

<http://www.globio.org/glossopedia/>

### **Go Green Database**

Edutopia offers the Go Green Database, an environmental-resources directory for educators. Users can search by topic, grade level, cost, or location. Topics include water, air/climate, habitat/ecosystem, and more, while resources can be searched for lesson plans, information/statistics, field trips, and more. Be sure to supplement the entries with your contributions and comments.

<http://www.edutopia.org/go-green>

### **Habitable Planet**

Annenberg Media offers a new video series in environmental science, *The Habitable Planet: A Systems Approach to Environmental Science*. The 13 programs will guide viewers through topics including the atmosphere, oceans, and ecosystems, as well as the impact of human activities and population growth on water and food resources, biodiversity, energy use, and global pollution. Each of the programs in the series includes two case studies featuring the work of top scientists in the field. The course materials were created in association with the Harvard University Center for the Environment. Materials will soon include a coordinated website with a downloadable guide, online textbook, interactive teaching and learning tools, and Video on Demand. Use *The Habitable Planet* as a teaching aid in the classroom or register for professional development.

<http://www.learner.org/resources/series209.html>

### **Invasive Species of Everglades National Park**

Take your students on an electronic field trip to the Everglades National Park to explore invasive species. The eFieldTrip consists of three major components: a trip journal, a virtual visit, and posting questions via the Ask the Experts Web Form. Ask the Experts will be available from November 14 - November 15, 2007.

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

### **Lab Out Loud**

The National Science Teachers Association (NSTA) has launched *Lab Out Loud*, a biweekly series in which hosts discuss science news and education with leading scientists, researchers, science writers, and others. The hosts are high school teachers from Wisconsin keenly interested in sharing ideas via the web, and the website includes the downloadable episodes along with links to associated materials.

<http://www.nsta.org/publications/laboutloud.aspx>

### **Millennium Assessment Reports**

The Millennium Ecosystem Assessment assessed the consequences of ecosystem change for human well-being. This involved the work of more than 1,360 experts worldwide, from 2001 to 2005. Their findings provide a scientific appraisal of the condition and trends in the world's ecosystems and the services they provide, as well as the scientific basis for action to conserve and use them sustainably. The website includes full reports, synthesis reports, slides and graphics, and more.

<http://www.millenniumassessment.org/en/Index.aspx>

### **National Geographic Kids Website**

The website shows the amazing diversity of animals, people, and our beautiful world. Students can learn about the planet, play games, watch videos, print out experiments, and more.

<http://kids.nationalgeographic.com/>

### **NASA Earth Sciences Expert Directory**

The NASA scientists and NASA-funded researchers in this expert directory represent over 30 scientific disciplines, from oceanography and ecosystems to natural hazards and global climate change. In addition, each expert has expressed an interest in working with the news media. Search by field or name.

<http://experts.nasa.gov/>

### **Play Decide**

New Economics Foundation offers Play Decide, a website with a downloadable kit for a game that examines global warming and climate change, through play participation in setting policies. The website also allows users to upload their results for a worldwide regional comparison. (The game was inspired by Democs (deliberative Meeting of Citizens), a card game that is also downloadable at

<http://www.neweconomics.org/gen/democs.aspx>).

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

### **Postcards from the Poles: Antarctica**

Scientists and science educators on expeditions Antarctica are sending virtual postcards to the Windows to the Universe Website, describing what it's like to do science in

Antarctica and what they are learning about the place. The Penguin Science team will be in Antarctica, looking at how the Adelie penguins of Ross Island are coping with climate change, as well as making a documentary film. Educators will be sending in virtual postcards to describe the experience this season as the chicks hatch and grow. In addition, science educators on a research immersion experience with the Antarctic Geological Drilling Project (ANDRILL) will be sending in postcards documenting the team as they drill into sedimentary rocks below the ice of the Ross Ice Shelf to help learn more about the environmental changes that have affected the continent in the past. [http://www.windows.ucar.edu/tour/link=/people/postcards/antarctic\\_post.html&](http://www.windows.ucar.edu/tour/link=/people/postcards/antarctic_post.html&)

### **Sea Monsters: A Prehistoric Adventure Movie**

National Geographic and the National Science Foundation offer *Sea Monsters: A Prehistoric Adventure Movie*. This website provides photos and video clips from the movie about creatures that roamed the seas 82 million years ago. Discover sea monsters of the past and present using the interactive timeline. Excavate fossils on a "virtual dig." See a video on how to survive a shark attack. The website links to lesson plans and more.

<http://www.nationalgeographic.com/seamonsters/>

### **Seafood Watch Quiz**

The Monterey Bay Aquarium offers a quick quiz on their Seafood Watch website. The on-line quiz is an entertaining way to teach about sustainable seafood. Note the great Sherman's Lagoon characters by Jim Toomey. While on the website, check out the regional seafood guides, newsletter, and more.

[http://www.montereybayaquarium.org/cr/cr\\_seafoodwatch/sfw\\_quiz.asp](http://www.montereybayaquarium.org/cr/cr_seafoodwatch/sfw_quiz.asp)

### **Teachers' Domain Resources**

Teachers' Domain introduces Open Education Resources. Download, share, or re-mix video segments, interactive activities, and lesson plans. The materials let you shape and adapt content to meet your teaching needs. Resources include biogeochemical cycles, natural resources, ecosystems, ocean characteristics, climate, and much more.

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

### **USGS CoreCast**

The United States Geological Survey has launched a podcast series, *It's natural science from the inside out*. The podcasts range in length from two to fifteen minutes and cover a wide range of topics, including geologic maps, polar bear research, hazards, and more. The transcription of each episode is also available on the website.

<http://www.usgs.gov/corecast/>

### **Water Issue Resources from Annenberg Media**

With wildfires raging throughout California and drought affecting large areas of the southeast, check out these programs from Annenberg Media.

- *Water Resources*, Unit 8 of The Habitable Planet - The first case study in the program deals with dwindling water resources in the Southwest. Unit 5, Human Population Dynamics, explores the issue of population growth in areas where basic resources, such as water, are in short supply; <http://learner.org/redirect/november/hab12.html>
- *Water is for Fighting Over*, Program 7 of Human Geography: People, Places, and Change, deals with the fight over scarce water resources along the California-Nevada border; <http://learner.org/redirect/november/hum13.html>

- *Global Forces/Local Impact*, the eighth workshop of Teaching Geography - one of the case studies examines the conflict over water rights in Oregon;  
<http://learner.org/redirect/november/tgeo14.html>

### **Wetlands on Wheels**

Environmental Concern's *Wetlands on Wheels* is a mobile program designed to help overcome field trip challenges faced by today's schools which find themselves bound to the classroom through a combination of decreased availability of field trip travel funds, and increased testing mandates. Targeting Eastern Shore schools in Maryland, Delaware, and Virginia, the program can overcome geography and demographics which often limit exposure to such programming opportunities. *Wetlands on Wheels* programs are for K-6th grade and incorporate hands-on investigative experiences. Trained wetland educators travel with the mobile classroom to teach the courses; the curriculum is correlated to the voluntary state curriculum standards and materials and handouts are provided use before and after the visit.

<http://www.wetland.org/wetlandsonwheels.htm>

## **INITIATIVES, JOURNALS, and MORE**

### **National Marine Sanctuaries Online News**

The National Marine Sanctuary Program offers a monthly e-newsletter to keep subscribers informed about the many program activities and accomplishments that take place within the national marine sanctuaries and marine national monument. The website allows visitors to download several past issues of the printed newsletter and instructions on how to subscribe to the monthly e-newsletter.

<http://sanctuaries.noaa.gov/news/sw/>

### **REEF Website Redesign**

The Reef Environmental Education Foundation (REEF) is a grass-roots organization that seeks to conserve marine ecosystems by educating, enlisting, and enabling divers and other marine enthusiasts to become active ocean stewards and citizen scientists. REEF announces the launch of the redesigned website with a new look, enhanced features, and fresh content. Through enhanced technology and innovative tools, the website will enable REEF to more effectively recruit, train, and engage divers and snorkelers in the Volunteer Survey Project and other conservation science programs. The website will also facilitate communication through Member Forums.

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

### **Scientific Principals**

NSTA offers a complimentary, monthly e-newsletter written especially for elementary school principals, dedicated to helping their teachers in science. *Scientific Principals* offers a science toolbox of new ideas and practical applications.

[http://science.nsta.org/scientific\\_principals/](http://science.nsta.org/scientific_principals/)

### **Student Biological Monitoring Programs**

This document, published in 2004, identified and described environmental monitoring programs that involve K-12 students to monitor plant and animal species in the United States. The list is currently being updated and will be posted on the website when complete.

Contact Lynna Kauchek at [lynnakauchek@yahoo.com](mailto:lynnakauchek@yahoo.com)

[http://www.extension.iastate.edu/naturemapping/Teacher%20Materials/Monitoring\\_Programs.pdf](http://www.extension.iastate.edu/naturemapping/Teacher%20Materials/Monitoring_Programs.pdf)

### **Wetlands are Wonderful Scavenger Hunts - Georgia**

Reed Creek Park in Martinez, Georgia, will be holding a series of scavenger hunts in November and December. The events will be tailored for school-aged children but all are welcome to explore their neighborhood to learn about the plants and creatures that live in a wetland habitat.

<http://www.eeingorgia.org/net/calendar/details.aspx?s=57828.0.68.4863>

### **Yale Forum on Climate Change and the Media**

The *Yale Forum on Climate Change & The Media* is an online publication and forum to foster dialogue on climate change among scientists, journalists, policymakers, and the public. The publication seeks to provide print, broadcasting, and online reporters and editors timely and credible information on climate change. Articles will include media resources on climate change causes, consequences, and solutions. It will also analyze and discuss the process by which climate change is communicated through traditional and new media. The goal of the journal is to continue connecting leading climate scientists and researchers with the reporters covering their work, and to underscore the importance of covering climate change impacts across numerous news "beats" and not solely as a responsibility of science and environmental journalists.

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