

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

MAY 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.

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

Notable References

The Failure of Environmental Education (and How We Can Fix It)

In this article, published in PLoS Biology, a peer-reviewed open-access journal published by the Public Library of Science, authors Daniel T. Blumstein, Associate Professor at the Department of Ecology and Evolutionary Biology, University of California, Los Angeles, and Charlie Saylan, Executive Director at the Ocean Conservation Society, argue that it is time for the environmental education community to take stock of itself. They suggest ways that an "evidence-based" approach can improve environmental education and that to create environmentally aware citizens, some difficult lessons must be taught.

<http://biology.plosjournals.org/perlserv/?request=get-document&doi=10.1371/journal.pbio.0050120>

Managing Tourism and Biodiversity

This User's Manual on the Convention on Biological Diversity's Guidelines on Biodiversity and Tourism development is a revised version of a draft prepared pursuant to a meeting of experts. In addition to the user's guide, the manual includes checklists and additional resources.

<http://www.biodiv.org/doc/programmes/socio-eco/tourism/tourism-manual-en.pdf>

Scaling Up Marine Management: The Role of Marine Protected Areas

This report from the World Bank assesses factors likely to determine marine protected areas' success and identifies opportunities for the bank and its partners to scale up MPA implementation to meet global conservation targets. The report focuses on how best to capture the potential benefits of MPAs for helping the world's poor while addressing the sociocultural and political realities of restricting access to the sea and regulating what has traditionally been considered common property.

http://siteresources.worldbank.org/INTCMM/Publications/21108865/Final_Printed_Version_MPA_ESW.pdf

PROGRAM OF THE MONTH

Wider Caribbean Sea Turtle Conservation Network

The Wider Caribbean Sea Turtle Conservation Network (WIDECAST) is an international scientific network comprised of volunteer Country Coordinators (mainly sea turtle experts, natural resource professionals, and community-based conservationists), an international Board of Scientific Advisors, and Partner Organizations in more than 30 Caribbean States and territories. Each coordinator works closely with a national coalition of stakeholders, including biologists, conservationists, resource managers, resource users, policy-makers, educators, and others, to ensure that everyone has access to the dialogue, as well as to the unique products and services of the network. The program offers an educator's handbook and a teacher's activity manual to help teachers bring the study of sea turtles into their classroom.

Endangered Caribbean Sea Turtles: An Educator's Handbook

This comprehensive handbook offers nearly 40 classroom activities that use sea turtles to teach concepts related to natural science, geography, social studies, team building, statistical analysis, public speaking, and more. By exploring sea turtle diving and feeding, navigation and migration, nesting and hatching, as well as the various factors that threaten sea turtle survival, including pollution, international trade, fisheries, and habitat loss, students gain a greater understanding of contemporary marine science and conservation issues. The Spanish edition will be available in 2008.

Sea Turtles Teacher's Activity Manual

The authors of the textbook, "Sea Turtles: An Ecological Guide" which features more than 350 color photos and original graphics to illustrate basic concepts of sea turtle taxonomy, ecology, and physiology, as well as human impacts and conservation, have revised and reprinted the accompanying Teacher's Activity Manual. The Activity Manual (free with the purchase of 10 or more copies of the textbook for classroom use) brings these concepts alive with field, lab, and classroom activities that are easy to implement and adaptable to any age.

All profits from the sales help ensure the survival of Caribbean sea turtles through the work of the Wider Caribbean Sea Turtle Conservation Network.
Contact Karen Eckert at keckert@widecast.org

WEBSITE OF THE MONTH

Earth Portal

Earth Portal is a free resource for timely, objective, science-based information about the environment built by a global community of environmental experts: educators, physical, life, and social scientists, scholars, and professionals who have joined together to communicate to the world. The Earth Portal is being created and governed by individuals and organizations, with attribution and expert review for accuracy.

Earth Portal includes:

- *Encyclopedia of Earth* offers an initial 2,300 articles from over 700 experts from 46 countries. The encyclopedia includes articles, e- books and reports, interactive maps, and more.
- *Earth News* includes news updates from many sources, with links from key words to encyclopedia articles, allowing readers to learn about the science behind the headlines.
- *Earth Forum* allows anyone to engage in discussions with experts, ask questions and get answers, and participate in debates about issues that matter to them.
- *Environment in Focus* provides an exploration of a major issue each week - energy, climate change, environmental economics and other topics - led by a prominent expert in the subject and involving articles, news, places, discussions, interesting facts, and more.

Check out the Hot Topics for Marine Ecology.
<http://www.earthportal.org/>

MESSAGE FROM THE BRIDGE

Bridge to hold an Ocean Observing System Teacher Workshop

The Bridge educators are planning a workshop for grade 9-12 science teachers within the Chesapeake Bay watershed. This data-rich professional development and classroom opportunity will focus on the Bay and its associated ocean observing systems, including the Chesapeake Bay Interpretive Buoy System, National Estuarine Research Reserve system, the Chesapeake Bay Observing System, and Virginia Estuarine and Coastal Observing System. Expert scientists and educators will provide teachers with interactive presentations, on-water experiences, and hands-on demonstrations designed to introduce ocean observing systems and how they can be used in and out of the classroom. This workshop is tentatively scheduled for June 26-29, 2007, and is contingent upon funding.

<http://www.vims.edu/k12/cbibs>

REQUESTS

Seeking Curriculum and Vignette Writers and Reviewers

The San Luis Obispo County Office of Education continues to seek experienced writers to work on the development and review of specific elements of a Model Curriculum for California's Education and the Environment Initiative.

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

Why We Love the Ocean Survey

The Ocean Conservancy is putting together an inspirational web page in honor of World Ocean Day, June 8, 2007, about why people love the ocean. Participate by completing their World Ocean Day survey.

<http://www.oceanconservancy.org/site/R?i=4i-sD6UT4ZhEsJsKC8zVKA>

GRANTS AND OPPORTUNITIES

Braitmayer Foundation Education Grants

The Braitmayer Foundation offers grants to fund a broad range of K-12 education programs with curricular reform initiatives and professional development opportunities for teachers. The grants can be used as seed money, challenge grants, or to match other grants to the recipient organizations. Grant applications are accepted twice each year; the deadline for the summer grant cycle is June 1, 2007.

<http://www.braitmayerfoundation.org/guid.htm>

Brimstone Award for Applied Storytelling

The National Storytelling Network's annual Brimstone Award for Applied Storytelling is awarded for a project that focuses on the transformational properties of storytelling to increase understanding of the ways storytelling can promote change in individuals and communities. Educators are invited to submit a storytelling project that is service-oriented, based in a community or organization, and replicable in other places and situations. Hurry - preliminary proposals are due May 7, 2007, and full proposals due by July 9, 2007.

<http://www.storynet.org/Programs/Grants/Brimstone/index.html>

Caribbean Coral Reef Institute Request for Proposals

The Caribbean Coral Reef Institute is a cooperative program between the University of Puerto Rico, Mayagüez and NOAA. The Institute sponsors scientific research and monitoring programs that address short and long-term management-driven priorities for the understanding and managing of the coral reef ecosystem of the US Caribbean. These activities address the major threats to coral reefs within an ecosystem context, including human socio-economic dimensions, and enhance our understanding of the biological and physical processes that structure coral reefs and impact the health of the ecosystem.

<http://ccri.uprm.edu/>

Environmental Leadership Fellowship Program - Southeast

The Environmental Leadership Program invites applications for its inaugural Southeast Regional Network Fellowship Program. Through hands on training, community building activities and participatory group discussions, fellows hone the practical skills of public leadership, develop a strong peer network, and explore ways to achieve lifelong personal and professional goals. The program is a unique opportunity for talented

individuals living or working in the Southeast (including Alabama, Georgia, the Carolinas, northern Florida, and central and eastern Tennessee). The deadline for application is June 4, 2007.

<http://www.elpnet.org/southeastnetwork/training.php>

GK-12 Program - Texas

The National Science Foundation sponsors the GK-12 Program, An Integrated Environmental Approach to K-12 Education, an UT Austin Environmental Science Institute program that partners graduate students in the sciences with K-12 teachers in Texas to enhance science education through new classroom activities, workshops, and field projects. The three-year project provides support for ten graduate fellows each year to serve as resources for K-12 science students and teachers. The program emphasizes collaboration in K-12 classrooms and in field projects on Texas watersheds, estuaries and ocean-going vessels. The deadline for application is May 9, 2007

<http://www.esi.utexas.edu/gk12/index.html>

J.J. Reneaux Emerging Artist Grant

The Emerging Artist Grant awards a storyteller of major and unique performing talent who has not yet received wide public recognition. The grant may be used only to pay for activities that will advance storytelling skills; for instance, workshops, specific courses of study, coaching or work with a director, mentoring by senior tellers, relevant conference attendance, and other forms of training. Applications due in August, 2007.

<http://www.storynet.org/Programs/Grants/JJReneaux/emergingartistgrant.htm>

Lloyd Bridges Scholarship

The Lloyd Bridges Scholarship enables a qualified educator to participate, at no cost, in a CEDAM-sponsored or -sanctioned expedition. This year CEDAM will be awarding two scholarships for participation in REEF's Discovery Tour led by Paul Humann in Key Largo, Florida from July 7-14, 2007. The scholarship will be awarded on the basis of both merit and financial need. The website will be updated shortly, but contact information is available from the website for further information.

<http://cedam.org/>

Marine Debris Prevention and Removal Program

The Marine Debris Prevention and Removal Program is a project of the National Fish and Wildlife Foundation in cooperation with the NOAA Marine Debris Program. The Program seeks to support projects that have a strong likelihood of reducing marine debris caused by derelict fishing gear (both commercial and recreational); to increase our understanding of the impacts, location, and best methods for removal; and projects that engage marinas, ports, and the fishing industry. The deadline for pre-proposals is May 18, 2007.

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

Mia J. Tegner Memorial Research Grants in Marine Historical Ecology and Environmental History

Marine Conservation Biology Institute offers the Mia J. Tegner Memorial Research Grants in Marine Environmental History and Historical Ecology. The program focuses on projects from both natural and social scientists that seek to uncover interactions between natural and human history in the marine and estuarine environments worldwide. MCBI is particularly interested in studies that seek to describe systems prior

to large-scale human impacts and industrialization. The deadline for application is June 1, 2007.

http://www.mcbi.org/what/tegnor_app_07.htm

Nature of Learning Start-Up Grants

The Nature of Learning is a community-based National Wildlife Refuge System conservation education program that uses national wildlife refuges as outdoor classrooms and seeks to promote a greater understanding of conservation issues while enhancing student academic achievement. The program utilizes field experiences and student-led stewardship projects to connect classroom lessons to real world issues; and involves a partnership among local schools, community groups, natural resource professionals and local businesses. Applicants must partner with a national wildlife refuge to be eligible. The deadline for application is June 15, 2007.

<http://www.fws.gov/refuges/education/natureOfLearning/intro.html>

ReSource Award for Sustainable Watershed Management

Swiss Re reinsurance company offers the 2008 ReSource Award, intended to recognize leadership in implementing sustainable watershed management in developing nations. The annual award is open to NGOs, public agencies, and scientific institutions. The deadline for submission is May 31, 2007.

<http://www.swissre.com/resource>

Science and Engineering Visualization Challenge

The National Science Foundation and *Science* created the Science and Engineering Visualization Challenge. In a world where science literacy is dismayingly rare, illustrations provide the most immediate and influential connection between scientists and other citizens, and the best hope for nurturing popular interest. Judges appointed by the National Science Foundation and the journal *Science* will select winners in each of five categories: photographs, illustrations, informational graphics, interactive media and non-interactive media. The deadline for application is May 31, 2007

http://www.nsf.gov/news/special_reports/scivis/index.jsp?id=challenge

Water You Thinking?

Have your students enter The People Speak water video contest. Prepare a video showing how to conserve water or tell something everyone needs to know about water conservation. The video can be informative, funny, or serious, but the overall purpose of the video is to both inform and entertain. The video should communicate to a general public audience and be suitable for submission to YouTube. Final videos will need to be uploaded and the submission form completed by June 15, 2007.

<http://www.thepeoplespeak.org/peoplespeak/Contests>

Young Birder of the Year Contest

The American Birding Association/Leica Young Birder of the Year is an annual contest for youth ages 10–13 and 14–18. Completed projects are due by October 10, 2007 but youth must register by June 1, 2007.

<http://americanbirding.org/yb/yby/index.html>

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Youth Conservation Corps – California

Cabrillo National Monument on Point Loma, California, is recruiting for its Youth Conservation Corps Summer employment program. The program is open to young people ages 15-18, and selection will be by random drawing with equal numbers of males and females selected. The dates for this year's program are June 20-August 15, 2007. The deadline for application is June 1, 2007.

<http://www.nps.gov/cabr/parknews/newsreleases.htm>

Summer Intern Opportunity - Massachusetts

Northeastern University's Marine Science Center has two summer college intern positions available in the Boston, Massachusetts area. Interns work with the Outreach Program conducting programs aboard the research vessel *Mysis*, on-site at the marine science center, and in various local coastal habitats. Responsibilities include leading K-12 outreach programs, summer science academies, and summer teacher workshops. Housing and a small stipend are available. Contact Emily Blume for more information or to apply for this position.

<http://www.marinescience.neu.edu/>

Contact Emily Blume at e.blume@neu.edu

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. Summer 1 courses (including The Ocean System, Evolution, Earth: Inside and Out, and more) run June 11–July 22, 2007; the deadline for registration is May 29, 2007. Summer 2 courses (including The Ocean System, The Diversity of Fishes, Sharks and Rays, and more) run July 2–August 12, 2007; the registration deadline is June 18, 2007.

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

Communicating Ocean Sciences Summer Workshop - California

The Center for Ocean Science Education Excellence (COSEE) – California will host a two-day workshop, Communicating Ocean Sciences Summer Workshop, June 11-12, 2007 in Berkeley, California. Participants will study education-theory-grounded methodology and receive the materials needed to teach the courses which are now being taught at more than 20 universities that have marine science programs. The deadline for applications is MAY 8, 2007.

<http://cacosee.net/collegecourse/workshop.html>

Cool Waters Workshop - Georgia

In this three-day water workshop for Georgia educators, June 4-6, 2007 in Marietta, Georgia, participants will learn about drinking water, wastewater, and surface water through daily field trips and hands-on activities. K-12 resources will be provided, including Project WET, The Urban Watershed, Healthy Water Healthy People, and Georgia Adopt-A-Stream certification. The deadline for registration is May 25, 2007.

<http://www.gawp.org/events.htm#Anchor-Cool-49575>

Coral Reef Task Force Meeting and Bleaching Tools Workshop – American Samoa

The 18th Meeting of the U.S. Coral Reef Task Force will be held August 20-25, 2007 in American Samoa. Additional information will be available on the website in the coming weeks, but if you plan to attend, you are advised to make flight arrangements as soon as possible.

In a follow-on event of the task force meeting, NOAA's Coral Reef Conservation Program and Australia's Great Barrier Reef Marine Park Authority will hold a joint 3-day **Bleaching Tools Workshop**, designed to increase the ability of coral reef managers to anticipate and respond to coral bleaching events. If you would like to attend this workshop, please email Jessica Morgan for more information. Space is limited, so please indicate your interest now. The workshop is offered free of charge, and some travel assistance may be available.

Workshop contact: Jessica Morgan at Jessica.morgan@noaa.gov
<http://www.coralreef.gov/taskforce/index.html>

Corals to Classrooms - Texas

The Corals to Classrooms educator workshop, June 19-20, 2007 in Galveston, Texas, is sponsored by the Gulf of Mexico Foundation and hosted by the Flower Garden Banks National Marine Sanctuary. The workshop focuses on coral reef biology and ecology and includes information, resources, hands-on activities, and a field trip. The deadline for application is May 31, 2007.

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

Developing Teacher Training – West Virginia

The National Conservation Training Center will offer Developing Teacher Training (OUT8161), September 10 – 14th, 2007 in Shepherdstown, West Virginia. This face-to-face training presents the essential components of working with schools and school systems, specifically on designing, conducting, and evaluating teacher workshops/trainings. The course culminates with participants working in groups to apply their skills at an actual 2-hour teacher workshop. Upon returning to their sites, each participant is also expected to plan and conduct a workshop for teachers within a year. The deadline for registration is July 16, 2007; call for availability after the deadline.

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

Contact Georgia Jeppesen at georgia_jeppesen@fws.gov

Educators' Workshop and Public Lecture - California

The Cabrillo Marine Aquarium will host a free educators' workshop, *Catch on! Fish Contamination, Bioaccumulation and Healthy Fishing*, June 9, 2007 in San Pedro, California, featuring inquiry-based, hands-on exercises for K-12 educators. The lecture, "DDT, PCB, past mistakes and the legacy left behind: what can we do now?" for both workshop participants and the public, will take place from 10:30 a.m.–noon. To register for the K-12 educators' workshop, contact the COSEE-West office at cosee.west@gmail.com; no registration is needed to attend the lecture.

EstuaryLive: NOAA in the Carolinas 2007 - Online

Registration is now open for EstuaryLive: NOAA in the Carolinas, a celebration of 200 years of NOAA, which will be held May 9-11, 2007 in Beaufort, North Carolina. Lessons highlighted during this three-day, interactive, Internet field trip will provide information on basic estuarine features and species including seagrass, beach geology, oysters,

dolphins, and more. Other lessons will focus on the scientists and agencies that study these estuaries, providing insight on the history of coastal studies.

<http://estuaries.gov/elivenc07.html>

Google Ocean - from Sneakers to Sea Lions Workshop - California

The Center for Marine Studies offers this free workshop for middle and high school teachers, Saturday, May 12, 2007 in San Pedro, California. The workshop includes tours of two rescue facilities, working with GIS data and Google Earth, information about pinnipeds and marine birds, and more.

Contact Todd Shattuck at todd.shattuck@lausd.net

Gulf and Caribbean Fisheries Institute

The 60th annual Gulf and Caribbean Fisheries Institute conference will be held from November 5-9, 2007 in Punta Cana in the Dominican Republic. Abstracts are due August 15, 2007. Two Travel Awards and two Student Achievement Awards are offered, with deadlines of July 1 and August 15, 2007, respectively.

<http://www.gcfi.org/Conferences/60th/PuntaCana60.html>

International Biodiversity Conference

The 2007 International Biodiversity Conference, June 16-21, 2007 in Baños, Ecuador, is sponsored by Nova Southeastern University's Environmental Science/Studies Program and Wild Spots Foundation.

<http://www.wildspotsfoundation.org/2006econf.html>

Interpretive Training - Online

This site is the result of a partnership between the NPS Interpretative Development Program and the Eppley Institute for Parks and Public Lands of Indiana University. The website provides competency-based training and development to anyone with access to a computer. The free Foundations of Interpretation is the first course to become available, introducing interpreters and managers to the purpose, practice, and theory of interpretation. Additional courses covering each of the ten NPS benchmark interpretive competencies will be posted as they are developed and will be available for a small registration fee.

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

Lake Huron Exploration Workshop – Great Lakes

The COSEE Great Lakes, in partnership with the Great Lakes Sea Grant Network, invites teachers (grades 4-10) and non-formal educators from the Great Lakes region to participate in the Lake Huron Exploration Workshop, August 11-17, 2007, in Alpena, Michigan. This workshop is designed to promote Great Lakes and ocean sciences in formal and informal education and forge lasting relationships between science researchers and educators. Participants will be involved in classroom and field programs, work with scientists, examine curricula and resources, and explore classroom activities relating to the Great Lakes and ocean resources. Participation is limited to 15 educators; the deadline for application is June 1, 2007. Educators who are members or teachers of groups underrepresented in science are encouraged to apply. Details will be available on the website shortly.

<http://coseegreatlakes.net/events/>

Learning Ocean Science through Ocean Exploration Workshop – South Carolina

Join Grade 5-12 educators at the South Carolina Aquarium June 16, 2007 in Charleston, South Carolina, during this follow-up session to the introductory professional development workshop Learning Ocean Science through Ocean Exploration. Conduct inquiry- and standards-based activities tied directly to ocean expeditions. Pre-registration is required and space is limited. The deadline for registration is June 1, 2007.

Contact Brian Thill at BThill@scaquarium.org

Making Ocean Life Count Seminar Series – Maryland and Webcast

The NOAA Office of Ocean Exploration is hosting a series of seminars on the Census of Marine Life, *Making Ocean Life Count*. These seminars will be held from mid-April through June, 2007 at a variety of locations around NOAA's Silver Spring, Maryland campus, with live video webcast feed and phone-in available for remote users. Presentations will also be posted on the website when available.

<http://explore.noaa.gov/about/seminar.html>

Natural History and Conservation of Florida Turtles - Florida

The Natural History and Conservation of Florida Turtles, a four-day workshop, June 4-7, 2007 in St. Petersburg, Florida, introduces teachers, environmental educators, and conservationists to the diversity, natural history, status, conservation, and management of Florida turtles. Participants learn basic identification techniques, causes of decline, conservation measures, and educational activities/resources. Highlights include field trips to upland, riverine, and coastal habitats to experience and study several species in the wild. A significant portion of the workshop involves hiking, canoeing, swimming, and snorkeling. The goal is to provide educators with both a solid introduction to the ecology and conservation of Florida turtles and first-hand field experiences. The workshop is limited to twelve participants; the deadline for registration is May 28, 2007.

<http://www.heinrichecologicalservices.com/programs.html>

New York State Marine Education Association Annual Conference

The 29th Annual Conference of the New York State Marine Education Association (NYSMEA) will be held June 3, 2007 in New York, New York. Join their hosts, the American Museum of Natural History and South Street Seaport Museum, for an enriching experience in marine science, with the theme *NYSMEA Takes Manhattan*.

<http://nysmea.org/con07/>

Oceans 2007

The annual Marine Technology Society / Institute for Electrical and Electronics Engineers-Oceanic Engineering Society Conference will be held September 29-October 4, 2007 in Vancouver, British Columbia, Canada. The conference theme is *Edge of Tomorrow* and will explore projects which gather data to understand the oceans. This conference features a partnership of engineers, technologists, scientific researchers, and marine educators. Oceans 2007 is calling for papers in the area of marine education, coastal zone management, and many other topics. The abstract deadline has been extended to MAY 14, 2007.

<http://www.oceans07mtsieevancouver.org/index.cfm>

Oceans for Life Virtual Teacher Workshop

Oceans for Life Virtual Teacher Workshop Earth Day 2007 was a two-week online workshop held April 16-28, 2007. It is still open for viewing, but not for input. Keynotes

are provided by scientists in the field conducting cutting edge research. You can access their presentations as well as their online discussions with participants in the workshop. The keynotes have National Science and other standards linked to them, and are supported by additional resources and materials to help your efforts improving ocean literacy in the classroom. Check out the Teacher's Tool Kit and Share-a-Thon sections. <http://coexploration.org/ngs/EarthDay/index.html>

Teacher-to-Teacher Workshops – Various Locations

The U.S. Department of Education's Teacher-to-Teacher Initiative will be held in 22 cities throughout the country to provide free high-quality professional development opportunities for teachers. Prominent educators will share best practices in all grade levels and content areas. Check the website for locations and focus areas. Registration is still open for many locations.

<https://www.t2tweb.us/Workshops/Schedule.asp>

EDUCATIONAL RESOURCES

Air – Here, There, Everywhere!

The Chemists in the Library Working Group of the American Chemical Society has compiled electronic and print resources about climate for further exploration of Chemists Celebrate Earth Day: Air - here, there, everywhere! The resources have been classified by grade level and annotated. The website includes basic characteristics of the Atmosphere, Understanding Weather, Climate, and many resources for further information.

<http://library.stanford.edu/depts/swain/hosted/earthday/2005/index.html>

Atlas of Science Literacy

The Atlas of Science Literacy is a two-volume collection of conceptual strand maps, and commentary on those maps, that show how students' understanding of the ideas and skills that lead to literacy in science, mathematics, and technology might develop from kindergarten through 12th grade. The atlas is part of a coordinated set of tools developed by the American Association for the Advancement of Science's Project 2061, to help educators understand and use specific goals for student learning. Volume 1, published in 2001, is joined now by a new, second volume. Together, the volumes map all of the goals that are recommended in the Benchmarks for Science Literacy. The website includes sample maps from both volumes.

<http://www.project2061.org/publications/atlas/default.htm>

Cities and Oceans

The World Ocean Observatory offers Cities and Oceans, the latest website in their series of events exploring ocean issues. This site offers multimedia presentations, interviews, and a wide array of information and images.

http://www.thew2o.net/events/cities_oceans/index.html

Climate Change and World Heritage

The UNESCO World Heritage Centre offers the publication entitled "Case Studies on Climate Change and World Heritage". The report features 26 case studies, including the Tower of London, Kilimanjaro National Park, and the Great Barrier Reef, that are representative of the dangers faced by the 830 sites inscribed on the World Heritage List. Chapters include Glaciers, Marine Biodiversity, Archaeological Sites, and more.

http://whc.unesco.org/documents/publi_climatechange.pdf

Dial-A-Buoy

Dial-A-Buoy gives mariners an easy way to obtain weather reports through a telephone. Large numbers of boaters use the observations, in combination with forecasts, to make decisions on whether it is safe to venture out. Buoy reports include wind direction, speed, gust, significant wave height, swell and wind-wave heights and periods, air temperature, water temperature, and sea level pressure. Some buoys report wave directions. Coastal weather stations report the winds, air temperature, and pressure; some also report wave information, water temperature, visibility, and dew point.

<http://www.ndbc.noaa.gov/dial.shtml>

eField Trips – Manatees and Sea Turtles

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 the highlighted field trips on Manatees and Sea Turtles.

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

Environmental Dilemmas in Georgia

This downloadable resource book is intended to serve as a tool for educators who are interested in incorporating problem-solving strategies and contextual teaching/learning into their curriculum. Each author's contribution has been designed to meet national and state standards, provides the background on a specific environmental dilemma found in Georgia, and then poses a problem for inquiry. The author then offers some alternative solutions for consideration, but requests the readers to provide more possibilities, and then come to a decision and group consensus as to the most viable solution using an evaluation matrix. Covered issues include water, fish, invasive species, urbanization, and much more.

<http://www.eeingorgia.org/net/content/page.aspx?s=49027.0.68.4863>

Fire Information and Education

The Wildland Fire Lessons Learned Center on-line Advances in Fire Practice has posted a Special Issue, *Fire Information and Education: A New Message for New Challenges*. Articles include The Gift of Fire, about the Confederated Salish and Kootenai Tribes of the Flathead Reservation in northwestern Montana's award-winning fire education project called "Fire on the Land;" Fire Education with One Foot in the Black, about the approach to fire education at Sequoia and Kings Canyon National Parks, illustrating the value of innovative approaches to communicating with the public: using different communication styles, using windows of opportunity, and providing information in terms people can understand; and much more about fire education and outreach.

<http://www.wildfirelessons.net/AFP.aspx?Page=AFPOverview>

For Sea

The FOR SEA marine science curriculum and teacher training program offers materials and teaching strategies with middle school/junior high school curriculum, a career awareness in science curriculum, and environmental education curriculum. The website offers tables of contents and examples of available materials.

<http://www.forsea.org/Default.htm>

The Fragile Fringe

The USGS National Wetlands Research Center offers The Fragile Fringe, a Guide for Teaching about Coastal Wetlands, a downloadable teaching guide. The intent of this material is to provide a basis from which a comprehensive study of coastal wetlands can be developed by the teacher on the basis of individual needs. The site includes background information, suggested activities, glossary, references, and a reading list. Activities can be demonstrated by the teacher or performed by students. Emphasis is on Gulf Coast wetlands and the Mississippi River watershed.

http://www.nwrc.usgs.gov/fringe/ff_index.html

Green Guide to the Mexican Caribbean

Mexiconservación, a Mexican NGO, launched the Green Guide to the Mexican Caribbean, a colorful manual, available in English and Spanish, designed to educate both individuals and businesses as to the value of the region's biodiversity and the threats it faces. The aim of the Green Guide is to arm both tourists and the tourist industry with the basic tools necessary for the protection of the region's ecosystems. The downloadable guide includes conservation guidelines relating to sea turtles, coral reefs, mangroves, seagrasses, cenotes, lagoons and beaches. It also offers good practices recommendations for sport fishing, recreational boating, and hotel and restaurant management.

http://www.mexiconservacion.org/MC_GreenGuide.html

Loxahatchee River District Environmental Poster Series

The Loxahatchee River District in South Florida is pleased to announce the debut of its environmental poster series. The first poster features the seven species of seagrass found in the Loxahatchee River Estuary and southern Indian River Lagoon. The poster provides a way to educate the public about the importance of seagrasses and how residents can alter their actions to minimize their impact on seagrasses. The poster, along with other materials, is available for downloading from the website.

<http://www.loxahatcheeriver.org/videos.php>

Mangrove Video

The Mullet Pond Coalition offers an on-line video showcasing the ecological diversity and value of Mullet Pond in Simpson Lagoon, St. Maarten. This five minute video provides a view into the underwater world and wildlife encountered among the mangrove trees and seagrass. It also outlines why Mullet Pond is so environmentally important and how it may be under threat. This video can be seen along with others on the popular website, You Tube.

<http://www.youtube.com/watch?v=IQEgQhy8QAE>

Marine Biology Website

MarineBio.org is a nonprofit volunteer organization of marine biologists, students, professors, and conservation advocates working to share the wonders of the ocean realm to inspire education, research, and a sea ethic. The website includes links to the marine biology news, research, games, species information, photo galleries, and more.

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

Millennium Ecosystem Assessment Toolkit

The Millennium Ecosystem Assessment is a study of the global environment and human well-being. Island Press has developed a toolkit based on the assessment's assets, called *Millennium Ecosystem Assessment, A Toolkit for Understanding and Action*:

Protecting Nature's Services. Protecting Ourselves. This toolkit describes the assessment, ecosystem services, and valuation, and lays out lessons learned from effective policies and practices to increase human well-being and to solve environmental and development problems.

<http://www.islandpress.org/MAToolkit>

Monitor National Marine Sanctuary

The Monitor National Marine Sanctuary protects the wreck of the famed Civil War ironclad *USS Monitor*, best known for its battle with the Confederate ironclad *Virginia* in Hampton Roads, Va., on March 9, 1862. The revised website offers student activities, downloadable lesson plans for teachers, updates on past expeditions, a listing of upcoming events, and more.

<http://monitor.noaa.gov>

National Geographic Classroom Companions and Resource Library – Global Fish Crisis

The National Geographic Magazine Community is a partnership between EdNet and National Geographic. The Resources section offers a library of material on numerous subjects, easily searchable by keyword. April 2007 highlights the Global Fish Crisis with articles, lesson plans, multi-media, and more.

http://www.ngsednet.org/community/resources_view.cfm?community_id=168&resource_id=7388

New Jersey Environmental Digital Library

The New Jersey Environmental Digital Library brings together materials on New Jersey's environment, mostly from state government agencies, non-profit organizations, research institutes, and academic departments. The News and Features area highlights some of the latest additions, while Past Spotlights includes direct links to reports on mitigating floods on the Delaware River and *Trout in the Classroom: A Guide for Teachers*.

<http://njedl.rutgers.edu/njdlib/index.cfm>

Ocean Currents Radio Show

Ocean Currents, with host Jennifer Stock of the Cordell Bank National Marine Sanctuary, dives into the depths and reveals the amazing science and mysteries that marine biologists are discovering out on, and in the big blue, especially in our national marine sanctuaries. Check out upcoming shows or look through the archives.

<http://cordellbank.noaa.gov/newscalendar/welcome.html>

<http://cordellbank.noaa.gov/education/radiopodcast.html>

Oceans for Life Lesson Plans

The NOAA National Marine Sanctuary Program in collaboration with National Geographic Society has launched a new series of marine education lesson plans highlighting cutting-edge research, maritime heritage, cultural resources and environmental issues in our national marine sanctuaries. Designed for K-12 teachers and marine educators, the multi-media Oceans for Life series of lessons and videos gives students an opportunity to explore the history, biology, and ecology of the National Marine Sanctuary System. The lesson plans are directly aligned with National Science Education Standards, National Geography Standards, and the Ocean Literacy Essential Principles and Fundamental Concepts.

<http://sanctuaries.noaa.gov/education>

Outdoor Safety and Survival Publications and Videos

A little reading, regular drills, and investment in safety equipment can go a long way to improve safety along our seas and shores. Publications and videos produced by Alaska Sea Grant, developed by survival experts, can help save lives and increase your comfort level at sea. The messages of survival are targeted to children, parents, teachers, and youth group leaders, among others. Fourth-grade reading level publications deal with hypothermia, frostbite, and dressing for cold weather. An outdoor survival training curriculum is geared to students and their teachers in grades five through high school. A four-volume "Surviving Outdoor Adventures" for kids in grades K-12 stresses cold water survival skills, ice safety, personal flotation devices, and surviving when lost or stranded. "It Could Have Been Prevented" examines small boat safety and was produced in partnership with Alaska Native leaders.

<http://seagrant.uaf.edu/bookstore/safety.html>.

The People Speak Global Debate

The United Nations Foundation project called The People Speak encourages young people to be actively engaged on global issues and to understand the value of global cooperation. The People Speak Global Debate will begin in October 2007 with the topic of climate change and involves high school students researching the debate topic and preparing clear, persuasive arguments for both sides of the issue. The debate topic is Resolved: Market mechanisms are preferable to regulatory approaches in reducing carbon emissions. Students will present their arguments and coordinate the entire student body to vote on the topic.

<http://thepeoplespeak.org/peoplespeak/About/highscho>

Polar Regions Workshop and Resources

The International Polar Year Online Workshop from COSEE West and the College of Exploration took place online April 16-28, 2007. The website offers archived lectures, PowerPoint shows, and educational materials related to both the Arctic and Antarctic regions. In addition, the Resources section offers an extensive list of websites with educational resources and activities.

http://www.coexploration.org/cosee_west/ipy/

Reef Education Network

The Reef Education Network website from the University of Sydney and Tech Talk Australia offers background information about coral reefs, including origins, design, energy cycles, plants, animals, research, management, a glossary, and more.

<http://www.reef.edu.au/default.htm>

Reefbase

Reefbase, a coral reef resource portal, has been recently updated. The website provides data and information on the location, status, threats, monitoring, and management of coral reef resources in over 100 countries and territories, and offers easy access to data, information, publications, photos, and maps related to coral reefs.

<http://www.reefbase.org/main.aspx>

Stream to Sea

The Canadian Fisheries and Oceans' Stream to Sea program envisions students and educators in the Pacific region that are well-informed on aquatic ecosystems, motivated by a stewardship ethic, and contribute to the health and sustainability of their community. The website offers free lesson plans (including *Salmonids in the Classroom*) along with

associated background material and student handouts for primary, intermediate, and secondary grades. Other activities and resources are also listed.

http://www-heb.pac.dfo-mpo.gc.ca/community/education/eduintro_e.htm

World Ocean Observatory Online Events

The World Ocean Observatory is dedicated to information, education, and public discourse about the ocean defined as an integrated global social system. Upcoming online events include explorations about the International Polar Year, Sea Turtles, Marine Education, Underwater Exploration, Ocean Energy, Coral Reefs, and more. Subscribe to the newsletter for reminders and essays about these events.

<http://www.thew2o.net/events/index.php>

INITIATIVES, JOURNALS, and MORE

Caribbean Endemic Bird Festival

The Society for the Conservation and Study of Caribbean Birds is celebrating the 6th Caribbean Endemic Bird Festival from April 22-May 22, 2007, with a theme of Global Warming. The purpose of the festival is to increase public awareness of the region's high endemism and rich bird life through activities such as talks, nature and birdwatching walks, photographic exhibitions, art competitions, launching of endemic bird postal stamps, articles in the media, and the preparation and distribution of educational materials about birds to schoolchildren and the general public. The website offers a downloadable festival poster, suggestions for activities, and links to resources on global warming and impacts on birds and wildlife.

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

Elliott Wildlife Values Project

The Elliott Wildlife Values Project and its Linking Girls to the Land program at Girl Scouts of the USA develop girls as leaders of environmental stewardship and conservation efforts who positively impact their communities and the world. Girl Scouts of the USA encourages Girl Scout councils, volunteers, and their partners to engage girls in 2007 national conservation events. They offer the 2007 National Conservation Events Calendar listing over 40 events, web sites, and a conservation history. Girl Scouts can earn the Get with the Land Patch by volunteering in national conservation events done in collaboration with a federal or state natural resource agency or on federal or state lands.

http://www.girlscouts.org/program/program_opportunities/environment/elliott_wildlife.asp

http://www.girlscouts.org/program/program_opportunities/environment/2007_conservation_events_calendar.pdf

Go Fish! Hawai'i and Great White Card Games

Educational, marine-themed card games, *Go Fish! Hawai'i* and *Great White*, have been received with minor errors, and are being made available at a special price (\$2.50 each, plus shipping) to classroom teachers only, for distribution to their students. The minimum quantity is 24 decks and the maximum allowed is the number of students in their class. For more details, and if you have any other ideas about what might be done with these cards, please contact Elaine de Man at elainede@sbcglobal.net.

http://www.cardsharkpress.com/wst_page2.html

Orbit Downloader

For those who need a faster way to download files, the free Orbit Downloader

1.5.4 application is a download manager that helps facilitate downloads of just about every type of media. It can also be used to resume broken or interrupted downloads.
<http://www.orbitdownloader.com/>

Rivers Alive Clean-Up - Georgia

Register your cleanup event for Georgia's annual volunteer waterways cleanup by July 31, 2007 to receive free T-shirts or patches for your volunteers (first come first serve basis), a radio Public Service Announcement, educational posters, and promotional posters to help you advertise your cleanup event.

http://riversalive.com/ra_index.htm

Special May Days, 2007

- May – American Wetlands month - <http://www.epa.gov/owow/wetlands/awm/>
- May 11 – Endangered Species Day –
<http://www.stopextinction.org/endangeredspeciesday>
- May 12 – International Migratory Bird Day - <http://www.birdday.org/>
- May 22 – International Day for Biological Diversity -
<http://www.biodiv.org/programmes/outreach/awareness/biodiv-day-2007.shtml>