

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

JANUARY 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.

The information included here has been compiled from many different sources, including EE-NEWS@NAAEE, EEinGEORGIA, CREEC, the Scout Report, edinfo at FREE, scuttlebutt, NSTA Express, and others. We have verified web addresses, but make no guarantee that they will remain active. The Department of Commerce/NOAA does not necessarily endorse or promote the views or facts presented on these sites.

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

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

Notable Reference

Highlights from Migratory Species and Climate Change: Impacts of a Changing Environment on Wild Animals

This report from UNEP and the Convention on Migratory Species aims to raise awareness about the effects of climate change on migratory species. Wildlife are already exhibiting signs of change in distribution and behavior as a result of changes in local or regional climate, weather patterns, and the resulting changes in vegetation and habitat conditions. Climate change is regarded as the main cause of loss of biodiversity in the future. The report features case studies that assess impacts of climate change on migratory species, and identifies possible solutions and mitigation measures. It includes a number of papers on the link between biodiversity and climate change; assessments of important habitats for migratory species; the effect of climate change on marine

mammal predators; impacts of climate change on sea turtles; and more. Note: if you have trouble opening the report, try accessing it through Internet Explorer.

http://www.cms.int/publications/pdf/CMS_CimateChange.pdf

PROGRAM OF THE MONTH

Ocean Park Stewardship Plan

National Parks contain more than 5,100 miles of beaches, coral reefs, kelp forests, wetlands, historic shipwrecks and forts, and other features that attract more than 75 million visitors every year. In 74 parks spanning 25 coastal states and U.S. territories, people come to camp, fish, snorkel, scuba dive, boat, and watch wildlife. Each of these parks maintains a rich legacy of ocean wildlife, native culture, U.S. maritime history, and beautiful landscapes above and below the waves. Established for their natural beauty and national significance, they play a critical role in conserving our nation's ocean and Great Lakes heritage.

At the 50th Anniversary Celebration of the Virgin Islands National Park on St. John, U.S. Virgin Islands, the Ocean Park Stewardship Action Plan was unveiled. This comprehensive program represents the commitment to restore and maintain productive fisheries, habitats, and wildlife in the ocean parks, and ensure the recreational opportunities they afford to hundreds of communities and millions of visitors.

The Ocean Park Stewardship Action Plan seeks to:

- Establish a seamless network of ocean National Parks, National Wildlife Refuges, National Marine Sanctuaries, and National Estuarine Research Reserves
- Discover, map, and protect ocean parks
- Engage visitors in ocean park stewardship
- Increase National Park Service technical capacity for ocean exploration and stewardship

The website offers an informational brochure about the stewardship plan along with other documents, an interactive map with links to individual park websites, an overview of marine- and coastal-related projects, and more.

http://www.nps.gov/pub_aff/oceans/conserv.htm

WEBSITE OF THE MONTH

Online Oceanography Expeditions

Designed for students in a general oceanography college course at San Jose State University, this website provides links to online expeditions in oceanography. Topics include marine resources, visualizing beneath the sea, global circulation and the California Current, marine ecosystems, and more. Additional resources include field guides, downloadable handouts and background information, and much more.

<http://oceansjsu.com/105/expeditions.html>

MESSAGE FROM THE BRIDGE

What's the *Scuttlebutt*?

An excellent way to stay current with all the latest news in the world of marine science education is *Scuttlebutt*, the Bridge email discussion list. This no cost, international listserv provides a forum for educators and scientists to informally discuss marine education ideas, issues, and questions, and allows ocean science programs from across the globe to advertise summer and year-round opportunities for educators and students. With over 800 members in 15 countries, *Scuttlebutt* is monitored by the Bridge staff, which assists in locating experts to answer posted questions when needed. All educators and scientists interested in marine science education are invited to subscribe. The Bridge: <http://www.marine-ed.org/bridge>
Scuttlebutt: http://www.marine-ed.org/bridge/index_scuttle.html

REQUESTS

Invitation to Participate in Cultural Inclusiveness Initiative

Environmental education (EE) and other organizations are invited to submit letters of interest for an 18-month pilot EETAP initiative. The initiative will help build the knowledge base on how EE organizations become more culturally inclusive. Participating organizations will implement culturally inclusive practices and share their experience with other organizations as members of a learning community. Letters of interest are due by January 19, 2007. Contact Sharon Courtney at Sharon.Courtney@uwsp.edu

Peace Child International Book Project About Water

Peace Child International Book Projects take complex international reports on important global issues and highlight the key points. Young people are then invited to write first-hand reports, paint pictures, take photographs, and write poems and stories to reflect their feelings about the issues. Take this opportunity to contribute stories, paintings and poems about water to a full color, illustrated, 28-page booklet summarizing key points about water. The book will be distributed around the world in English, French, and Spanish on World Water Day, March 22 2007. Contributions must be received by January 31st 2007; see the website for details. <http://www.peacechild.org/water/>

Reviewers Wanted

The San Luis Obispo County Office of Education is seeking highly qualified educators and technical experts to participate in the Education Working Group and the Content Working Group for California's Education and the Environment Initiative. Working group members will participate in the review of draft instructional materials and the technical accuracy of the draft instructional materials being developed. [http://www.creec.org/stories/storyReader\\$198](http://www.creec.org/stories/storyReader$198)

GRANTS AND OPPORTUNITIES

Adobe Software Donation Program

Adobe supports primary and secondary schools and qualified nonprofit organizations/NGOs with donations of their latest version software; a maximum of four individually titled software products or one bundled software package may be requested per year. Donations are made to both North American and specific international areas.

<http://www.adobe.com/aboutadobe/philanthropy/software.html>

Amgen Award for Science Teaching Excellence – CA, CO, KY, MA, RI, WA, PR

Amgen invites educators with a minimum of three years teaching science in grades K-12 to apply for the Amgen Award for Science Teaching Excellence, an unrestricted cash award for educators in communities in which Amgen operates, who are elevating the level of science literacy through creativity in the classroom and motivation of students. The deadline for application is January 31, 2007.

<http://www.amgen.com/citizenship/aaste.html>

AIAA Science and Math Programs Grants

The American Institute of Aeronautics and Astronautics awards grants to support hands-on mathematics, science, and technology projects. The purpose of these grants is to assist educators in presenting mathematics, science, and technology principles to K-12 students in an exciting, hands-on manner to develop future aeronautics and aerospace engineers, scientists, pilots, and space explorers. Preference will be given to proposed activities including, but not limited to, biological and physical research, earth science, and more. Acceptable materials include classroom science supplies, supplies for robotic programs, and more. Grants are considered on a quarterly basis, with deadlines at the end of November, January, April, and July; the next deadline for submission is January 31, 2007.

<http://www.aiaa.org/content.cfm?pageid=216>

Edutopia's Daring Dozen

Edutopia magazine's annual *Daring Dozen* issue profiles twelve people who work on a grand or small scale with a momentous goal in mind: they seek to revolutionize learning, redefining the elements of a great education and ensuring its availability to all who wish to learn. The deadline for nominations is January 31, 2007. Scroll down to *Opportunities & Resources* for the link to the nomination form.

<http://www.edutopia.org/edutopianews.html>

Earth Expeditions

The Cincinnati Zoo and Botanical Garden, in partnership with Miami University's Project Dragonfly, offers Earth Expeditions, tuition-free graduate courses open to educators from all disciplines and settings. Six different courses and field expeditions are offered, including Belize, with a focus on forest and marine ecology, and Trinidad, with a focus on environmental education. The deadline for application is February 1, 2007.

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

Hollings Undergraduate Scholarship Program

NOAA's Ernest F. Hollings scholarship program provides selected undergraduate applicants with awards that include academic assistance for full-time study; a 10-week, full-time internship position during the summer at a NOAA or partner facility; and, if reappointed, academic assistance during a second academic year. The internship provides hands-on, multi-disciplinary educational training experience involving students in NOAA-related scientific, research, technological, policy, management, and education activities. The deadline for application is February 9, 2007.

http://www.oesd.noaa.gov/Hollings_info.html

HP Technology for Teaching Grant

The K-12 HP Technology for Teaching Grant initiative is designed to support innovative and effective uses of technology in the classroom setting. Hewlett-Packard will grant awards to K-12 public schools that are using a collaborative, team-based approach to implementing technology integration projects. The deadline for submission is February 15, 2007; check out the website for details.

http://www.hp.com/hpinfo/grants/us/programs/tech_teaching/k12_main.html

Igniting Creative Energy National Student Challenge

The Igniting Creative Energy Challenge is an educational competition designed to encourage students to learn more about energy conservation and the environment. Entries must reflect the theme "Igniting Creative Energy" and demonstrate an understanding of what an individual, family or group can do to make a difference in their home or community. Students may express their ideas in the form of science projects, essays, stories, artwork, photographs, music, video, or website projects. They may also submit recent service projects or results from Energy Patrol activities. The deadline for entry is February 17, 2007.

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

Intel Schools of Distinction Awards

The Intel Schools of Distinction awards recognize K-12 schools that demonstrate excellence in implementing innovative, replicable programs supporting positive educational outcomes. There are two subject areas, math and science. The deadline for entry is February 28, 2007.

<http://www.schoolsofdistinction.com/overview.php>

Learning and Leadership Grants

The National Education Association offers grants to both individual and group applicants to participate in high-quality professional-development experiences. All professional development must improve practice, curriculum, and student achievement. "One-shot" professional growth experiences, such as attending a national conference or engaging a professional speaker, are discouraged. The next deadline is February 1, 2007.

http://www.neafoundation.org/programs/Learning&Leadership_Guidelines.htm

National Association of Biology Teachers Awards

The National Association of Biology Teachers recognizes excellence in teaching with a variety of awards, including the Ecology/Environmental Science Teaching Award, Award for Excellence in Encouraging Equity, and more. The nomination deadline is March 15, 2007.

<http://www.nabt.org/sites/S1/index.php?p=290>

National School and Business Partnerships Award

The Council for Corporate and School Partnerships serves as a forum for the exchange of information, expertise, and ideas to ensure that partnerships between businesses and schools achieve their full potential for meeting key educational objectives. The council works with educators and businesses to identify, create, recognize, and support exemplary school-business partnerships that improve the student experience for all children in the K-12 system of education in the United States. The application deadline is January 30, 2007.

<http://www.corpschoolpartners.org/award.shtml>

National Wetlands Awards

The National Wetlands Awards Program celebrates individuals who have demonstrated extraordinary dedication, innovation, or excellence in wetlands conservation. Their work covers programs or projects on the regional, state, and local levels, and their efforts to educate the public and surrounding communities about the value of wetlands, the programs that are available to protect and restore wetlands, and the value of cooperation among grassroots organizations, educational organizations, private landowners, and government agencies lead to the successful protection of wetland resources. Categories include education and education and outreach, conservation and restoration, wetland community leader, and more. The deadline for nomination is January 15, 2007.

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

River of Words Art and Poetry Contest

River of Words is an international environmental poetry and art contest on the theme of watersheds. The contest is open to youth ages 5-19. The contest is designed to help youth explore the natural and cultural history of the place they live, and to express, through poetry and art, what they discover, designed to nurture respect and understanding of the natural world. U.S. entries must be postmarked by February 15, 2006; international entries are due by March 1, 2007.

<http://www.riverofwords.org/contest/index.html>

Save Our History National Honors Contest

Teachers and students working on local preservation projects can apply for cash prizes in the Save Our History National Honors Contest from the History Channel. The deadline for entry is March 30, 2007. Check out the rules on the website; click on "National Honors".

<http://www.saveourhistory.com>

Social Science Fellowship

NOAA will award up to five fellowships for masters and doctoral students to conduct social science research within the National Estuarine Research Reserve System, beginning July 1, 2007. The fellowships are for research that focuses on the social, cultural, economic, or policy aspects of one of the following topics: community resilience; ecological restoration; ecosystem-based management; landscape or seascape change; climate variability and change. The deadline for applications is February 1, 2007.

<http://www8.nos.noaa.gov/publicnerrs/news.aspx?id=208>

Student Opportunities

NOAA's Office of Education hosts a Student Educational Opportunities website. Information about scholarships, internships, fellowships, and more is available for opportunities all across NOAA. In addition, a Special Opportunities section highlights student openings in specific geographic locations, in underrepresented communities, and for students with disabilities.

http://www.oesd.noaa.gov/noaa_student_opps.html

Teacher at Sea

NOAA's Teacher at Sea program is accepting applications from currently employed K-16 teachers. The mission of the program is to give teachers a clearer insight into our ocean planet and a greater understanding of maritime work and studies, and to foster an

interdisciplinary educational experience that provides a unique environment for learning and teaching. The deadline for applications is January 31, 2007.

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

Toshiba America Grants

Toshiba America Foundation contributes to the quality of science and mathematics education in the U.S. with a variety of grants. The foundation focuses its grants on inquiry-based projects designed by individual teachers, and small teams of teachers for use in their own classrooms. Large Grant Applications for grades 7-12 are due February 1, 2007. Teachers are encouraged to contact the Toshiba Foundation directly before submitting an application.

<http://www.toshiba.com/tafpub/jsp/home/default.jsp>

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Marine Science Educator

Salish Sea Expeditions is a Seattle area marine science education non-profit operating on Puget Sound. Salish currently seeks applications for the position of spring season (March-June) Marine Science Educator. The qualified candidate will have a science degree and experience with marine science, teaching students, and overnight program work. Applications are being accepted on a rolling basis.

<http://www.salish.org/GetInvolved/progemploymentopportunities>

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Coastal Science Institute for Middle School Teachers - Maine

Bowdoin College offers a weeklong Summer Institute, June 24-June 30, 2007 in Brunswick, Maine, for New England middle school teachers to improve coastal and marine literacy in the sciences. The institute will provide a meaningful professional development opportunity for teachers to conduct hands-on science and disseminate important environmental knowledge into classrooms over time. Interdisciplinary teams involving a science teacher and a teacher representing another discipline are encouraged to apply. The theme of the 2007 institute is *Invasive Species* and will introduce teachers to laboratory and field techniques that will help to identify, monitor, and trace the spread of introduced species. The deadline for application is March 2, 2007.

<http://academic.bowdoin.edu/csc/bccsi/index.shtml>

Conference on Coastal Environmental Sensing Networks

The University of Massachusetts, Boston Center for Coastal Environmental Sensing Networks announces a Call for Papers for the first conference on Coastal Environmental Sensing Networks, April 12-13, 2007 in Boston, Massachusetts. The conference will bring together stakeholders from diverse fields including academia, industry, governmental, and non-governmental agencies with the common focus of extracting, processing, and utilizing information from the coastal environment using sensor networks. This conference will also address hardware, software, and human dimensions of information sharing. The deadline for abstract submission is January 31, 2007.

<http://cheetah.cs.umb.edu/ocs/index.php>

COSEE-SE's Coastal Processes in the Outer Banks Workshop – North Carolina, South Carolina, and Georgia

This free Coastal Processes in the Outer Banks workshop is part of the *Coastal Legacy: Multicultural Marine Science, Professional Development Summer Program* from COSEE-SE. It will take place June 25-29, 2007 in Manteo, North Carolina. Participants will explore the physical forces which create barrier island dynamics. By investigating regional geology, currents, waves, and weather, educators will learn how researchers use technology to measure the processes and enhance their earth science and physical sciences classes. Multicultural strategies that maximize learning in the science classroom will be examined. Applications will be accepted from middle and high school teachers, pre-service teachers, and informal educators in North Carolina, South Carolina, and Georgia. Teachers who teach in schools with high percentages of underrepresented/underserved populations are encouraged to apply.

Contact Elizabeth Joyner at elizabeth.rogers@scseagrant.org for complete details. Information and applications will be posted in January on the COSEE SE website, at <http://www.scseagrant.org/se-cosee/>.

Georgia's Native Waters and the Leopold Education Project

Georgia's Native Waters and the Leopold Education project workshops, February 9-10, 2007 in Savannah, Georgia, will create awareness among participants about the important role the environment can play in their classrooms. Teachers will become empowered by being provided teaching tools that can provide interdisciplinary, practical, outdoor learning opportunities for improved student achievement. Learn the skills necessary to complete interactive projects for the indoor and outdoor classroom. Connections will be made to the curriculum by participating in hands-on activities and scientific investigations. The deadline for registration is January 30, 2007.

<http://www.gaconservancy.org/Events/Event.asp?id=301&yy=2007&mm=2&dd=9>

Green Eggs and Sand Workshops – Delaware and Georgia

The Green Eggs and Sand Horseshoe Crab and Shorebird Professional Teacher Development workshops will feature presentations from scientists and resource managers, along with field trips to take part in spawning surveys and search for eggs and shorebirds. Participants will receive training from teachers who have developed learning modules; in addition, participants will receive middle and secondary level classrooms materials and resources about the horseshoe crab/shorebird phenomena.

- May 4–6, 2007 in Savannah, Georgia, contact Dodie Sanders at sandersd@uga.edu
- May 18-20, 2007 in Dover, Delaware, contact Gary Kreamer at gary.kreamer@state.de.us

Holbrook Global Field Expeditions – Costa Rica

Holbrook Global Field Expeditions offers a series of international professional development workshops. Travel and study with the Florida Marine Science Educators Association, July 19-27, 2007, to Costa Rica. Designed for K-16 instructors, the workshop participants will experience environments and communities while covering new techniques and applications within science curriculum and instruction. The programs are designed to support the bridge between field inquiry and the full incorporation of new themes and topics in the classroom, providing educators a highly motivational and content-rich opportunity to experience the world. This program includes travel by boat in Ballena National Park to observe dolphin populations and the marine environment; hiking in primary forest and learning about the rainforest ecosystem

and structures, focusing on the relationship between forest conservation and marine habitat health; and more.

<http://www.holbrooktravel.com/pages/educationExpeditions/details.aspx?Id=463>

Marine Science Partner Series at California Science Education Conference

The California Science Teachers Association will hold its 2007 California Science Education Conference October 25-28, 2007 in Long Beach, California. COSEE-West, COSEE-California, and the Southwest Marine/Aquatic Educators Association are joining forces to host a Marine Science "Partner Series" at the Conference. This will permit interested educators to present workshops with a marine theme sequentially and in the same room, a great asset when trying to capture the attention of the several thousand teachers attending the conference. You are invited to submit a workshop proposal to be included in the series. If interested, submit your proposal(s) online; in the "Session Description for Selection Committee" section of the proposal form, write COSEE/SWMEA. Please email Peggy Hamner at phamner@ucla.edu when you submit your proposal so organizers will have an estimate of how many participants might be part of the series. The deadline for workshop proposals is February 5, 2007.

<http://www.cascience.org/proposals.htm>

Master of Science in Environmental Education – Online

The Master of Science in Education with specialization in Environmental Education is a collaborative offering between Nova Southeastern University's Fischler School of Education and Human Services and the Oceanographic Center, designed for educational professionals who seek to incorporate environmental education perspectives within their curricula. Through the interdisciplinary examination of current cultural contexts, socioeconomic factors, and formal and informal educational settings, students will gain a critical perspective on the theory and practice of environmental education. Each term, one course is taught with an emphasis on the "education" field, the other with an emphasis on "environmental" components of education. Online coursework integrates hands-on activities that take students outside and away from the computer screen. Environmental education is also about bridging social borders; each learning cluster may include students based in different locations throughout the United States and internationally, allowing for cross-cultural sharing of perspectives on local and global environmental issues. Registration for the Winter 2 session ends March 2, 2007.

<http://www.schoolfed.nova.edu/qtep/ngeonline/oceedegree.htm>

My NASA Data Teacher Workshop - Virginia

NASA will host a hands-on workshop designed for grade 6-12 teachers, July 29-August 3, 2007 in Hampton, Virginia. The workshop will focus on the implementation and use of earth system science data sets developed for the pre-college education community. The data sets are derived from the archive of remotely-sensed data from NASA's Earth Observing System satellites. Participating teachers will explore topics in Earth system science (especially atmospheric science), educational application of data sets, and hands-on classroom activities. The deadline for application is April 30, 2007.

<http://mynasadata.larc.nasa.gov/workshop.html>

National Science Teachers Association Conference

The theme of the National Science Teachers Association National Conference, March 29-April 1, 2007 in St. Louis, Missouri, is *Science: A River of Connections*. The deadline for earlybird registration is February 9, 2007.

http://www.nsta.org/conferencedetail&Meeting_Code=2007STL

Ocean Awareness Through Aquarium Education – North Carolina

Join aquarium staff and marine education specialists to experience science education driven by ocean awareness in this free Ocean Awareness Through Aquarium Education workshop, January 20, 2007 in Kure Beach, North Carolina. Activities will connect teachers to aquariums and oceans, as resources for discovery and relevant science education. Teachers participating in this workshop receive CEU credit, classroom activities, posters, and other useful materials.

Contact Danielle Wallace at Danielle.Wallace@ncmail.net

Projects WET, WILD and Learning Tree Facilitator Workshop - Georgia

Projects WET, WILD and Learning Tree Facilitator Workshops will be held January 23-24, 2007 in Mansfield, Georgia. Participants will receive certification and resource materials to become Project WET, WILD and Learning Tree facilitators. Facilitator training is for individuals interested in conducting workshops for their school or organization on how to teach these environmental education programs. The registration deadline is January 12, 2007.

<http://eeingeorgia.org/net/calendar/details.aspx?c=29418&s=43308.0.68.4863>

ROV Workshop - Georgia

Learn about Remotely Operated Vehicle (ROV) technology and its use in ocean exploration and research, January 26-27, 2007 in Atlanta, Georgia. Teach your students how to build an ROV and put together a student team to participate in a regional ROV competition. This workshop is hosted by NOAA Gray's Reef National Marine Sanctuary and Georgia Aquarium in partnership with Marine Advanced Technology Education Center.

<http://eeingeorgia.org/net/calendar/details.aspx?c=30113&s=46328.0.0.4863>

Society for Conservation Biology Annual Meeting

The 2007 annual meeting of the Society for Conservation Biology, *One World, One Conservation, One Partnership*, will be held from July 1-5, 2007 in Port Elizabeth, South Africa. The Local Organizing Committee is now accepting abstracts for oral and poster presentations. The program will include plenary sessions, invited symposia, workshops, organized discussions, short courses, poster sessions, concurrent sessions of contributed oral presentations and speed presentations. Due to the high level of attendance expected at the 2007 meeting and, consequently, limited time and space for oral presentations, poster presentations are strongly encouraged. Hurry - the deadline for abstract submission is January 8, 2007. The deadline for travel awards (application at <https://www.conbio.org/2007/travel/>) is February 7, 2007.

<http://www.nmmu.ac.za/scb/>

State of the Bay Educator Summit - Texas

The theme of the eighth biennial State of the Bay symposium of education-focused sessions, January 23-25, 2007 in Galveston, Texas, is *Teaching Science using our Bay System as an Integrating Context*. The summit offers workshops, field workshops, symposium, and resources for educators. The early registration deadline is January 12, 2007.

http://www.gbep.state.tx.us/news-events/Educator_Summit_Webpage.htm

Waves, Wetlands, and Watersheds Educator Workshops - California

Waves, Wetlands, and Watersheds is a classroom activity guide for teachers that addresses critical coastal and marine issues such as endangered species, marine debris, coastal geology, water use, and more. It is aligned to the California State Science Content Standards for grades 3 through 8, and includes Community Action lessons adaptable for all ages up to and beyond grade 12. The connection between inland areas and the ocean is emphasized throughout. Three free workshops are scheduled for February and March, 2007.

- Berkeley California, February 7, 2007; register by February 2, 2007
- San Mateo California, February 24, 2007; register by February 20, 2007
- Long Beach California, March 3, 2007; register by February 28, 2007.

Contact Annie Kohut Frankel at afrankel@coastal.ca.gov

EDUCATIONAL RESOURCES

An Inconvenient Truth DVD for Teachers

50,000 copies of the documentary about global warming, *An Inconvenient Truth*, will be donated on a first come, first serve basis to teachers across the country interested in using the film as a teaching tool in classrooms. The DVDs will be given away between December 18, 2006 and January 18, 2007. A free curriculum guide is also available for download on the website. The website also hosts teacher comments about the materials by way of a blog.

<http://www.participate.net/educators/>

Applied Math and Science Education Repository

Internet Scout offers the Applied Math and Science Education Repository (AMSER). AMSER is funded by the National Science Foundation and serves up information about applied math and science resources in an easy-to-use format. Though specifically created for teachers and students at community and technical colleges, AMSER is free for anyone to use and is part of NSF's larger National Science Digital Library initiative. Users can find a wide assortment of materials, from large web sites focusing on an individual applied science or math topic (including general oceanography) to animations that demonstrate specific science or math principles in action. The website also offers users a variety of features including rating and commenting on resources and the opportunity to recommend new resources.

<http://amser.org>

Coral Ecosystems SciGuide

The Coral Reef Conservation Program, the Communications and Education Division, and the National Science Teachers Association have unveiled the Coral Ecosystem SciGuide, a new web-based "science toolbox" for teachers and other educators. The Coral Ecosystem SciGuide pulls together Internet resources on coral science and organizes them into three major theme areas for the classroom: coral reef biology, coral ecosystems, and coral conservation. This SciGuide is featured in the December issue of *NSTA Reports*, the association's newspaper. For more information, contact Bruce Moravchik at Bruce.Moravchik@noaa.gov or Alissa Barron at Alissa.Barron@noaa.gov. http://www.nsta.org/main/news/stories/nsta_story.php?news_story_ID=53036

eField Trips

Check out the eField trips available, both upcoming and archived. In general, each program has four major components: a virtual visit, a trip journal worksheet, Ask the Experts, and a live webchat. Archives of the questions are posted on the website. Don't miss *Glacier Bay: A Living Laboratory for Studying Marine Mammals*, hosted by Glacier Bay National Park and Preserve. Ask the Experts will be open February 20-22, 2007.

<http://www.efieldtrips.org/Schedules/searchResults.cfm?searchType=all>

Flower Garden Banks National Marine Sanctuary

The updated Flower Garden Banks National Marine Sanctuary Website is live. Sanctuary education materials can be downloaded directly from the site's document library. Included are downloadable coloring pages, games, an educational activity, and more. Teachers can sign up for an Education List Serve, request educational materials, and stay abreast of the various workshops and seminars offered by the sanctuary.

<http://flowergarden.noaa.gov/education/education.html>

Guidelines to Prevent Species from becoming Endangered or Threatened

This 56-page draft guideline was produced for a consortium of NGOs, including the Humane Society of the U.S., Wildlife Land Trust, Island Resources Foundation, and Monitor Caribbean. This document brings together current international and small island conservation planning information which can be used by national planners to build a proactive plan for protecting island species and habitats from current and projected hazards and threats. It is available for downloading under Information Documents on the website. Check out the many other useful documents on the SPAW COP IV website.

http://cep.unep.org/meetings/2006/spaw-cop-iv/meeting_documents_view

Immersion Presents: Secrets of the Gulf

Dr. Robert Ballard and a team of researchers will launch an expedition to the Gulf of Mexico in March; from March 4-9, 2007 Immersion Presents and Media Arts will offer half-hour broadcasts live from the Gulf of Mexico and Mystic Studio. An important theme of the expedition will be connectivity. Biologists and geologists on the team will explore how the Flower Garden Banks Sanctuary's marine ecosystems are connected to one another, to other parts of Gulf, and to the land. Archaeologists on the team will investigate connections between the sanctuary and human history. They will search for evidence of ancient shorelines and human habitation in the area around the Flower Garden Banks. Throughout all of these efforts, the expedition team will gather important data to aid in the conservation and management of vital resources within the Gulf. The Immersion Presents website will offer educational activities and other materials, expedition coverage, message boards, and other materials. Check back for updates.

<http://www.mysticaquarium.org/index.cgi/1290>

Journey North

Journey North begins again in February. Track the arrival of spring and the migrations of numerous wildlife species using the Journey North web site. Journey North is a free online program engaging students in a study of wildlife migration and seasonal change, following tulips, monarch butterflies, whooping cranes, gray whales, and more. Students share their own field observations with classrooms across the hemisphere. In addition, students are linked with scientists who provide their expertise directly to the classroom. The Annenberg Channel also offers free Journey North video programs, downloadable teaching tools and classroom lessons, and more.

<http://www.learner.org/jnorth/>

Real-time Data Resources from Ocean Observing Systems

This resource list of over 70 annotated web sites was developed as part of a national focus group study of K-12 educators who currently use real-time data in their classrooms. This list focuses on ocean-related datasets, but also includes weather and watershed resources. A Real-time Data Educators Mailing List is also available for subscribers at https://email.rutgers.edu/mailman/listinfo/rtd_educators.
<http://marine.rutgers.edu/outreach/rtd/resources.htm>

Repeat Glacier Photography at Kenai Fjords

Kenai Fjords National Park, located on the eastern edge of Alaska's Kenai Peninsula, is home to the largest concentration of tidewater glaciers in the U.S. National Park System. Changes in these glaciers have never been more obvious nor easy to comprehend, thanks to a cooperative project between the National Park Service and the U.S. Geological Survey. The project research relies on work done by three scientists separated by nearly a century of time and on modern technology that allows for precise adjustment of digital photographs. On the website, you can view significant changes in glacier growth and glacier stability suggesting both warming and changes in precipitation in this part of Alaska. The website also hosts a complete description of the project and links to other reports.
<http://www.oceanalaska.org/research/rptglacier-video.htm>

Rivers, Trails and Conservation Assistance Program

The Rivers, Trails and Conservation Assistance program provides staff time and technical assistance for 1-2 years to projects that need an extra hand to take the next leap forward to success. The program works with citizens' groups and non-profits, helping them realize their vision of how to improve their communities, whether it's through a rail-trail, urban park, or a restored river. Contact the regional representative today to determine if your project is a good fit. The website offers informational publications, information about applying for assistance, links to online resources for river conservation and trail development, and more.
<http://www.nps.gov/rtca>

Science from the Poles

This site from the Exploratorium in San Francisco is designed to celebrate the start of the International Polar Year with webcasts that highlight the work of scientists at both the North and South Poles. Sections include presentations on climate change and another that focuses on the work of scientists who are constructing the largest telescope ever utilized in a polar region. In addition, users can view videos that address different themes, including sense of place, ice diving, penguins, and more.
<http://www.exploratorium.edu/poles/index.html>

Stop Disasters Game

A pilot online game from the U.N.'s International Strategy for Disaster Reduction aims to teach children, ages 9-16, how to protect cities and villages against natural hazards through disaster risk planning and management. The game includes five natural hazard scenarios (flooding, tsunami, wildfire, hurricane, and earthquake) with different levels of difficulty that require critical decision-making and strategic planning. Players assess risk, build and house the local population, and assign roles. A natural hazard strikes, after which players assess damage and receive scores. The player who has protected the most people and their livelihoods (property and resources) wins the game. The pilot

game is currently being tested; contact Brigitte Leoni at leonib@un.org with any additional scenarios or development.

<http://www.stopdisastersgame.org>

USGS Data Delivery and Mapping Over the Web

The National Water-Quality Assessment (NAWQA) Program offers a downloadable fact sheet, *Data Delivery and Mapping Over the Web – National Water-Quality Assessment Data Warehouse*. NAWQA's Data Warehouse integrates data on water quality, ecology, and hydrology across the nation, providing consistent, online collections of water-quality data and associated information. Included in the database are chemical concentrations in water, sediment, and aquatic-organism tissues; biological community data for algae, fish, and invertebrates; daily streamflow and temperature information for selected sampling sites; and more. The fact sheet offers useful tips and information about these and other NAWQA data offerings.

<http://pubs.usgs.gov/fs/2006/3101/>

Watersheds: Connecting Weather to the Environment - Online

National Environmental Education and Training Foundation (NEETF), in partnership with the Cooperative Program for Operational Meteorology, Education and Training, has released the first in a series of free online courses relating weather to the environment.

Watersheds: Connecting Weather to the Environment is a primer on how weather events relate to the health of a watershed, and how the public can take simple actions to protect watershed health. Although originally designed for meteorologists, agencies and organizations, land use managers, teachers, community leaders, and others interested in learning more about watersheds are encouraged to use and distribute this interactive resource. The website includes easily downloadable files, resources, images, and more.

<http://www.meted.ucar.edu/broadcastmet/watershed>

World Meteorological Organization

The World Meteorological Organization is one of the oldest specialized agencies of the United Nations. With information available in Arabic, English, Spanish, French, and Russian, this website offers information on weather, climate, and water. The Topics section contains links to thematic pages on over four dozen areas of interest, including women in meteorology, Antarctic activities, disasters, and much more. The website also offers information on weather conditions and links to the Severe Weather Information Centre with a real-time interactive map of the world. An additional section offers the beginning of an online art gallery with artistic impressions of different weather conditions from around the world.

<http://www.wmo.int/>

MISCELLANEOUS, INITIATIVES, AND MORE

Civic Education Project

This Earth Day Network program helps teachers to teach students about a selected local environmental problem and take action to improve that issue. The program currently seeks applicants for the spring semester in Los Angeles, New Orleans, Cleveland, Chicago, Cincinnati, Albuquerque, and Washington, DC.

http://www.earthday.net/involved/civic_education/CEP_intro.aspx

Geotagger 1.1

Photographers with a keen interest in spatial analysis (and appropriate photographs) might find this freeware useful. With Geotagger 1.1 and Google Earth, users can take their digital photographs, insert GPS coordinates into the images, and place them online.

<http://craig.stanton.net.nz/software/Geotagger.html>

National Environmental Education Week

National Environmental Education Week, April 15-22, 2007, offers a full week of educational preparation, learning, and activities in K-12 classrooms, nature centers, zoos, museums, and aquariums. An on-line Nature Bee which will encourage student identification of wildlife habitats, flora, and fauna in their communities. Questions will be posted in March, 2007. Become a formal partner by registering on the home page.

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

NOAA Celebrates 200 Years

NOAA's 200th Celebration in 2007 will highlight the rich history of science, service, and stewardship provided to the American public by NOAA and its predecessors. Stories range from the founding of the U.S. Survey of the Coast by Thomas Jefferson to the present-day activities of an agency dedicated to the protection, management, and understanding of our ocean, coasts, and skies. The website includes a section For Kids and Educators, Feature Stories, Historical Resources, and more.

<http://celebrating200years.noaa.gov/welcome.html>