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 eeNEWS@NAAEE, EEinGEORGIA, the Scout Report, 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 or unsubscribe to this list, send information to include in the newsletter, or discuss further enhancements, please contact the editor directly at phyllis.dermer@noaa.gov, or by phone at (865) 932-5074

Collected archives and issues of the newsletter, past and present, are available at http://marineprotectedareas.noaa.gov/resources/education/.

****

NOTABLE REFERENCES
Getting Business on Board
The June-August, 2015 issue of the Marine Ecosystems and Management discusses Getting business on board: Engaging the business community in ocean planning, with advice to ocean planners for working with ocean businesses.
https://meam.openchannels.org/news/meam/getting-business-board-engaging-business-community-ocean-planning

State of North America's Birds
The Cornell Lab of Ornithology and partners offer the downloadable State of North America's Birds 2016 report, based on the conservation vulnerability assessment of the more than 1,000 bird species that occur in continental North America.
http://www.stateofthebirds.org/2016/

Tourism Concessioning Toolkit
The World Bank Group has recently published Part One of a Tourism Concessioning Toolkit in Protected Areas. It offers core principles to be taken into consideration when designing concession programs, presenting 14 key characteristics displayed in most successful tourism concession programs. It can be read online or downloaded for free.
http://www.slideshare.net/AnnaSpenceley/an-introduction-to-tourism-concessions

WEBSITES OF THE MONTH

Oceans of Data
The Oceans of Data Institute helps people succeed in school, work, and life in a data-intensive world, helping students learn the skills and knowledge to be able to understand and make informed decisions using data. The website offers links to presentations, curriculum, and more, through an easy-to-use resource search. The website also offers a blog, a newsletter, and more. Be sure to check out the projects link.
http://oceansofdata.org/

Water Resources
Australia's Murray-Darling Basin Authority offers lesson plans, interactive modules, and a myriad of links to additional resources about water – rivers, groundwater, and much more. There are games, videos, lesson plans by grade, and more. Check out the free Run the River: A water sharing challenge for smart devices, Groundwater and the dreamtime (from the wetrocks link), and more. Spend some time on this and linked websites for some great resources.
http://www.mdba.gov.au/education

REQUESTS

Environmental Education Guidelines for Community Engagement
The North American Association for Environmental Education (NAAEE) is developing a sixth set of guidelines as part of the National Project for Excellence in Environmental Education, Environmental Education Guidelines for Community Engagement. Please review this second draft and provide comments that will be used in the revision process. Hurry - the deadline for comments is July 15, 2016.
https://naaee.org/eepro/blog/environmental-education-guidelines

NGSS Survey
The Climate Literacy and Energy Awareness Network (CLEAN) Collection contains 650 reviewed educational resources addressing climate and energy science for grades 6-16. These resources have recently been aligned with the Next Generation Science Standards (NGSS). CLEAN would like to improve the search functionality of the collection to better serve the way teachers search for educational resources as they work to address the standards in their teaching. Please complete the short survey on how you search for appropriate materials.
https://cuboulder.qualtrics.com/jfe/form/SV_2rf5f9fF4Fk7cVf

NOSB Question Writers Needed
The National Ocean Sciences Bowl[®] is looking to hire science question writers during the summer of 2016 to write questions for the 2017 competitions. The deadline for application is July 15, 2016.
http://nosb.org/wp-content/uploads/Job-Announcement-for-2016-2017.pdf

Ocean Literacy Survey
The Lawrence Hall of Science and partners are developing an International Ocean Literacy Survey that will be translated into more than 13 European and Asian languages. They are testing questions related to attitudes of 16-18 year olds towards the ocean. They also seek multiple-choice questions to missing concepts.
https://berkeleylha.az1.qualtrics.com/jfe/form/SV_4VMmhTk08DrALVX
http://www.marine-ed.org/blogpost/1067768/245783/Guest-Blog-Opportunity-to-contribute-to-measuring-Ocean-Literacy-Want-to-join-us

Proposed Sanctuary Expansion – Call for Comments
NOAA announced a proposal to expand Flower Garden Banks National Marine Sanctuary to protect additional critical Gulf of Mexico habitat. The public is invited to comment on this proposal through August 19, 2016. There will also be five public meetings held in Texas, Louisiana, and Alabama.
http://flowergarden.noaa.gov/management/expansiondeis.html

Remote Sensing of Coral Bleaching – Call for Papers
The journal, Remote Sensing, invites contributions to a special issue on Remote Sensing of Coral Bleaching. The deadline for abstract submission is August 30, 2016 with the manuscript deadline of January 20, 2017.
http://www.mdpi.com/journal/remotesensing/special_issues/coralbleaching

Water Feature in Sensory Garden
Kate Madin's colleague is considering developing a water feature in a sensory garden for children on the autism spectrum and would like to learn about similar efforts and ideas. Contact Kate at kmadin@whoi.edu

GRANTS AND OPPORTUNITIES

21st Century Solutions Grants
The NBCUniversal Foundation and partners support community-based programs in the areas of education, environment, and more in their market areas, with 3 grants in each market. See the website for details. The deadline for application is August 26, 2016.
http://ysa.org/briefing/nbcuniversal-foundation-21st-century-solutions-grants/

AmeriCorps Grants
The Corporation for National and Community Service will award 346 competitive grants to national and local nonprofits to engage 44,554 new AmeriCorps members in improving lives and strengthening communities from coast to coast. See the website for details about possible opportunities.
http://www.nationalservice.gov/node/37814

Blue Ocean Film Competition
The Blue Ocean Film Festival & Conservation Summit film competition celebrates excellence in visual storytelling, embraces the spirit of collaboration across the arts and sciences, and honors innovative filmmaking that inspires. The festival will be held November 10-13, 2016 in St. Petersburg, Florida. The late deadline for entry is July 31, 2016.
http://www.blueoceanfilmfestival.org/2016-film-competition/

Caribbean Islands Biodiversity Hotspot
The Critical Ecosystem Partnership Fund is soliciting proposals to provide consulting services to update the ecosystem profile for the Caribbean Islands Biodiversity Hotspot. See the website for complete details, along with additional grant requests for proposals. The deadline for proposals is August 17, 2016.
http://www.cepf.net/grants/Pages/default.aspx

Coastal Ecosystem Resiliency Grants Program
The NOAA Fisheries' Coastal Ecosystem Resiliency Grants Program focuses on developing healthy and sustainable coastal ecosystems through habitat restoration and conservation. Projects should demonstrate socioeconomic benefits associated with restoration of healthy and resilient coastal ecosystems, support healthy fish populations, and demonstrate collaboration among multiple stakeholders. The deadline for submission is August 16, 2016.
http://www.habitat.noaa.gov/funding/coastalresiliency.html

CSX Beyond Our Rails Grant
CSX provides non-profit assistance and support through a variety of programs, including grants for projects focusing on the environment, community, and more. There are no deadlines for applications, but organizations are encouraged to submit all their annual requests at one time each year.
http://www.beyondourrails.org/index.cfm/community/giving-gateway/

Entomological Foundation Science Project Idea Competition
The Entomological Foundation is creating a national list of science fair project ideas that use insects and arthropods as their primary subject. To build the website, they run an annual science fair contest that seeks to identify the best science project ideas for students, teachers, and families. The contest is open for students in grades 3-12; up to 10 awards will be given. The deadline for submission is August 31, 2016.
http://www.entfdn.org/kids_scifair.html

Every Kid in a Park Funding
Fourth grade teachers can request funding through Donors Choose for Every Kid in a Park projects, courtesy of the Johnson Ohana Charitable Foundation. Funding can help cover transportation costs and more, to a U.S. national park, forest, wildlife refuge or other national public lands and waters.
https://www.linkedin.com/pulse/every-kid-park-funding-from-johnson-ohana-charitable-foundation-hill

Global Youth Service Day Lead Agency Grants
Lead Agencies are local, regional, or statewide organizations that increase the scale, visibility, and impact of Global Youth Service Day in their city, region, or state. Lead Agencies convene a planning coalition of partner organizations that collectively engage

a minimum number of youth volunteers in service, engage local media and elected officials, and plan a high profile signature project or celebration of service.   The deadline for application is August 21, 2016.
http://ysa.org/grants/organization-grants/gysdlead/

Home Tweet Home
The categories in the annual NestWatch photo contest, Home Tweet Home, include Nests & Eggs, Cutest Baby, Eye Witness, and Feeding Time. The deadline for entry is July 31, 2016.
http://nestwatch.org/connect/hth-contests-2016/

Kinder Morgan Foundation Grants
The Kinder Morgan Foundation supports nonprofit youth programs that focus on education, the arts, and the environment in communities where Kinder Morgan operates. Application deadlines are the 10th of every other month, starting in January. See the website for complete details.
http://www.kindermorgan.com/pages/community/km_foundation_guidelines.aspx

MAXIMUS Grants
The MAXIMUS Foundation provides grants to non-profit organizations and charities serving disadvantaged populations and underserved communities. The biannual grants emphasize programs that promote personal growth and community development, including enrichment and education. The next deadline for submission is August 31, 2016.
http://www.maximus.com/corporate-citizenship/maximus-foundation/grant-application

Melinda Gray Ardia Environmental Foundation Grants
K-12 teachers are invited to apply for grants to develop or implement environmental curricula that integrate hands-on ecology exercises into the classroom. To facilitate learning and student empowerment, environmental curricula should be holistic and strive to synthesize multiple levels of learning (facts, concepts, and principles), often including experiential integrated learning and problem solving. The deadline for pre-proposals is August 12, 2016.
http://www.mgaef.org/application.htm

NSTA Calendar Resources
The NSTA publications/calendar page offers event category searches, including awards/competitions, grants/fellowships, summer programs, and more. Further filters include regional locations, date range, and grade level.
http://www.nsta.org/publications/calendar/

Ocean Conservation Projects in Developing States Calls for Proposals
The U.S. Department of State, Bureau of Oceans and International Environmental and Scientific Affairs offers this call for proposals for grants to improve compliance capacity in marine protected areas in Latin America and the Caribbean; to create more effectively managed MPAs in East Africa; or to reduce nutrient pollution in waterways, coastal waters, and the ocean. The deadline for proposals is August 1, 2016.
http://www.grants.gov/view-opportunity.html?oppId=285575

PASCO STEM Educator Awards
The PASCO STEM Educator awards recognize excellence and innovation in the field of STEM education in middle and high school. The deadline for application is December 15, 2016. Check out this and other NSTA awards.
http://www.nsta.org/about/awards.aspx#stem

Professional Interpreter Grant Program
The National Association for Interpretation offers grant assistance to professional interpreters to help offset the costs of professional development through NAI. Funds can apply to attendance at the national conference, certification fees, and other workshops and programs that the NAI national office conducts. Grant applications for attendance at NAI 2016 National Conference in Corpus Christi, Texas, November 8-12, 2016, are now being accepted. Hurry - the deadline for application is July 15, 2016.
http://www.interpnet.com/NAI/docs/Events/NAI-Grant-App-16.pdf

Safeway Foundation Grants
The Safeway Foundation supports nonprofit organizations whose mission is aligned with four priority areas, including education. Grants are reviewed quarterly or biannually. See the website for complete details.
http://www.safewayfoundation.org/get-funded/what-we-fund.html

Siemens Competition in Math, Science and Technology
This competition encourages students to undertake individual or team research projects that foster intensive research and improve their understanding of the value of scientific study, and informs their consideration of future careers in these disciplines. The deadline for submission is September 20, 2016.
https://siemenscompetition.discoveryeducation.com/

Young Leaders for the Sustainable Development Goals
The U.N. Young Leaders Initiative will convene young change-makers who are working towards sustainable development goals, including combating climate change.   The program will recognize 17 outstanding young people ages 18-30. The deadline for nomination is July 15, 2016.
http://sdgyoungleaders.org/#calling-all

FELLOWSHIPS, INTERNSHIPS, AND TEMPORARY OPPORTUNITIES

AmeriCorps - Washington
The Port Townsend Marine Science Center is seeking four paid Environmental Educator AmeriCorps members to join their team dedicated to conserving the Salish Sea. The positions start October 1, 2016. See the website for full details. The priority deadline for application is July 31, 2016.
http://ptmsc.org/uploads/employment/AmeriCorps%20job%20announcement.pdf

Digital Internships
The Virtual Student Foreign Service is the largest virtual internship program in the world. This year there are more than 900 vacancies with more than 30 federal agencies. The unpaid internship offers unique mentoring and recruitment possibilities. Hurry - the deadline for application is July 22, 2016.
http://vsfs.state.gov/

Ecology Project International
Ecology Project International offers 8-day teacher fellowships in Costa Rica, Baja California Sur, and Yellowstone National Park. These professional development opportunities are geared toward high school and college-level educators. Most costs are covered. The deadline for application is September 1, 2016.
https://www.ecologyproject.org/programs/educator-professional-development/epi-teacher-fellowships

New England Aquarium Internships
The New England Aquarium is currently seeking applications for a variety of internships. College students and recent graduates can gain experience in veterinary services, animal husbandry, and much more. See the website for details.
https://neaqinterns.applicantpro.com/jobs/

Nippon Foundation of Japan Fellowship
The United Nations Nippon Foundation of Japan Fellowship Programme is executed by the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs. The fellowship provides opportunities for advanced education and research in the field of ocean affairs and the law of the sea, marine science in support of management frameworks, and more to government officials and other mid-level professionals from developing States. The deadline for application is September 9, 2016.
http://www.un.org/depts/los/nippon/

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Dynamics of Climate Change – Online
The free webinar, The Dynamics of Climate Change—from the Political to the Personal, will take place July 13, 2016, followed by a live Facebook question and answer period.
https://engage.vevent.com/index.jsp?code=house_email_1&seid=221&eid=1274

Esri Ocean GIS Forum - California
Esri (Environmental Systems Research Institute), the geographic information systems company, will host the Esri Ocean GIS Forum, November 1-3, 2016 in Redlands, California. This year's theme is Advancing Ocean Science with GIS. Attendees will explore the value of GIS in Discovery and exploration, Ocean-use planning, and much more. The deadline for submissions of presentations or lightning talks is September 2, 2016. See the website for additional opportunities.
http://www.esri.com/events/ocean

GCFI Conference
The Gulf and Caribbean Fisheries Institute will hold its 69th GCFI Conference November 7-11, 2016 on Grand Cayman. The deadline for presentations is August 15, 2016. Check out the scholarship and student travel awards available, along with their upcoming deadlines for application.
http://www.gcfi.org/Conferences/69th/69th_First_announcement_En.pdf

GLOBE Training for Eco-Schools - Online
National Wildlife Federation's Eco-Schools USA is a collaborating partner of the GLOBE Program and together they are working to engage Eco-Schools in the GLOBE Program. They offer free online training, June 13-August 5, 2016, for educators to understand how to integrate GLOBE as a part of the 7-Step Framework and to become GLOBE trained. The course is self-paced within the specified dates.
http://www.nwf.org/Eco-Schools-USA/GLOBE/On-Line-Course-Information.aspx

Introduction to Animal Behaviour – Online
This free six-week MOOC from the Wageningen University in the Netherlands starts August 9, 2016. Explore wild animal behavior, discover how animals learn, communicate, find food, avoid predators, and interact socially.
https://www.edx.org/course/introduction-animal-behaviour-wageningenx-ab101x

Question Everything - Online
This free 8-week MOOC from the University of Queensland, Query 101x: Question Everything: Scientific Thinking in Real Life, starts July 12, 2016. High school students learn how to use math and science to solve everyday problems and better prepare to continue studying science in high school and beyond.
https://www.edx.org/course/question-everything-scientific-thinking-uqx-query101x

Restore America's Estuaries and Coastal Society Summit
Restore America's Estuaries and The Coastal Society will bring together the coastal restoration and management communities for an integrated discussion to explore issues, solutions, and lessons learned, December 10-15, 2016, in New Orleans, Louisiana. The theme of the conference is Our Coasts, Our Future, Our Choice.
https://www.estuaries.org/Summit

Strategies for Cultural Inclusiveness – Online
The Consortium for Ocean Science Exploration and Engagement (COSEE) 2016 Webinar Series has engaged participants with experts to discuss examples of COSEE's effective practices and activities. The final webinar of the 2016 season, July 26, 2016, is Strategies for Cultural Inclusiveness and Diversity for Ocean Science Education. The deadline for registration is July 22, 2016.
https://www.surveymonkey.com/r/COSEEWebinar_July2016

Teachers on the Estuary (TOTE) – Various
NOAA's National Estuarine Research Reserve System educators and researchers offer a wide variety of professional development opportunities, grounded in research and fieldwork. The workshops include field activities, in-depth background information about estuaries and other coastal habitats, classroom resources, and more. Check out upcoming workshops in July and August; many are free.
http://estuaries.noaa.gov/Teachers/Default.aspx?ID=170

Technology in Marine Science – Alabama
Dauphin Island Sea Lab Discovery Hall Programs promote conservation through education, research, and outreach. The ROV workshop, July 24-28, 2016 is for teachers in the Florida panhandle, Alabama, Mississippi, and Louisiana; see the website for complete details. Workshop registrations are refunded upon completion.
http://www.disl.org/educational-programs/professional-development-for-educators/list-of-workshops/

UQx – Online
The University of Queensland, Australia offers a myriad of free, online courses. Browse the courses, including Question Everything, Making Sense of Climate Change Denial, Working in Teams: a Practical Guide, and much more. The UQx courses can be audited free or students can choose to receive a verified certificate for a small fee.
https://www.edx.org/school/uqx

What Now? Emerging Technologies and Their Practical Application - Online
The free four-week MOOC from the University of Texas at Arlington, What Now? Emerging Technologies and Their Practical Application in K12 Teaching and Learning, starts July 11, 2016. This education and teacher training course takes participants to the intersection of research and actual classroom practice, where they can develop a practical framework for integrating technology into the K12 classroom.
https://www.edx.org/course/what-now-emerging-technologies-practical-utarlingtonx-edtech101x

Bridge eUpdate

This month, the Bridge looks at invertebrates as indicators. The featured K-12 resource, The Coral Reef Portal, provides background information and lesson plans on reef ecosystems. The highlighted Bridge DATA Exercise, More Than Mud: Amphipods as Pollution Indicators, investigates how benthic organisms can be used to monitor water quality in the Chesapeake Bay.
https://www.livingoceansfoundation.org/education/portal/
http://www2.vims.edu/bridge/DATA.cfm?Bridge_Location=archive0202.html

EDUCATIONAL RESOURCES

#30DaysOfClimateTools
Every day in June, NOAA highlighted a new climate tool on their Facebook and twitter pages, designed to help users manage climate-related risks and take advantage of opportunities.
https://twitter.com/NOAAClimate
https://www.facebook.com/NOAAClimateGov

BayMobile - Alabama
The BayMobile is Dauphin Island Sea Lab's traveling classroom, allowing Sea Lab educators to bring marine science lessons to schools across the state. Its primary mission is to visit underserved schools whose students do not have the opportunity or means to visit the Sea Lab on a field trip. The BayMobile is a science classroom on wheels, with specimens and scientific tools designed to increase understanding and appreciation for science and the marine environment by directly involving participants in hands-on activities. Be sure to also check out the onsite and other educational programs available at the lab.
http://www.disl.org/educational-programs/baymobile/

Capitol Hill Ocean Week Archives
This year's Capitol Hill Ocean Week discussions included fisheries and technology, from global tracking and enforcement technologies, to electronic monitoring, to technological

advances in marine aquaculture. Other topics included marine debris, energy, traditional knowledge, and more. Videos of the talks are archived on OceansLive, along with photos and more.
http://oceanslive.org/video-gallery

CaribNode
CaribNode is an online data-mapping platform for Eastern Caribbean islands that brings together data from national and regional entities, making it possible to create tools for resource management across the region. Examples include the Caribbean Coral Reef Report Cards and the Coral Reef Assessment Tool. Both provide access to standardized indicators that allow users to monitor the status and trends of the marine environment, the effectiveness of their management, and the health of the communities that rely on it.
http://www.caribnode.org/

Climate Generation Blog
Climate Generation blog topics include Youth Action, Climate Lessons, Climate Minnesota Series, Climate News, and Climate Justice. Check these out.
http://www.climategen.org/blog/

Climate Science Investigations
Climate Science Investigations (CSI): South Florida is an interactive series of modules and teaching resources. The objective of CSI is to develop modules that enable secondary and undergraduate students to analyze and use NASA data to address the public's questions and commonly held misconceptions about climate change.
http://www.ces.fau.edu/nasa/

Coral Reefs
NOAA's Coral Reef Conservation Program's website has undergone a redesign and update, with easy-to-navigate web stories, data highlights, and a multimedia library. The education resources include an interactive reef, a SciLinks Coral Tutorial, and much more.
http://coralreef.noaa.gov/welcome.html

Curriculum for the Bioregion
The Curriculum for the Bioregion, coordinated by Evergreen State College in Olympia, Washington, links university faculty from a wide range of disciplines to share ideas for incorporating bioregional sustainability and place-based learning into their curriculum. The curriculum, hosted by Carleton's Science Education Resource Center, incorporates sustainability concepts and place-based learning, introductory courses that feature sustainability themes, and essays on bioregional teaching and learning and the pedagogies of teaching for a sustainable future. The website offers activities, essays, and more.
http://bioregion.evergreen.edu/aboutus.html

EPA Fact Sheets on Climate Change and Health
Check out these eight new climate change and health fact sheets from the EPA. Topics include health and pregnant women, health of indigenous populations, and more.
https://www3.epa.gov/climatechange/impacts/health/factsheets/

Expii
Expii functions as an interactive series of math and science textbooks. Users may either search for a specific topic, or they may use the Topic Map . Topics are accompanied by short explanations of concepts and often include practice problems. Check out Statistical approaches and data analysis under Algebra. Expii is a crowdsourced learning site; please contribute.
https://www.expii.com

Facilitating Collaborative Public Discussions
Using video clips from public meetings that were part of implementing California's Marine Life Protection Act (MLPA) Initiative, a new tool enables users to explore strategies for facilitating the different stages of collaborative decision making. For example, users can explore in detail how to start a public process, maintain control of it, reach agreements, and more.
http://www.snre.umich.edu/ecomgt/mlpavideo/

Fisheries Surveillance
Project Eyes on the Seas, Global Fishing Watch, and DigitalGlobe are high-tech global fisheries surveillance systems that are being developed to help authorities stay ahead of illegal fishing. These technology platforms combine satellite monitoring and imagery data with other information, such as fishing vessel databases and oceanographic data, to help authorities detect suspicious fishing activity. Check out the websites along with the archived webinar on Eyes on the Seas.
http://www.pewtrusts.org/en/multimedia/video/2015/project-eyes-on-the-seas
https://www.openchannels.org/webinars/2016/project-eyes-seas
http://globalfishingwatch.org/

Generating Ideas Lesson Plan
Students learn to generate ideas for innovation using two different approaches in this lesson plan from NOVA Education. In the first approach, ideas are generated based on inspiration drawn from existing materials and found objects. In the second approach, students generate ideas based on the needs of different user demographics around the world.
http://www.pbslearningmedia.org/resource/nvmsi.eng.lpideagen/generating-ideas/

Generator School Network
The Generator School Network is an online community committed to providing and advocating for service-learning experiences for young people. Generator is a project planning tool to guide the creation of new service-learning projects. The tool takes users from early planning to project completion, and also houses the National Service-Learning Clearinghouse. The clearinghouse offers thousands of free online resources and a library of service-learning research, data, tools, and materials.
https://gsn.nylc.org/

Historic Preservation
The U.S. Fish & Wildlife Service is celebrating the 50th anniversary of the National Historic Preservation Act with a web page commemorating the even. Check out the podcasts, success stories, and more.
http://www.fws.gov/historicpreservation/NHPA.html

How to Become a Greenz Climate Champion
While this interactive climate change toolkit has been developed specifically for primary school students (grades 3-6) in Grenada, Carriacou and Petite Martinique, it can be adapted for other locations. The toolkit includes child-friendly illustrations such as stickers and posters, while units are discussion-based and exercises are activity-based' some include field-trips.
http://www.gov.gd/articles/greenz-champion/greenz-climate-champions.html

Hurricanes: Science and Society
With hurricane season underway, it's a good time to revisit the Hurricanes: Science and Society website, which provides information on the science of hurricanes and their impacts on people, buildings, and the environment. It offers inquiry-based activities about wind in a hurricane, building a coastal home, and utilizing hurricane imagery. The downloadable iBook explains how hurricanes form, how they are tracked and forecast, and more.
http://www.hurricanescience.org/

Innovative Instructor
The Innovative Instructor is a newsletter published by John Hopkins University to provide instructional resources and ideas to higher education instructors. The newsletter publishes articles related to pedagogy, best practices, and technology. While aimed at higher education professionals, teachers at the high school level may also find useful software tools or ideas.
http://ii.library.jhu.edu

Inquiry Project
The Inquiry Project brings research, curriculum for grades 3-5, assessment, and professional development together in order to build an early understanding of science that may then progress into more nuanced study. The project is designed around three content areas: measurement of matter, change and conservation, and scale. The website offers assessment materials, professional development resources, and more.
http://inquiryproject.terc.edu/

Josh's Water Jobs
The jobs found on this website are related to water and internationally focused. There are two broad categories that are highlighted, namely Water (policy, governance, law, economics, management, finance, advocacy, science, communications, etc.) and WASH (water, sanitation and hygiene). The website launched recently from a listserv; the blog intends to discuss issues in career development related to water.
http://www.joshswaterjobs.com/

learnXdesign
learnXdesign offers projects and activities that focus on design and engineering skills. The website offers a database of science activities for youth of all ages, especially for use in informal learning environments. Activities can be searched by subject, age level, or the time duration of the project. Many activities are accompanied by a video of science educators demonstrating the activity and explaining how they incorporated the activity into their own programs.
http://learnxdesign.org/

Living with Water Scarcity
This downloadable book by David Zetland, an Assistant Professor at the Netherlands' Leiden University College, discusses the connections among personal and social water flows. Chapters include Water as a commodity; Pipes, canals and dams; and more.
http://livingwithwaterscarcity.com/

MESA and AAEE
The Marine Education Society of Australasia (MESA) and the Australian Association for Environmental Education (AAEE) websites have numerous resources which can help you to teach about marine and coastal environments. These include teaching units on the Great Barrier Reef and coastal areas, the Coasts and Marine Schools Project, ocean culture, and much more.
http://www.mesa.edu.au/teachers.asp
http://www.aaee.org.au/seaweek-2015-resources/
http://mesa.edu.au/cams/default.asp

Mitigating Microplastics
This middle school science curriculum from Oregon Sea Grant guides teachers and their students in grades 6-8 through the threat to our oceans posed by microplastics. The lessons include opportunities for student inquiry, as well as collaboration and engagement with real data collected by researchers working in the field.
http://seagrant.oregonstate.edu/sgpubs/mitigating-microplastics-teacher-lesson-plans-curriculum

National Integrated Heat Health Information System
The National Integrated Heat Health Information System web portal offers information and services surrounding the problems from extreme heat. Visitors can view forecasts by week, month, and more. The website also offers adaptation strategies for at risk populations.
http://toolkit.climate.gov/nihhis/

NBC Learn
NBC Learn, the educational arm of NBC News, has assembled a collection of videos, generally less than six minutes long. Each video includes a transcript, and on the reverse, additional information and links. The STEM & Innovation topic includes Changing Planet, Sustainability: Water, When Nature Strikes, and more.
http://www.nbclearn.com/portal/site/learn/resources

NCA Education Resources for the Southwest Region
The National Climate Assessment summarizes the impacts of climate change on the United States, now and in the future. Climate.gov offers links to educational resources addressing these issues in different regions, including the Southwest, Great Plains, and more.
https://www.climate.gov/teaching/national-climate-assessment-resources-educators/southwest-region

Ocean Safety Videos
NOAA's Ocean Today offers the video, Ocean Safe with Bruckner Chase, which explores how reading the water and understanding changing waves, wind, and currents can help keep you safe. Related videos on rip currents and lightning are also available on the website.

http://oceantoday.noaa.gov/oceansafe/

OceanLink
OceanLink from Bamfield Marine Sciences Center is dedicated to ocean education. The website links to the Ocean News Newsletter, with lessons and teacher's guides to fisheries, marine mammals, and much more. Other topics on the website include career information, virtual labs, and more.
http://oceanlink.info/index.html

Open Vault
Open Vault provides online access to content produced by the public television and radio station WGBH. The website offers more than 42,000 records that can be searched through a browseable index of series such as NOVA, a Scholar Exhibits for selected topics, and Special Collections with interview and more.
http://openvault.wgbh.org/

Our Island, Out Water, Our Future
Eutrophication is impacting fresh, estuarine, and coastal waters around the world. Deteriorating water quality is more than an environmental issue - it impacts the health of people and communities. To increase awareness of eutrophication and its consequences, The Nature Conservancy has produced three short animated films illustrating some of Long Island's eutrophication issues, accompanied by a series of personal testimonials ranging from a Nassau junk man to a pair of Montauk oyster farmers.
http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/newyork/places-preserves/long-island-water-quality-videos.xml

Polar Code
The Polar Code from the International Maritime Organization begins to frame the safe use of the polar region by the inevitable increased shipping traffic to the Arctic due to climate change. Check out World Ocean Radio's review, and the Polar Code's website with summary, infographics, and more, available in multiple languages.
http://worldoceanobservatory.org/radio-item/polar-code-and-future-arctic
http://www.imo.org/en/MediaCentre/HotTopics/polar/Pages/default.aspx

Roots & Shoots
The Jane Goodall Institute's Roots & Shoots website encourages youth-led community action programs. The website offers example campaigns, lessons and activities for students, tips on community collaboration, and more.
http://rootsandshoots.org/

Science on the Leading Edge
This website explores the earth and ocean on Canada's Pacific edge. It offers lessons in plate tectonics, the deep sea, and First Nations traditions.
http://oceanlink.island.net/SOLE/index.html

Shark Experts
Meet six NOAA Southeast Shark Experts based in Mississippi and Florida to learn more about who they are, how they study sharks, and what they've learned.
http://sero.nmfs.noaa.gov/shark/index.html

Shark Week Videos From NOAA Fisheries
Shark Week may come and go, but NOAA Fisheries offers videos which provide a glimpse of the wide variety of shark science and conservation work they do every day.
http://www.nmfs.noaa.gov/stories/2014/08/shark_videos_365.html

SOS Explorer
SOS Explorer™, from the inventors of NOAA's Science On a Sphere®, is now available as an exhibit and classroom tool. Users can view over 100 datasets through a user-controlled touchscreen interface on a flat screen. The visualizations show information provided by satellites, ground observations, and computer models, and lets users explore the data. See the website for contact information, and for a "SOS Lite" downloadable trial version.
http://sos.noaa.gov/SOS_Explorer/

STEM Teaching Tools
STEM Teaching Tools is designed to help STEM educators develop a toolbox of instructional approaches that meet the Next Generation Science Standards. Educators can browse a number of Practice Briefs addressing common educator questions and topics.
http://stemteachingtools.org

Threats to Coral Reefs: Climate Change
This new infographic from NOAA's National Ocean Service highlights some of the varied effects of climate change that are threatening coral reefs. The web page posts the downloadable infographic with accompanying text.
http://oceanservice.noaa.gov/facts/coralreef-climate.html

Values Taught by Our Ancestors
The Confederated Salish and Kootenai Tribes are incorporating elders' wisdom in the process of systematically analyzing climate impacts and vulnerabilities in nine categories of tribal life, to prioritize actions to take to enhance the evolution of an ancient culture, while protecting tribal traditions. Applying the Values Taught by Our Ancestors offers a video, tools, and more.
http://toolkit.climate.gov/taking-action/confederated-salish-and-kootenai-tribes-applying-values-taught-our-ancestors

INITIATIVES, JOURNALS, and MORE

DearTomorrow
DearTomorrow is collecting letters to the future, asking people to send open letters, photos, and videos about climate change to those living in the future. Messages will be held in the archive and released in 2030 and 2050.
http://www.deartomorrow.org

Earth is Blue Magazine
The National Marine Sanctuaries offers a new yearly magazine, Earth is Blue. The magazine uses articles and vivid imagery to showcase the diversity of marine life within national marine sanctuaries and marine national monuments and to tell stories about the people who depend on them.
http://sanctuaries.noaa.gov/magazine/1/

International League of Conservation Photographers
The International League of Conservation Photographers is a non-profit organization whose mission is to further environmental and cultural conservation through photography. Their goal is to use the art of high-quality photography to encourage people to take action in support of tangible and meaningful conservation measures.
http://conservationphotographers.org/