

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

**JUNE 2009**

This update is funded by the National Marine Sanctuaries Foundation in partnership with NOAA's Ocean Exploration and Research Program, with additional support from the Office of Education and 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](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.

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**Notable Reference**

**Caribbean Protected Area Communication Programs**

The Trust for Sustainable Livelihoods offers the downloadable publication, *Protected Areas Management in the Caribbean: Core Themes for Education, Awareness, and Communication Programmes*. Information for the preparation of the report was gathered from a literature review and a survey of protected areas professionals in the wider Caribbean region.

<http://www.sustrust.org/documents.html>

## **CONFERENCE OF THE MONTH**

### **NMEA09 One World Conserving One Ocean**

Each summer, educators gather to hear the latest about ocean research and education, exchange ideas, and make and renew friendships with colleagues at the National Marine Educators Association Annual Conference. Join them this year June 29-July 3, 2009 on the Asilomar Conference Grounds in Pacific Grove, California, for *NMEA09: One World Conserving One Ocean*. Interact with outstanding speakers, bid on a wide variety of auction items, attend field-based workshops, enjoy field trips, and much more. The concurrent sessions will be posted on the website soon.

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

## **WEBSITE OF THE MONTH**

### **Pictures from Andros**

Sean Nash is a high school biology instructor in Missouri, and a prolific underwater (and above-water) photographer. He has posted images taken during Andros Island sailing field studies, part of the marine biology program in the Saint Joseph School District. He is happy to share the photos for educational purposes (as always, with attribution). Check them out at the two flickr websites, and while you're looking around, check out the links to his classroom network and blog site.

<http://www.flickr.com/photos/nashworld/sets/72157616761811732/>

<http://www.flickr.com/photos/nashworld/3351791844/in/set-72157615192501798/>

## **MESSAGE FROM THE BRIDGE**

### **Bridge Webinars**

The Bridge, a COSEE-NOW (Networked Ocean World) partner, has just completed its first two webinars. The first introduced participants to the Bridge website and all of its many features, including the Bridge-authored Data Analysis Teaching Activities (DATA) series; and more specifically, the DATAs that use ocean observing system data. The second webinar served as an introduction to ocean observing systems, their uses and components, as well as how educators can use the systems with their students. Both webinars are archived on the Bridge and COSEE-NOW websites, and forums have been set up on the COSEE-NOW site for those that want to discuss the webinars. Stay tuned to the Bridge, COSEE-NOW, and Scuttlebutt for future webinar announcements.

Bridge - <http://coseenow.net/2009/05/bridge-online-webinars/>

COSEE-NOW – <http://coseenow.net/2009/05/bridge-online-webinars/>

## **REQUESTS**

### **Comments Please on Habitable Planet**

Annenberg Media would like to hear from any users of the video or web materials from *The Habitable Planet: A Systems Approach to Environmental Science* series. They would especially like comments on the effectiveness of the materials with students or for professional development. Please send any comments by June 24, 2009 to [info@learner.org](mailto:info@learner.org)

### **T-Shirts Needed For a Good Cause – Please Help**

The Tennessee Educators of Aquatic and Marine Sciences is hosting *NMEA 2010: From the Mountains to the Sea*, and they need your help to make their auction a success.

One of the highlights of the auction will be a quilt made from past conference t-shirts.

While they have many of the needed shirts, they are still in need of more. If you can't donate a conference t-shirt, please donate a chapter t-shirt as they would like to include all chapters of NMEA in the quilt. Here are the chapters and the conference years still needed:

CARIBWA – 1998	NAME – 1978, 1984, 1992, 2001
FMSEA – 1989	OCEANIA – 1990
GLEAMS – 1979, 1986, 1997	SAME – 1993
GOMMEA – 1983, 1996	SENEME – 1987
MME – 1980	SWMEA – 1982, 1988
MAMEA – 1977, 1985	TEAMS – 1994
NJMEA – 1991	TMEA – 1981

Contact Courtney Thompson at [thompson@ripleys.com](mailto:thompson@ripleys.com)

## **GRANTS AND OPPORTUNITIES**

### **Big Green Grants**

Nickelodeon's Big Green Grants Program provides resources to schools and community-based organizations to support environmentally friendly projects that educate and inspire kids to: take care of the environment, be active, live healthily, and engage in community service. Applications are accepted and reviewed on a rolling basis throughout the year.

<http://bghevent.com/grant/index.htm>

### **Birds in Focus Contest**

Audubon Magazine offers the first Audubon Magazine Photography Awards: Birds In Focus Contest. The contest encourages participants to submit photographs that depict birdlife in any form. Note that there is an entry fee. The deadline for submission is July 15, 2009.

<http://audubonmagazinephotoawards.org/>

### **Bright Green Dream**

Lutron Greenovation offers the Bright Green Dream School Sustainability Challenge, inviting participants to look at their entire school—from the classroom to the science lab to the lunchroom and beyond—and describe their ideas for improving energy efficiency. The deadline for submission is September 25, 2009.

<http://www.greenovationnation.com/dream/>

### **Classroom Earth Professional Development Grants**

Classroom Earth will award 20 professional development grants to high school teachers to take two online courses in environmental education offered by the University of Wisconsin, Stevens Point. The courses help teachers incorporate environmental topics to create interactive, science-based lessons into their high school classrooms. The deadline for application is June 12, 2009.

<http://www.classroomearth.org/professional-development-grant-2009>

### **Climate Change Impacts and Adaptation Funds**

With assistance from the Government of Denmark, UNESCO's Frontlines Forum is funding local projects on climate change impacts and adaptation. Eligible projects should be community-level projects focusing on local experiences with climate change impacts and adaptation. These could involve field research, interviews with community members, workshops, film projects, and more. The deadline for submission is July 15, 2009.

<http://www.climatefrontlines.org/en-GB/node/191>

### **Coral Reef Management Fellowship**

The Coral Reef Management Fellowship program provides the U.S. state and territorial coral reef management agencies with highly qualified candidates whose education and work experience meet each jurisdiction's specific needs, while providing the individual fellows with professional experience in coastal and coral reef resource management. The deadline for application is July 31, 2009.

<http://coralreef.noaa.gov/fellowship.html>

### **Disney Minnie Grants**

Youth Service America and Disney offer the Disney Minnie Grants to fund children's efforts to improve their communities. These grants are for children (ages 5-14) or the organizations that engage them, to implement youth-led service projects. The deadline for application is June 15, 2009.

<http://ysa.org/AwardsGrants/tabid/58/Default.aspx>

### **Earth Science Week Student Contests**

The American Geological Institute is sponsoring three national contests for Earth Science Week 2009. The photography, visual arts, and essay contests allow both students and the general public to participate in the celebration, learn about Earth science, and compete for prizes. The deadline for entry is October 16, 2009.

- Photography, all ages, How Climate Shapes My World
- Visual arts, grades K-5, The Climate Where I Live
- Essay, grades 6-9, Climate Connections

<http://www.earthsciweek.org/contests/>

### **FishAmerica Foundation Funding**

The NOAA Restoration Center's Community-based Restoration Program, in partnership with the American Sportfishing Association's FishAmerica Foundation, has a funding opportunity for community-based fisheries habitat restoration projects. This partnership encourages projects that demonstrate on-the-ground benefits to marine, estuarine, or anadromous fisheries resources, particularly sportfish, and must involve community participation through an educational or volunteer component tied to the restoration activities. The deadline for proposals is June 22, 2009.

[http://www.nmfs.noaa.gov/habitat/restoration/projects\\_programs/crp/partners/fishamerica.html](http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/partners/fishamerica.html)

### **GCFI Conference Student Travel Awards**

The Gulf and Caribbean Fisheries Institute (GCFI) offers two travel awards to attend the GCFI conference, November 2-6, 2009 in Cumana, Venezuela. All full-time students planning to give an oral or poster presentation are eligible to apply for these awards. The deadline for application is July 1, 2009.

<http://www.gcfi.org/StudentAwards/StudentAwards.htm>

### **Green Effects Grants**

Frito-Lay's SunChips brand and National Geographic offer Green Effect, an initiative to inspire people to take small steps to create big change by sparking a green movement in their community. Hurry - the deadline for entry is June 8, 2009.

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

### **Green Your School Contest**

The Student Conservation Association's Green Your School Contest is a competition to stimulate and/or identify conservation service projects designed by high school students that improve or restore or beautify or conserve their high school environment. The deadline for submission is October 9, 2009.

<http://www.thesca.org/green-your-school>

### **Lindbergh Foundation Grants**

The Charles A. and Anne Morrow Lindbergh Foundation provides grants for innovative research and educational projects that focus on the Lindbergh's vision of balance between the advancement of technology and preservation of the natural and human environment. The deadline for application is June 11, 2009.

<http://www.lindberghfoundation.org/grants/index.php>

### **Name That Jellyfish Contest**

Join a scientific team and help give the Bonaire Banded Box Jellyfish a species name. This new name will become the official scientific name and will appear in several scientific publications. The deadline for submission is June 14, 2009. Online voting for the top five names will take place June 19-21, 2009.

[http://www.yearofscience2009.org/themes\\_ocean\\_water/general/jellyfish.html](http://www.yearofscience2009.org/themes_ocean_water/general/jellyfish.html)

### **National Wildlife Annual Wildlife Photography Contest**

The National Wildlife Photo Contest is looking for striking images of nature. These images may show animal behavior, portraits of wildlife in natural habitat, plant life, natural landscapes, or people interacting with nature. The deadline for submission is July 20, 2009.

<http://www.nwf.org/nationalwildlife/photocontestrules.cfm>

### **NSF Funding**

The National Science Foundation offers a funding website which allows you to search for grants and funding. Visitors can search by keyword, program area, current offerings, and through an advanced search. There are categories for undergraduates and graduates, K-12 educators, and more. The website also offers a Grant Proposal Guide and a helpful Grants.gov Application Guide. Upcoming grants include ITEST (see below), teacher scholarship, Antarctic research, and many more. Be sure to check this out if you haven't visited before.

<http://www.nsf.gov/funding/index.jsp>

### **Outstanding Young Educator Award**

The Association for Supervision and Curriculum Development offers a yearly Outstanding Young Educator Award. The award recognizes a teacher under the age of 40 who demonstrates excellence in his or her profession. Criteria include a positive impact on students, creativity in the classroom, and leadership in his or her school or district. The deadline for nomination is August 1, 2009.

[http://www.ascd.org/programs/Outstanding\\_Young\\_Educator\\_Award/Outstanding\\_Young\\_Educator\\_Award\\_Program.aspx](http://www.ascd.org/programs/Outstanding_Young_Educator_Award/Outstanding_Young_Educator_Award_Program.aspx)

### **Rivers, Trails, and Conservation Assistance Program**

The National Park Service provides up to two years of staff assistance to locally-led natural resource conservation and outdoor recreation projects through the Rivers, Trails, and Conservation Assistance (RTCA) Program. RTCA staff work in communities to help applicants conserve rivers; preserve natural areas; and develop trails, greenways, and blueways. Staff help with partnership-building to achieve community-set goals, organizational development, and more. Applicants are strongly encouraged to discuss their project with RTCA staff before sending in an application; check the website for local contact information. The next deadline for application is August 1, 2009.

[http://www.nps.gov/ncrc/programs/rtca/contactus/cu\\_apply.html](http://www.nps.gov/ncrc/programs/rtca/contactus/cu_apply.html)

### **Save the Trees Paper Towel Design Contest**

The Marcal "Save the Trees" Drawing Contest provides contestants with the opportunity to submit an original drawing that expresses their appreciation for trees. The deadline for application is June 30, 2009.

<http://www.marcalpaper.com/contest.html>

### **Surf Sweets Artwork Contest**

Surf Sweets is hosting an art contest for kids age 5-13. They are looking for art that shows "Why I Love the Ocean", in celebration of World Ocean Day on June 8, 2009. The deadline for entry is June 20, 2009.

<http://www.surfsweets.com/artworkcontest/>

### **Zine-a-thon Contest**

The Science Zine-a-thon Contest is a competition that combines art and science and offers 36 possible winners. Participants can write about anything in science, aligned with one of the Year of Science themes. Participants tell an entire science story in art and text on a single 8 ½ x 11 sheet of paper. The deadline for entry is November 1, 2009.

<http://www.yearofscience2009.org/about/zine-contest.html>

## **INTERNSHIPS AND TEMPORARY OPPORTUNITIES**

### **Marine Science Consortium - Virginia**

The Marine Science Consortium is a nonprofit educational corporation comprised of regional universities and colleges committed to excellence in education and research in the marine and environmental sciences. The programs include summer programs for undergraduate, graduate, pre-college, and continuing education students. The consortium maintains marine stations where both field and laboratory investigations of coastal ecosystems are conducted under the supervision of university faculty and qualified marine education instructors.

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

### **Roundhouse Aquarium Summer Programs**

The Roundhouse Aquarium in Manhattan Beach, California, offers a variety of summer camp programs for kids ages 4-14; for older folks who would like to spend time there, they offer volunteer opportunities.

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

### **Shoals Marine Laboratory Student Summer Courses - Maine**

The Shoals Marine Laboratory on Appledore Island, Maine, still has a few openings in some of their introductory and advanced courses for students. Due to a generous recent donation, financial aid may be available to eligible students who want to apply.

[http://www.sml.cornell.edu/sml\\_students\\_creditcourses.html](http://www.sml.cornell.edu/sml_students_creditcourses.html)

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

### **Approaches to Inquiry - Washington**

The Port Townsend Marine Science Center will host *Approaches to Inquiry: Shifting Classrooms Toward Inquiry Learning* for teachers of grades 5-10, August 18 to 22, 2009 in Port Townsend, Washington. The workshop explores the nature of inquiry using methods and materials developed at the Exploratorium's Institute for Inquiry, combined with field study applications. A goal of the program is to help teachers understand shifts they can make in lessons they currently teach that help students gain the skills needed to excel in science and use scientific inquiry.

<http://www.ptmsc.org/education/teacher.html>

### **Beach Fossil Field Trip - Maryland**

The Society for Ocean Sciences has organized a beachcombing and fossil hunting event in the Chesapeake Bay region at Brownie's Beach, Maryland. The trip will introduce participants to paleontology and teach how to tell the difference between fossilized bones and everyday rocks. The trip is limited to 20 participants.

<http://www.societyoceansciences.org/sharkhunt.html>

### **Caribbean Conference on the Environment**

The Environmental Management Programme, University of the West Indies, is pleased to host the Caribbean Conference on the Environment, July 7-8, 2009 in Kingston, Jamaica, under the theme *Caribbean Environments: Perspectives, Practice, and Policy*. The conference offers a forum for academics, professionals, practitioners, and policy-makers working in environmental fields throughout the Caribbean to share perspectives, and to explore and discuss issues surrounding environmental research, practice, and policy-making. Sessions include education, protected areas, and more.

<http://uwi.edu/environmentconference/about.aspx>

### **Climate Science and the Oceans - Massachusetts**

The New England Aquarium and partners offer this summer professional development workshop for teachers of grades 6-12, August 10-13 in Boston, Massachusetts, with a follow-up meeting date to be decided. The workshop will focus particularly on ocean ecosystems and consider rising sea levels and melting ice caps as indicators of a changing climate. Participants will also consider ocean acidification as a related topic with implications for marine life and systems.

For more information, contact [trc@neaq.org](mailto:trc@neaq.org).

### **Coastal Ecosystem Workshop - California**

The Farallones Marine Sanctuary Association is offering the annual summer Coastal Ecosystem Workshop, July 8-10 in San Francisco, California, for teachers of grades 6-

12. Participants will broaden their knowledge of California's rocky intertidal marine ecosystems, connect and collaborate with local teachers and scientists, and receive background materials and classroom resources. The workshop is free; a stipend may be available.

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

### **Global Climate Modeling Teacher Workshop - Pennsylvania**

Learn how to use a NASA global climate model and develop a climate modeling activity for your classroom at this free Global Climate Modeling Teacher Workshop, June 30-July 1 2009 in Allentown, Pennsylvania. The Educational Global Climate Modeling software has a user-friendly interface that runs on desktop computers, and provides teachers and their students with the ability to run one of NASA's research-quality global climate models. The software makes it easy to run experiments with a climate model, analyze the output, and create scientifically meaningful visuals for use in reports, and also provides an easy way for students to publish their reports to school websites. The deadline for pre-registration is June 12, 2009.

<http://www.davinci-center.org/profdev.html>

### **National Conservation Training Center Courses – West Virginia**

The U.S. Fish and Wildlife Service offers professional development courses at the National Conservation Training Center campus in West Virginia. For more information about a specific course, contact the individual identified below.

- OUT8160: Environmental Education Methods, September 21-24, 2009; the deadline for registration is July 13, 2009. Contact Julie Study at [Julie\\_Study@fws.gov](mailto:Julie_Study@fws.gov)
- OUT8194: Trail Management: Plans, Projects and People, October 5-9, 2009; the deadline for registration is July 27, 2009. Contact Matt Gay at [Matt\\_Gay@fws.gov](mailto:Matt_Gay@fws.gov)
- OUT8164: Creating a Schoolyard Habitat/Outdoor Classroom, November 2-6, 2009; the deadline for registration is August 24, 2009. Contact Julie Study at [Julie\\_Study@fws.gov](mailto:Julie_Study@fws.gov)

Note that the following courses may still have some open slots even if the deadlines for registration have passed. Contact the individuals below for the latest information.

- OUT8121: Interest-Based Negotiation (prerequisite to 8122), June 15-17, 2009
- OUT8122: Applying Collaboration to Environmental Issues, September 14-18, 2009
- OUT8116: Grant Writing for Conservation, September 9-11, 2009

Contact Ora W. Dixon at [Ora\\_Dixon@fws.gov](mailto:Ora_Dixon@fws.gov)

- OUT8106: Powerful Presentation Tools and Techniques, July 27- 31, 2009

Contact Juanita Gustines at [juanita\\_gustines@fws.gov](mailto:juanita_gustines@fws.gov)

- OUT8181: Working with the News Media, August 3-5, 2009, NCTC

Contact Sandy Spakoff at [sandy\\_spakoff@fws.gov](mailto:sandy_spakoff@fws.gov)

- OUT8114: Volunteer Recruitment and Management, August 11-14, 2009

- OUT8120: Advanced Volunteer Management, August 17-20, 2009

Contact Laura Jones at [Laura\\_Jones@fws.gov](mailto:Laura_Jones@fws.gov)

[http://training.fws.gov/documents/Section1\\_NCTC\\_Sponsored\\_Courses.pdf](http://training.fws.gov/documents/Section1_NCTC_Sponsored_Courses.pdf)

### **New York State Marine Education Association Conference – New York**

The theme for the New York State Marine Education Association Annual Conference, June 5-7, 2009 in Southampton, New York, is *Estuaries – Sustaining the Sea!*

<http://www.nysmea.org/con09/NYSMEA09.htm>

### **NSDL Brown Bag Webinars - Online**

The National Science Digital Library (NSDL) Resource Center offers monthly Brown Bag webinars on topics of interest to STEM educators at all levels. Sessions are typically scheduled for the final week of the month. Learn about trends and issues in education, technology use in educational settings, and useful tools, services, and best practices. Check out the upcoming brown bag, *What Works? Using NSDL Collections in the K-12 Classroom*, and look through the archives for information about open source technology tools you can use.

<http://nsdl.org/pd/?pager=brownbag>

### **Oceans 2009**

The annual Marine Technology Society / Institute for Electrical and Electronics Engineers-Oceanic Engineering Society Conference will be held October 26-29, 2009 in Biloxi, Mississippi. The conference theme is *Marine Technology for our Future: Global and Local Challenges*. Oceans 2009 is calling for papers in the areas of data to decision support, ocean observing systems, coastal restoration, and lessons learned from Hurricane Katrina.

<http://www.oceans09mtsieebiloxi.org/>

### **On the Waterfront - Massachusetts**

The New England Aquarium offers the professional development program for teachers in grades 3-8, *On the Waterfront: Integrating Science Standards through Classroom and Field Investigations*, July 27-August 1, 2009 in Boston, Massachusetts, with a call-back in fall, 2009. The deadline for application is June 30, 2009.

Contact the Teacher Resource Center at [tnc@neaq.org](mailto:tnc@neaq.org)

### **Underwater Robotics - Illinois**

The Shedd Aquarium is offering a *Teacher Field Experience: Underwater Robotics*, suggested for teachers of grades 6-12, August 10, 2009 from Chicago, Illinois. Teachers must apply in teams of 2-3. Participants will build their own ROV, use it to conduct field research, and take home several hundred dollars worth of materials and a full curriculum to share the excitement with their class.

[http://www.sheddaquarium.org/teacherprogram\\_listings.html](http://www.sheddaquarium.org/teacherprogram_listings.html)

### **What Works? Using NSDL Collections in the K-12 Classroom - Online**

In the first of the three-part free webinar series from WGBH Teachers' Domain, *How to Use Rich Digital Media to Impact Science Teaching and Learning*, June 16, 2009, you'll explore some of NSDL's collections and highlight what works for teaching with rich media in chemistry, physics, and physical science. While finding quality resources is half the challenge, the seminar will also provide tips on how to use these materials more effectively.

<https://cc.readytalk.com/cc/schedule/display.do?udc=1op253zn9d4dr>

### **Wilderness Management Certificate - Online**

The University of Montana is now offering a Graduate Certificate in Wilderness Management, providing students and professionals training and expertise in key topics related to wilderness management. Four online courses cover the history and philosophy of the wilderness system, wilderness law and policy, wilderness recreation management, wilderness ecosystem conservation and resource monitoring, and wilderness planning. Courses are offered as traditional correspondence courses or

interactive online courses through the Wilderness Management Distance Education Program in the College of Forestry and Conservation.

<http://wmdep.wilderness.net/>

## EDUCATIONAL RESOURCES

### Build Your Own ROV

NOAA scientist Doug Levin has developed a detailed manual to explain how to build a remotely operated vehicle (ROV) for underwater use. The manual lists parts and pieces, where to find them, and photographs of how to assemble them. The Monitor National Marine Sanctuary website publications page offers the downloadable manual, along with ROV lesson plans, origami and other activities, and much more.

<http://monitor.noaa.gov/publications/>

### Climate Post

The Nicholas Institute for Environmental Policy Solutions at Duke University introduces The Climate Post, a weekly narrative overview which aims to provide commentary on the news, trends, and events that shape climate policy.

<http://theclimatepost.wordpress.com/>

### Coastal Climate Adaptation

The NOAA Coastal Services Center hosts the Coastal Climate Adaptation website, which focuses on adaptation-related resources such as local and state plans, new policies, case studies, risk and vulnerability assessments, and decision-support tools. There is a forum where users can suggest new resources, engage in dialogue on the issues, and submit comments and questions. Check out the list of tools for adaptation already on the website, along with the initial outreach and education offerings.

<http://community.csc.noaa.gov/climateadaptation/>

### Ducks in the Flow

*Ducks in the Flow: Resources about Surface Ocean Currents for the Upper Elementary Classroom*, intended for grades 3-5, includes a storybook and three classroom activities. In the storybook, the three kids work collaboratively to explore and investigate surface currents found in the ocean and the Great Lakes while learning about the journey of a seafaring plastic duck. Three hands-on activities for the classroom further explore the science content and provide instruction in basic science process skills.

[http://www.windows.ucar.edu/tour/link=/teacher\\_resources/ocean\\_education/currents\\_main.html](http://www.windows.ucar.edu/tour/link=/teacher_resources/ocean_education/currents_main.html)

### Ecological Impacts of Climate Change

The National Academies offers a downloadable booklet based on the 2009 report, *Ecological Impacts of Climate Change*. The booklet explains general themes about the ecological consequences of climate change and identifies examples of ecological changes across the United States. The website also offers downloadable Powerpoint presentation modules on ecological impacts, developed to assist educators in sharing information about the ecological impacts of climate change. The presentations are offered for different geographic region, and presenter notes are embedded in the files.

<http://dels.nas.edu/climatechange/ecological-impacts.shtml>

### **EPA Science Notebook**

The EPA Science Notebook website showcases EPA science and scientists using assorted multi-media, including science blogs, videos, interviews, and more. A scientist's notebook is home to ideas, questions, drawings, and data and offers information about the scientific process. The website aims to make scientists and their research more accessible, understandable, and interesting to the public.

<http://www.epa.gov/sciencenotebook/>

### **History of Maine Fisheries**

The History of Maine Fisheries database contains digitized images of historical records relating to fishing. The collection will be regularly supplemented with additional materials, in order to support environmental and historical research that utilize records of Maine fisheries.

<http://www.library.umaine.edu/speccoll/fisheries/>

### **Hurricane Resources**

June 1 is the start of the hurricane season. Annenberg Media offers resources that can help you learn and teach about hurricanes. *The Habitable Planet: A Systems Approach to Environmental Science, Unit 2* describes hurricanes in Section 7 of the online textbook. In an interview with MIT Professor Kerry Emanuel, transcribed in the second link, below, he explains what a hurricane is and how it forms. The weather interactive in the third link helps you to understand the forces that influence weather, hurricanes, and other powerful storms. Dr. Emanuel explains what computer models and an energy systems approach can reveal about the behavior of hurricanes in *Science in Focus: Energy, Workshop 6, "Energy and Systems,"* while the last link brings you to his MIT home page with additional information on hurricanes, tracking models, and various resources related to cyclonic storms.

<http://www.learner.org/courses/envsci/unit/text.php?unit=2&secNum=0>

<http://www.learner.org/courses/envsci/scientist/scientist.php?shortname=emanuel>

<http://www.learner.org/interactives/weather/>

<http://www.learner.org/workshops/energy/workshop6/icon4.html>

<http://wind.mit.edu/~emanuel/home.html>

### **ITEST**

The Innovative Technology Experiences for Students and Teachers (ITEST) program was established by the National Science Foundation in response to current concerns and projections about the growing demand for professionals and information technology workers in the U.S. and seeks solutions to help ensure the breadth and depth of the STEM workforce. The ITEST program connects students, teachers, and scientists to increase awareness about careers in STEM. The website includes publications, a resource library, and more. The ITEST professional development collection on Teachers' Domain documents hands-on science, community partnerships, and career exploration; the videos can give you ideas to use in your school.

<http://itestlrc.edc.org/>

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

### **JOIDES Resolution**

The R/V JOIDES Resolution is an earth and ocean science research vessel run by the Integrated Ocean Drilling Program. The core samples and data that its scientists and crew bring up from the seafloor every day hold significant clues to Earth's history, climatic changes, geologic events, and more. The website offers students the

opportunity to ask scientists questions, track the ship's location, explore daily ship blogs, and more. The website includes activities for young children, classroom materials for teachers, tracking globes, multimedia, and much more.

<http://joidesresolution.org/>

### **Kindergarten EE Resources**

The California Coastal Commission offers two new Kindergarten-level Environmental Education resources on their website. The classroom activities introduce the topics of global warming (*The Earth has a Fever!*) and the origin of drinking water (*Our Melting Ice Cube*), with tips on how students and their families can help protect the earth.

[http://www.coastal.ca.gov/publiced/directory/global\\_k.html](http://www.coastal.ca.gov/publiced/directory/global_k.html)

### **Media College**

MediaCollege.com is an educational and resource website about all forms of electronic media. Topics include video and television production, audio work, photography, graphics, web design, and more. The website offers hundreds of tutorials with supporting illustrations, videos, sound bytes, and interactive features. You'll also find reference material, utilities, and other useful tools, as well as a helpful forum.

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

### **Parks Canada Videos on the Internet**

Parks Canada has launched video channels on YouTube, MySpace, and Yahoo Video, with videos on Canada's national parks and national marine conservation areas, as well as other historic sites. Videos will include promotional pieces, wildlife and habitat shorts, and scientists and staff discussing issues facing these protected places.

<http://www.youtube.com/ParksCanadaAgency>

<http://www.myspace.com/parkscanada>

<http://ca.video.yahoo.com/people/5743950>

### **Pocket Guide to Marine Debris**

The Ocean Conservancy and the EPA published the booklet, *Pocket Guide to Marine Debris*. This book is designed for beach cleanups, to serve as a reference to standardize terminology for marine debris items and to help volunteers identify unknown debris items. It offers Quick Tips about what to bring and how to prepare for different situations that may be encountered during debris cleanup. The booklet can be found in different formats on the web: as html, a slideshow, and a downloadable pdf file.

<http://sacoast.uwc.ac.za/education/resources/marinedebris/index.htm>

<http://www.slideshare.net/vicmanlapaz/pocket-guide-to-marine-debris-presentation>

[http://www.cobsea.org/cleanupeas/docs/ICC\\_PocketGuide\\_EN.pdf](http://www.cobsea.org/cleanupeas/docs/ICC_PocketGuide_EN.pdf)

### **Teens for Planet Earth Social Networking Site**

Teens for Planet Earth has been transformed into a social networking site, and sports a new look and ways to help teens (and adults who work with teens) carry out environmental service-learning projects. Members can connect with other members, share photos and videos of their projects; post upcoming events related to their projects; find resources to help carry out a successful project; receive advice on conducting service-learning projects; and much more.

<http://www.teensforplanetearth.org>

### **Underwater Universe**

The History Channel will present Underwater Universe, a two-hour special **tonight, June 1, 2009 at 8pm EST.** Throughout history, tidal waves, storm surges, hurricanes and cyclones – fueled by the ocean – have wreaked great destruction on the cities and people in their path. *Underwater Universe* tracks the history and evolution of the ocean's seven deadliest zones. This program helps explain to viewers the how and floods, tsunamis, hurricanes, whirlpools, and underwater volcanoes develop.

<http://www.history.com/schedule.do?action=daily>

### **Visiting Geoscientists: An Outreach Guide for Geoscience Professionals**

This American Geological Institute guide is written to provide Earth science enrichment for students. Many geoscience professionals already visit classrooms, lead student field trips, and involve K-12 students in research. The guide includes a discussion of what effective modern enrichment can be like, including key components and why Earth science enrichment matters; how K-12 students learn science best, with an emphasis on discovery and inquiry; a review of the current state of Earth science in K-12 education, from curriculum issues to science frameworks and standardized testing; Classroom Tips to provide ideas to help get into (and out of) the classroom, and how to make the most of the time spent there; and sample activities, material lists, and other resources.

<http://www.agiweb.org/education/aapg/index.html>

### **Voices in the Sea**

The Whale Acoustics Lab at the Scripps Institute of Oceanography is continuing to support and update the Voices in the Sea website. Teaching resources include a student journal and grading rubric for each of the lessons, while the Kids Page offers interactive games. There are videos, interviews with experts, and a special edition section for IPY and commercial vs subsistence whaling.

[http://cetus.ucsd.edu/voicesinthesea\\_org/Flash/](http://cetus.ucsd.edu/voicesinthesea_org/Flash/)

### **World of Change**

Inspired by their 10th anniversary, NASA's Earth Observatory has pulled together a special series of satellite images documenting how the world has changed during the previous decade. Images are include Amazonian deforestation, evaporation of the Aral Sea, Arctic and Antarctic sea ice, and more.

<http://earthobservatory.nasa.gov/Features/WorldOfChange/>

### **Year of Science June Theme: Ocean and Water**

The Year of Science 2009 is a chance to celebrate science. Throughout the year, participating groups from around the world will engage the public in science and work to improve public understanding about how science works, why it matters, and who scientists are. The website includes educational activities, online games, and other resources.

[http://www.yearofscience2009.org/themes\\_ocean\\_water/celebrate/](http://www.yearofscience2009.org/themes_ocean_water/celebrate/)

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

### **Bird Education Alliance for Conservation**

The Bird Education Alliance for Conservation is a coalition of educators representing universities, bird observatories, local, state, and federal agencies, and environmental education and conservation groups. They are working to promote bird conservation

education and to develop effective ways to implement bird conservation through education.

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

### **Children in Nature Programs**

The National Park Service hosts hundreds of replicable programs for kids in parks. You can search their data base by a variety of criteria, or leave the fields blank to list all programs.

<https://pwrcms.nps.gov/customcf/apps/cnps/Bestpractices/index.cfm>

### **Coastweeks**

Coastweeks, September 19-October 11, 2009, is a celebration of coastal and water resources. Each fall, people participate in a three-week celebration of our coastal resources that begins on the third Saturday in September. The kick off for the celebration is Coastal Cleanup Day, when tens of thousands of people across the country come together to keep our coasts and inland waterways free of debris. Check out California's website.

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

### **International Migratory Bird Day**

Environment for the Americas invites you to participate in International Migratory Bird Day 2009. The initiative focuses attention on migratory birds' journeys between summer and winter homes. This year, the bird conservation focus is *Celebrate Birds in Culture*. The website includes downloadable materials, activity ideas, lists of bird festivals, and more.

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

### **Referencing Made Easy**

The Deadline Due beta website creates a Harvard Reference for a research paper when a book's title or ISBN is entered.

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

### **Reuse Warehouse**

Another Good Idea: The City of Houston Building Materials Reuse Warehouse accepts donated construction materials from builders, supply companies, remodelers, contractors, and individuals. These materials are made available at no charge for use by any non-profit organization. The warehouse benefits the community by providing storage space for excess building material that would otherwise be dumped in local landfills.

<http://www.greenhoustontx.gov/reuse.html>

### **Thank You Ocean Website Redesign**

The *Thank You Ocean* campaign website has been redesigned. The new site discusses four major threats to the ocean, features news reports updated daily, describes actions that people can take to protect the ocean, and more. The site offers dynamic content, contests, videos, and connection to social media.

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

**Water in Focus**

Water in Focus is a global photography project that calls youth to action as they document the use, waste, conservation, and pollution of water through words and images. Students are invited to submit photos for the online virtual mural.

<http://www.outsidethelens.org/wif.aspx>

**World Ocean Day**

World Ocean Day, every June 8th, provides an opportunity to join with people around the world to celebrate our world's ocean. The theme for 2009, *One climate, one ocean, one future*, will help bring local and global attention to the impact climate change is having on the ocean, what that impact will mean for human life, and how we can all make important changes to reduce our CO<sub>2</sub> emissions. Enter your event, check out what's happening in your area, download the media and outreach kit, and more.

<http://theoceantproject.org/wod/index.php>