

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

**APRIL 2017**

This update is funded by the National Marine Sanctuary Foundation in partnership with NOAA's Ocean Exploration and Research Program, with additional support from 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 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](mailto: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/welcome.html#exchange>.

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## **NOTABLE REFERENCE**

### **MPAs, Fisheries Livelihoods, and Food Security**

The report Marine protected areas: Interactions with fisheries livelihoods and food security from the Food and Agriculture Organization of the United Nations, offers case studies exploring experiences with aquatic protected areas in the context of livelihoods and food security.

<http://www.fao.org/3/a-i6742e.pdf>

## **PROGRAMS OF THE MONTH**

### **Channel Kindness**

Lady Gaga's Born This Way Foundation launched Channel Kindness, a digital platform featuring stories of kindness as documented by young people from around the U.S. These youth reporters identify and document the acts of generosity, compassion, and

acceptance that define their generation and shape their communities. The content includes videos, first person essays, interviews with youth leaders, and more, <http://www.channelkindness.org/>

### **Teach Ocean Science**

TeachOceanScience.net was created to serve as a central location to gather ocean science education resources. The resources are teacher-approved and scientist-vetted for both classroom feasibility and scientific accuracy. Check out the STEM Lessons, myriad Education Modules, and, especially, the Ocean Science Curriculum Guide: An Introduction to Our Dynamic Ocean. <http://www.teachoceanscience.net/>

### **Out 2 Lunch Webinars**

This webinar series from the Federation of Earth Science Information Partners offers ten-minute demos of Earth Science data tools and resources. Watch live or view the recordings. Upcoming topics include GLOBE Cloud apps and S'COOL, NOAA View Data Exploration Tool, and more. Archives include My NASA Data, Climate Explorer, and much more. <http://wiki.esipfed.org/index.php/Education/Out2Lunch>

## **WEBSITES OF THE MONTH**

### **Earthzine**

Earthzine is an online source for news, articles, information and educational materials about Earth science, Earth observations, and users of information for the Earth-observing community. The website offers news from around the world about the Earth, Earth observations, environmental policy, and new and emerging environmentally-friendly and earth-observing technologies. Topics include societal benefit areas (including climate, weather, and more), oceans, and more. Earthzine produces four seasonal themed issues per year; check out invasive species, women in STEM, and more.

<https://earthzine.org/>

### **Estuary Education**

NOAA's Estuary Education website has been updated with many new features, including interactive classroom activities, real time water quality and weather data exercises, simulations, and more. Check out Graphing with your Students, Estuaries 101, and much more.

<https://coast.noaa.gov/estuaries/>

## **REQUESTS**

### **Call for Papers: Coral Reefs**

Earthzine, an online scientific publication, is soliciting articles its second 2017 quarterly theme, Coral Reefs. They seek articles describing contemporary issues behind the science, monitoring, and conservation of coral reefs including their interaction with human activity. The deadline for submission is June 10, 2017.

<https://earthzine.org/2017/02/22/call-for-papers-coral-reefs-2/>

### **Seeking Acoustic Data**

The Caribbean Humpback Acoustic Monitoring Programme, a multi-national collaborative acoustic monitoring program, seeks acoustic recordings made between October 2016 and April/May 2017 in the northern Caribbean, recordings made in the Southern Caribbean between November 2016 and May/June 2017, and recordings made in previous years, especially in the Southern Caribbean.

<http://www.nefsc.noaa.gov/psb/acoustics/psbAcousticsCHAMP.html>

Contact Dr. Heather Heenehan at [hheenehan@gmail.com](mailto:hheenehan@gmail.com)

## **GRANTS AND OPPORTUNITIES**

### **Acres for America**

Acres for America is a partnership between Wal-Mart Stores, Inc. and the National Fish and Wildlife Foundation to provide funding for projects that conserve habitat for fish, wildlife, and plants through acquisition of interest in real property. The deadline for pre-proposals is April 13, 2017.

<http://www.nfwf.org/acresforamerica/Pages/home.aspx>

### **BEST Small Grants**

Biodiversity and Ecosystem Services in European Overseas Territories (OCT) is a funding opportunity for environmental projects. The lead applicant of the project must be a legal entity registered in one of the 13 OCTs and all project activities must be implemented within the territories. The deadline for application is April, 14, 2017.

<https://portals.iucn.org/best/?q=node/939>

### **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. The preliminary proposal deadline is April 28, 2017.

<http://www.storynet.org/grants/brimstone.html>

### **Brower Youth Awards**

The Earth Island Institute's New Leaders Initiative offers the Brower Youth Awards, recognizing young people (ages 13-22) for their outstanding youth leadership and project impact in conservation, preservation, and restoration. The deadline for application is May 15, 2017.

<http://www.broweryouthawards.org/apply/>

### **Butler-Cooley Excellence in Teaching Award**

The Turnaround Management Association and the John William Butler Foundation honor exceptional teachers who have changed the outcome of students' lives and the communities in which they live, with the Butler-Cooley Excellence in Teaching Awards. The deadline for applications is June 12, 2017.

[https://turnaround.org/sites/default/files/2017TMA-ButlerCooley\\_Awards\\_ACTIVE.pdf](https://turnaround.org/sites/default/files/2017TMA-ButlerCooley_Awards_ACTIVE.pdf)

### **CERF Awards**

The Coastal and Estuarine Research Federation recognizes excellence in and service to the fields of coastal and estuarine science, management, and education through several scientific and service awards. The awards are presented every two years in conjunction with the biennial conference. The deadline for nomination is April 14, 2017.

<https://cerf.memberclicks.net/2017-cerf-scientific-awards>

### **Climate Adaptation Fund**

The Wildlife Conservation Society's Climate Adaptation Fund supports projects that demonstrate effective interventions for wildlife adaptation to climate change. Hurry – the deadline for pre-proposals is April 7, 2017

<http://wcsclimateadaptationfund.org/program-information>

### **Every Day Capacity Building Grants**

With support from Toyota Motor Sales USA, Inc., the National Environmental Educational Foundation offers Every Day Grants to public land organizations or Friends Groups, to engage their community on a public land site. The events can be educational, recreational, and/or volunteering-based. The deadline for application is April 12, 2017.

<https://www.neefusa.org/every-day-capacity-building-grants>

### **From the Bow Seat Ocean Awareness Student Contest**

As a reminder, the goal of this contest is to challenge high school students to think critically about challenges facing the ocean. This year's contest theme is Ocean Pollution: Challenges & Solutions. The website offers links to scientific literature, pollution websites, resources on artists and writing, and much more. The deadline for entry is June 19, 2017.

<http://www.fromthebowseat.org/contest.php>

### **Green Difference Awards**

The Green Difference Awards honor environmental excellence, innovation, and stewardship in schools, organizations, and communities across the nation. The deadline for nomination is April 7, 2017.

<http://projectgreenschools.org/green-difference-awards/>

### **Impediments to Aquaculture Grants**

Sea Grant is requesting proposals addressing Impediments to Aquaculture Opportunities. Interested parties should partner with a Sea Grant program to apply. The deadline for application is April 18, 2017.

[http://seagrant.noaa.gov/FundingFellowships/NationalStrategicInvestments\(NSIs\)/AquacultureCompetition/2017Aquaculture.aspx](http://seagrant.noaa.gov/FundingFellowships/NationalStrategicInvestments(NSIs)/AquacultureCompetition/2017Aquaculture.aspx)

### **Marisla Environmental Program**

The Marisla Foundation offers Environmental Program Grants for activities which promote the conservation of biological diversity and advance sustainable ecosystem management. Primary emphasis is on marine resources conservation with a geographic focus on western North America, Chile, and the western Pacific. The next deadlines for application are April 15, 2017 and July 15, 2017..

<https://online.foundationsource.com/public/home/marisla>

### **NAAEE Conference Scholarships**

Each year, the North American Association for Environmental Education offers a variety of scholarships to help educators and students attend their annual conference, to be held October 18-21 in San Juan, Puerto Rico. The deadline for application is June 16, 2017. Remember, the deadline for submission for conference proposals is April 10, 2017.

<https://naaee.org/conference/scholarships>

### **North American Wetlands Conservation Act Grants**

The North American Wetlands Conservation Act provides matching grants to organizations and individuals who have developed partnerships to carry out wetlands conservation projects in the United States, Canada, and Mexico for the benefit of wetlands-associated migratory birds and other wildlife. There are both Standard and Small grants programs. See the website for complete details and deadlines. The next deadline for application is July 14, 2017; check the website for additional opportunities.

<https://www.fws.gov/birds/grants/north-american-wetland-conservation-act.php>

### **North Face Explore Fund**

The North Face Explore Fund grant program supports non-profit organizations that encourage youth outdoor participation, focusing primarily on creating more connections between children and nature. This year, they encourage organizations that focus on providing their participants with environmental stewardship opportunities as well as groups that focus on outdoor experiences to apply. Hurry - the deadline for application is April 5, 2017.

<https://www.thenorthface.com/about-us/outdoor-exploration/explore-fund.html>

### **Outstanding Earth Science Teacher Awards**

The National Association of Geoscience Teachers presents its Outstanding Earth Science Teacher Award to K-12 educators who have made exceptional contributions to the stimulation of interest in the earth sciences. The deadlines for nomination differ for each area – see the website for details.

<http://nagt.org/nagt/awards/oest.html>

### **Paddle Nation Grant**

Outdoor Nation is accepting applications from non-profit organizations and universities who are interested in connecting youth with their waterways through recreational paddling. This funding opportunity supports projects and initiatives that are youth-developed and that result in increased paddling participation. The deadline for application is April 14, 2017.

[http://www.cybergrants.com/pls/cybergrants/quiz.display\\_question?x\\_gm\\_id=4494&x\\_quiz\\_id=5170&x\\_order\\_by=1](http://www.cybergrants.com/pls/cybergrants/quiz.display_question?x_gm_id=4494&x_quiz_id=5170&x_order_by=1)

### **Patagonia Grants**

Patagonia offers grants to organizations that work on root causes of problems and approach issues with a commitment to long-term change, with a focus on organizations that build a strong base of citizen support. Applications are accepted year round at retail stores and twice yearly at the headquarters, with the next deadlines for application of April 30, 2017 and August 31, 2017.

<http://www.patagonia.com/grant-guidelines.html>

### **Science and SciLifeLab Prize for Young Scientists**

The Science and SciLifeLab Prize for Young Scientists invites recent doctoral graduates in the life sciences to submit an essay based on their thesis work. The categories include Ecology and the Environment. The deadline for application is July 15, 2017.

[http://www.sciencemag.org/prizes/scilifelab?et\\_rid=79840790&et\\_cid=1213128](http://www.sciencemag.org/prizes/scilifelab?et_rid=79840790&et_cid=1213128)

### **Stepping Stone Grant**

These grants for Grades K–5 help fund teacher-initiated projects that foster an arts-infused approach to inquiry-based learning and emphasize a holistic methodology that addresses all learners through creativity and the incorporation of the arts as a fundamental tool for learning. The deadline for application is April 30, 2017.

<http://lilysarahgrace.org/grants>

### **Young Birder of the Year Contest**

The American Birding Association sponsors the Young Birder of the Year, an annual contest for youth ages 10-18. Submissions are due by October 15, 2017, but youth must register by June 15, 2017.

<http://youngbirders.aba.org/young-birder-of-the-year-contest>

### **YSA and First Book Read & Act Grants**

First Book and Youth Service America created a collection of books that make reading an adventure, and encourage students ages 6 to 12 to think about how they can use their own skills and passions to take action in their communities. Each book in the Read & Act: Kids Making a Difference collection is paired with a downloadable tip sheet to help make connections between inspiring stories and ways to make communities a better place. The grant is available on a first come, first served basis – see the website for complete details.

<http://ysa.org/how-would-you-use-150-worth-of-books-to-inspire-your-students/>

### **Zayed Global High School Prize**

The goal of the Zayed Global High School Prize is to inspire future generations across the globe by instilling an ethos of sustainability from an early age, including an appreciation of issues in energy and broader sustainability. The deadline for application is July 6, 2017..

[http://www.zayedfutureenergyprize.com/en/prize-categories/global\\_high\\_school\\_prize/](http://www.zayedfutureenergyprize.com/en/prize-categories/global_high_school_prize/)

## **FELLOWSHIPS, INTERNSHIPS, AND TEMPORARY OPPORTUNITIES**

### **BIOS REU Internships - Bermuda**

The Bermuda Institute of Ocean Sciences has received funding from the National Science Foundation for the Research Experiences for Undergraduates Program, to support eight internships for undergraduate student research during Fall 2017. The deadline for application is May 31, 2017.

<http://www.bios.edu/education/reu/>

### **Outreach Officer/Teacher at Sea**

The International Ocean Discovery Program is accepting applications to sail as an Onboard Outreach Officer on the R/V *JOIDES Resolution* for two upcoming expeditions: Expedition 375 Hikurangi Subduction Margin (March 8, 2018 – May 5, 2018), and 376

Brothers Arc Flux (May 5, 2018 – July 5, 2018). The deadline for application is April 17, 2017.

<http://joidesresolution.org/node/453>

### **School of Rock Expeditions for Earth and Ocean Science Educators**

Educators interested in experiencing scientific ocean drilling research can join this multi-day workshop onboard the R/V *JOIDES Resolution* while transiting from Subic Bay, Philippines to Townsville, Australia, July 10-27, 2017. Apply in teams of two: a secondary-level educator and an early career scientist from the same general location. Hurry - the deadline for application is April 7, 2017.

<http://joidesresolution.org/node/3298>

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

### **Antarctica: From Geology to Human History - Online**

This MOOC (massive open online course) from the Victoria University of Wellington explores the geology and history of Antarctica. The five-week course starts April 15, 2017.

<https://www.edx.org/course/antarctica-geology-human-history-victoria-ice101x>

### **Changing Public Behavior - Online**

Changing Public Behavior: People and the Environment is a self-study course through the USDA's University Extension online learning resource, designed for natural resource professionals, extension educators, and environmental educators who work with communities. Through the seven units, participants build skills in identifying and analyzing behavior change opportunities and draft a plan for increasing people's involvement in an environmental situation.

<http://campus.extension.org/enrol/index.php?id=548>

### **Citizen Science Association Conference**

CSA2017, May 17-20, 2017 in Twin Cities, Minnesota, offers the opportunity to make face-to-face connections with leaders in areas of science, policy, conservation, science education, and citizen science practice to inspire social responsibility through participation in citizen science.

<http://citizenscience.org/association/conferences/citsci2017/>

### **CoCoRaHS WeatherTalk Webinars - Online**

The Community Collaborative Rain, Hail and Snow Network is a non-profit, community-based network of volunteers measuring and mapping precipitation. By using low-cost measurement tools, stressing training and education, and utilizing an interactive website, the aim is to provide high-quality data for natural resource, education, and research applications. They offer bimonthly webinars, and archive them for those wishing to view them at a later date. Check out Weather, Climate and Phenology, Weather Underground, and much more.

<https://www.cocorahs.org/Content.aspx?page=wxtalk>

### **Creating Climate Resilient Communities - Online**

The free webinar from Island Institute's Energy Education and Leadership program, Creating Climate Resilient Communities Through Hands-On Energy Education and Conservation, will take place April 3, 2017.

<https://attendee.gotowebinar.com/register/2426289391834990338>

### **Earth Optimism Summit**

The first Earth Optimism Summit will take place April 21-23, 2017 in Washington, DC. Check out the concurrent public events and live streaming, sister events around the world, and more.

<https://earthoptimism.si.edu/>

### **Earth Science for Middle School Teachers - Texas**

The Texas Space Grant Consortium is hosting this educator workshop, The Little Blue Dot -- Earth Science for Middle School Teachers, June 12-15, 2017 in Austin, Texas. Participants will learn about hands-on activities designed to support the Earth science standards in grades 6-8. A stipend is available to offset costs of housing and travel.

<http://www.tsgc.utexas.edu/earth-science-workshop/>

### **Extremes of Life: Microbes and their Diversity - Online**

This self-paced MOOC from Kyoto University investigates microbes that are able to survive in extreme environments and temperatures. The materials are divided into four units: Evolution and the Diversity of Life; Life in Boiling Water; Diversity of Extremophiles; and Genome Sequences.

<https://www.edx.org/course/extremes-life-microbes-diversity-kyotoux-003x-0>

### **Fish Field Methodology Course – Florida**

REEF will host a Fish Field Methodology Course, June 4-11, 2017 in Key Largo, Florida. This course is designed for college undergraduates and recent graduates aspiring towards a career in marine biology or a related field. It covers commonly used tools and techniques for visual assessments of reef fishes.

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

### **IMPAC4**

The theme of the 4th International Marine Protected Areas Congress, IMPAC4, September 4-8, 2017 in La Serena-Coquimbo, Chile, is MPAs: bringing the ocean and people together. The deadline for submissions is April 20, 2017.

<http://www.IMPAC4.org/en/homepage/>

### **Making Sense of Climate Science Denial – Online**

Learn to make sense of the science and to respond to climate change denial through this MOOC from the University of Queensland. While the seven week course started March 21, 2017, enrollment is still open and it is easy to catch up.

<https://www.edx.org/course/making-sense-climate-science-denial-uqx-denial101x-3>

### **Microplastics - Online**

Join the webinar, Microplastics: What we know and discussion of research needs, April 13, 2017, highlighting studies funded by the NOAA Marine Debris Program. Learn about the various types and sources of microplastics and the impacts associated with microplastic marine debris

<https://attendee.gotowebinar.com/register/5580307763312728833>



### **Mother Mother Ocean – Online**

Mother Mother Ocean from the University of West Florida is the first in a series of Gulf Stories, highlighting the university's connection and engagement with the Gulf of Mexico. This free course consists of five modules lasting approximately two hours each. The deadline for registration is April 16, 2017.

<http://uwf.edu/innovation/the-work/gulf-stories/>

### **NGSS Climate Education with the CLEAN Collection - Online**

The Climate Literacy and Energy Awareness Network (CLEAN) Collection is a digital library of free climate and energy learning resources, including activities, videos, short demonstrations, and guidance for teaching. This free webinar from the National Association of Geoscience Teachers, April 13, 2017, will highlight ways in which climate and energy learning is included in NGSS (Next Generation Science Standards), will describe the resources available through CLEAN, and will show attendees how to use CLEAN for their NGSS needs. The deadline for registration is April 11, 2017.

[http://nagt.org/nagt/profdev/workshops/ngss\\_summit/CLEAN\\_res/index.html](http://nagt.org/nagt/profdev/workshops/ngss_summit/CLEAN_res/index.html)

### **Resilience: It's Not Just Surviving the Zombie Apocalypse - Connecticut**

This Climate Science & Education Professional Development Workshop from the University of Connecticut and partners, July 11-July 13, 2017 in Groton, Connecticut, will focus on topics of climate science and resilience strategies for the northeast region of the United States, with a goal of connecting educators and their students and/or audiences to the best available science-based information and pedagogic resources.

[https://docs.google.com/forms/d/14jBiqVINP0W6loE8gUOQkUbSEY790QZhhlq-W5dHnj4/viewform?edit\\_requested=true](https://docs.google.com/forms/d/14jBiqVINP0W6loE8gUOQkUbSEY790QZhhlq-W5dHnj4/viewform?edit_requested=true)

### **Rivers to Reefs Educator Workshop - Georgia**

Sponsored by the Georgia Aquarium and partners, participants will learn about watersheds, water quality, current aquatic issues, and a variety of aquatic ecosystems in this free workshop, June 11-16, 2017, starting from Atlanta, Georgia. Georgia teachers with a current teaching placement are eligible. The deadline for application is April 14, 2017.

<http://www.georgiaaquarium.org/experience/learn/school-programs/educators/professional-development>

### **Summer Institute for Climate Change - Minnesota**

Climate Generation's 2017 Summer Institute, June 26-28, 2017 in St. Paul, Minnesota, will focus on their curriculum, Next Generation Climate. It is a six lesson, interdisciplinary, middle school climate change curriculum that has students investigate the cause of the global temperature change, research the major repercussions of climate change, and find out how they can monitor and minimize those repercussions.

<https://www.climategen.org/what-we-do/education/professional-development/summer-institute/summer-institute-2017/>

### **Teacher Workshops - Louisiana**

The Coastal Waters Consortium and partners offer free teacher workshops targeting science development with a concentration in coastal and marine sciences. Check out the upcoming workshops:

- Ship Time & Shoreline, July 10-14, 2017
- Water Quality Training, May 30-June 2, 2017

[http://cwc.lumcon.edu/?page\\_id=3101](http://cwc.lumcon.edu/?page_id=3101)

Contact Murt Conover at [mconover@lumcon.edu](mailto:mconover@lumcon.edu)

### **Urban Environmental Education - Online**

Cornell University's Civic Ecology lab offers the online course, Urban Environmental Education, April 10-June 4, 2017. The nominal fee may be waived for those unable to pay.

<https://civicecology.org/course-UEE/>

### **U.S. Fish and Wildlife Service Training – Various**

The following courses are offered by the U.S. Fish and Wildlife Service. You can search using the course code or keywords. The dates listed are course start dates

- River Assessment and Monitoring (Wildland Hydrology) CSP3410, May 8, 2017 in Shepherdstown, West Virginia
- Connecting Birds with Nature, OUT8163, June 5, 2017 in Fergus Falls, Minnesota
- Wetland Assessment, Restoration and Management, CSP3106, June 19, 2017 in Willows, California
- Freshwater Mussel Identification, CSP1103, June 26, 2017 in Shepherdstown, West Virginia
- Climate-Smart Conservation with Scenario Planning, ALC3187, May 15, 2017 in Shepherdstown, West Virginia
- Wetland Plant Identification, CSP3107, July 17, 2017 in Shepherdstown, West Virginia

<https://training.fws.gov/courses/>

### **Watershed Webs - Gulf Coast**

Watershed Webs, June 5-8, 2017 on Grand Isle, Louisiana for teachers of students in grades 5-12, focuses on the dynamics of watersheds, water quality, trash, and the WET tracker app. Teachers in the coastal parishes/counties of Alabama, Florida, Louisiana, Mississippi, and Texas are eligible to participate; if you live in an eligible area, be sure to check this out. Funding for student field expeditions and equipment may be available.

<http://www.wlf.louisiana.gov/professional-development-opportunities>

### **Youth Conservation Summit - Maryland**

The Youth Ocean Conservation Summit for high school students, will take place April 23, 2017 in Baltimore, Maryland. The deadline for application is April 10, 2017.

<https://aqua.org/learn/student-programs/youth-ocean-conservation-summit>

## **EDUCATIONAL RESOURCES**

### **Adapting to a Changing World**

In the module Climate of Change from Carleton College's InTeGrate (Interdisciplinary Teaching about Earth for a Sustainable Future) program, students explore differences between climate change and climate variability, examine the ENSO system as a pattern in time and space, and examine glacial climate records as part of a role-playing game. In the activity, Adapting to a Changing World, students assess individual and national opinions on climate change and explore strategies that communities are employing to adapt to aspects of climate change already affecting them in addition to those likely to affect them in the future.

[http://serc.carleton.edu/integrate/teaching\\_materials/climate\\_change/unit6\\_cover.html](http://serc.carleton.edu/integrate/teaching_materials/climate_change/unit6_cover.html)

### **Anecdata**

Anecdata is a free online portal for environmental citizen science projects. Researchers can share data from Excel, Google Earth, or ArcGIS and invite others to create online profiles and help with data collection. Check out the projects section, which features current Anecdata projects from around the globe, including king tide projects, phytoplankton monitoring, and more.

<https://www.anecdata.org>

### **Biodiversity e-Learning Platform**

The Biodiversity e-Learning Platform is designed to provide a one-stop-access to e-learning modules and courses relating to the Convention on Biological Diversity, the Cartagena Protocol on Biosafety, and the Nagoya Protocol on Access and Benefit-Sharing. Currently, the platform contains 26 e-learning modules on biosafety, biodiversity valuation, and protected areas.

<https://scbd.unssc.org/>

### **BirdNote Podcasts**

The BirdNote podcast is a two-minute radio show that combines sounds with stories to illustrate the lives of birds and give listeners a momentary respite from the news of the day.

<http://birdnote.org/shows>

### **Climate Degregation Tracker**

This website from the Columbia Law School lists daily updates on congressional or presidential actions that will impact climate mitigation and adaptation. The site contains an easy overview of the latest actions, action types, and agencies affected, as well as expanded information on each entry.

<http://columbiaclimatelaw.com/resources/climate-deregulation-tracker/>

### **Coral Reef Education Portal**

The Khaled bin Sultan Living Oceans Foundation offers a standards-based coral reef curriculum on its coral reef education portal. Students can explore eleven units on topics that can be integrated into a variety of courses such as art, biology, chemistry, environmental and marine science, and physics. Check out the quizzes, videos, and much more.

<https://www.livingoceansfoundation.org/education/portal/>

### **Data in the Classroom**

The NOAA Data in the Classroom website has been updated. Check out the resources on Sea Level and El Nino, and watch for Coral Bleaching, Ocean Acidification, and more.

<https://dataintheclassroom.noaa.gov/>

### **Disney Moana Educator Packet**

Disney offers a downloadable educator packet and activity guide to go along with the movie, Moana. Check out storytelling, music and rhythms of the ocean, and more.

<http://movies.disney.com/moana>

### **EarthEcho Water Challenge**

The EarthEcho Water Challenge is an international program that builds public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local water bodies. Check out the guides and lesson plans.

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

### **Endangered Reefs, Threatened People**

Check out this story map on threats to coral reefs and the people that rely on them.

<https://grid->

[arcgis.com/apps/Cascade/index.html?appid=2f440e93fefa4cce8e660c259bd23b50](http://arcgis.com/apps/Cascade/index.html?appid=2f440e93fefa4cce8e660c259bd23b50)

### **EurekaAlert! Marine Science**

The American Association for the Advancement of Science's EurekaAlert posts news releases about scientific developments from around the world. The Marine Science topical news portal is updated with news releases almost daily. Be sure to check out the multimedia and calendar sections.

<https://www.eurekaalert.org/marinescience/>

### **Exploration To Gray's Reef National Marine Sanctuary - Online**

GPB Education will stream a live exploration of Gray's Reef National Marine Sanctuary, May 10, 2017.

<http://www.gpb.org/blogs/education-matters/2017/03/29/live-exploration-grays-reef-national-marine-sanctuary>

### **Exploring Ocean STEM Careers - California**

Birch Aquarium at Scripps Institution of Oceanography and partners invite students in grades 6-12 and their parents to an evening of Exploring Ocean STEM Careers, April 26, 2017, in San Diego, California. Students can explore scientist tables around the aquarium as they learn about tools of the trade, listen to career path stories, and more.

<https://aquarium.ucsd.edu/experiences/programs/exploring-ocean-stem-careers>

### **Global Biodiversity Information Facility**

The Global Biodiversity Information Facility is an international open data infrastructure. It allows free access to data about all types of life on Earth, shared across national boundaries. It currently includes over 30,000 data sets and data from over 200 countries. Check out the News section with featured data use, a newsletter, and more.

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

### **Marineland Lecture Series – Florida and Online**

Marineland, in partnership with the Guana Tolomato Matanzas National Estuarine Research Reserve, offers this free lecture series on the third Tuesday of each month. When possible, the talks are streamed live (with a chat feature) and archived on the GTMNERR YouTube channel. Register to attend in person; space is limited.

<http://www.marineland.net/home/programs-events/arts-culture/lecture-series>

<https://www.youtube.com/user/GTMNERR>

### **NASA Scientific Visualization Studio**

NASA's Scientific Visualization Studio and partners have teamed up to create visualizations, animations, and images in order to promote a greater understanding of Earth and Space Science research activities at NASA and within the academic research community supported by NASA. Galleries include Hurricanes and Typhoons, Arctic Sea Ice, Climate Essentials, and much more. Special Events include Carbon Consumption and the Earth's Carrying Capacity, Warming World Snaps from Space, and more.

<https://svs.gsfc.nasa.gov//>

### **Next Gen Navigator**

Next Gen Navigator is a monthly e-newsletter from NSTA delivering information, resources, and professional learning opportunities for science educators on the Next Generation Science Standards and three-dimensional instruction.

<http://www.nsta.org/publications/archive-nextgennavigator.aspx>

### **Nimuno Loops**

For those of you working with Legos<sup>®</sup> for your STEM projects, check out this toy block tape, currently funding on Indiegogo. The reusable tape transforms any surface into a base for building blocks and components.

<https://www.indiegogo.com/projects/nimuno-loops-the-toy-block-tape#/>

### **New Frontiers in Ocean Exploration**

A downloadable report from NOAA's Office of Ocean Exploration and Research's (OER) 2016 expeditions has just been released in a Supplement to the March issue of Oceanography. The report highlights OER's work along with that of the Ocean Exploration Trust's E/V Nautilus and Schmidt Ocean Institute's R/V Falkor. The significance of U.S. Marine Protected Areas and the resources they contain was an underlying focus throughout the 2016 expeditions.

<http://tos.org/oceanography/issue/volume-30-issue-01-supplement>

### **NOAA Story Maps**

A new NOAA Story Map will be released monthly to highlight NOAA's mission. The first tells about California's Epic Winter, and the crisis at the Oroville Dam.

<https://noaa.maps.arcgis.com/apps/MapJournal/index.html?appid=c60cc2d3c4fa4a84a4966f49a8c34578>

### **Ocean Exploration Expeditions**

NOAA and partners are conducting two telepresence-enabled ocean exploration cruises on NOAA Ship *Okeanos Explorer* to collect critical baseline information of unknown and poorly known deepwater areas between Samoa and Hawai'i, including the Pacific Remote Islands Marine National Monument. From April 4-21, 2017, mapping operations will start in Apia, Samoa, and ending in Pago Pago, American Samoa, with the majority of time spent within the waters of American Samoa. April 27-May 19, 2017, ROV and mapping operations start in Pago Pago, American Samoa, and end in Honolulu. Follow along with daily updates, mission logs, educational materials, and more.

<http://oceanexplorer.noaa.gov/okeanos/explorations/explorations.html>

### **Ocean Literacy Webinars**

Three webinars from NMEA's Ocean Literacy Committee have been archived for viewing online: Organizing for Ocean Literacy - Implementation at Different Scales; Exploring

and Applying the Ocean Literacy Scope and Sequence for Grades K–12; and Aligning the Ocean Literacy Framework to the Next Generation Science Standards.

<http://www.marine-ed.org/blogpost/1067768/262768/Guest-Blog-by-the-Ocean-Literacy-Committee-Join-our-winter-ocean-literacy-webinar-series>

### **Salt Marsh Ecology Citizen Science Projects**

Scientists working to better understand the ecology of the salt marsh have created two citizen science "games" that will help them create large maps containing detailed spatial information for all the marsh species. Results will allow new insights into how salt marsh species interact with each other and with the environment. Students match overlapping photographs or identify plants and animals in unprocessed images.

<http://eeintennessee.org/resource/about.aspx?s=129172.0.0.37935>

### **Science Journal App**

Students can use their Android phone or tablet to measure sound, light, and motion data in real time.

<https://makingscience.withgoogle.com/science-journal?lang=en>

### **Science Teach-in Toolkit**

The National Council for Science and the Environment offers a free Science Teach-In Toolkit on how institutions of higher education can organize a teach-in, including answers to frequently asked questions, a planning checklist, and tips for communicating about your event. Templates include a teach-in agenda, outreach email, and more. Check out the archive of the webinar, and check the website for future webinars.

<https://www.ncseglobal.org/ncse-science-teach-in-toolkit>

### **Sea Level Rise Impact Videos**

This series of ten videos from Florida International University's School of Journalism and Mass Communication highlights South Florida's future environmental challenges related to sea level rise.

[https://www.youtube.com/playlist?list=PL8NJkhLZOuT-EtP9axK3VYGkSYPe45\\_HI](https://www.youtube.com/playlist?list=PL8NJkhLZOuT-EtP9axK3VYGkSYPe45_HI)

### **Seawall Interpretive Trail Video**

Artist Boat's Seawall Interpretive Trail (Project S.I.T.) public art program is a beautification project which transformed 70 Galveston seawall benches into educational works of art that depict the coastal and ocean heritage of Galveston Island and the Gulf of Mexico. Watch this video to see some of the benches and listen to some of the artists' stories.

<https://www.youtube.com/watch?v=ht53arMNXeU&feature=youtu.be>

### **Sharks of New York**

This short video from Dr. Jaws (Zachary Webb Nicholls) describes the 54 shark species that occur in the Virginian Marine Ecoregion.

<https://www.youtube.com/watch?v=HM1d-5-7Z-E>

### **Storytelling**

Khan Academy and Pixar offer this interactive lesson about the Art of Storytelling. Pixar storyboard artists explain their creative processes and their personal favorite stories. The videos are accompanied by four activities designed to get youth to reflect on and discuss different aspects of storytelling, including memory. The initial series includes

one complete tutorial; additional tutorials on storytelling are coming soon.

<https://www.khanacademy.org/partner-content/pixar/storytelling/we-are-all-storytellers>

### **Water, Agriculture, and Sustainability**

InTeGrate offers the Water, Agriculture, and Sustainability module on its website, a three to five-week module that provides a framework for students to learn about how people interact with water, peer into our water future, and consider ways we might foster more sustainability in water management

[http://serc.carleton.edu/integrate/teaching\\_materials/water\\_sustainability/index.html](http://serc.carleton.edu/integrate/teaching_materials/water_sustainability/index.html)

### **WikiWatershed Toolkit**

The WikiWatershed Toolkit from the Stroud Water Research Center, is a web toolkit to support researchers, educators, and others to collaboratively advance knowledge and stewardship of fresh water.

<https://wikiwatershed.org/>

### **Wisdom of the Elders Climate Change Documentaries**

Wisdom of the Elders has completed several climate change films with Tribes. The first in their series is the “The People of the Whale,” featuring the Inupiaq people of Alaska. The Climate and Native Wisdom Documentary Film Festival will be held April 16, 2017 in Portland, Oregon.

<https://vimeo.com/122569798>

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

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

### **Cleanseas**

UN Environment has launched a global campaign to eliminate major sources of marine litter: microplastics in cosmetics and the excessive, wasteful usage of single-use plastic. The #CleanSeas campaign urges governments to pass plastic reduction policies; targets industry to minimize plastic packaging and redesign products; and calls on consumers to change their throwaway habits.

<https://cleanseas.org/>

### **Earth Day**

Earth Day Network, the global organizer behind Earth Day, has created tools, resources and opportunities for teachers and students to get involved. The theme for 2017 is Environmental & Climate Literacy. Celebrate on and around April 22, 2017 and plan a service project. Check out the resources, including toolkits, local campaigns, and more.

<http://www.earthday.org/earth-day/>

### **EE Week**

National Environmental Education Week (EE Week), April 23-29, 2017, is a celebration of environmental education, aimed at inspiring environmental learning and stewardship among K-12 students. Register your events, check out the blogs and news feeds, view archived webinars, and more.

<https://www.neefusa.org/greening-stem/environmental-education-week>

### **Global Youth Service Day**

Global Youth Service Day is April 21-23, 2017. Spread the word about your service day event, join in one of the many GYSD Partner Days of Service, and see what others in your area are planning.

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

### **Green Schools Catalyst Quarterly**

This new online publication focuses on green schools, and is geared toward making healthy, sustainable K-12 institutions the rule and not the exception.

<http://greenschoolsnationalnetwork.org/gscq/>

### **National Park Week**

National Park Week is April 15-23, 2017. All parks will offer free admission April 15-16 and 22-23, 2017. Find a park near you, check out special celebrations, and more.

<https://www.nps.gov/findapark/national-park-week.htm>

### **New Zealand Wetland Trail System**

For six years, a group of Westport, New Zealand volunteers have worked to transform a muddy wasteland area by hand into stunning trails and boardwalks.

<http://www.stuff.co.nz/travel/news/89345406/westport-wasteland-transformed-by-volunteers-into-beautiful-river-trail>

### **STEM All Stars**

STEM All Stars is an international nonprofit organization committed towards eliminating gender differences by running a STEM competition, clubs, and events for girls around the world.

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

### **Stump the Treehugger - Texas**

The Citizens' Environmental Coalition will hold this environmental trivia contest, April 30, 2017, in Houston, Texas. during their Think and Drink for the Planet celebration. Teams of eight players each will compete in nine rounds of earthy trivia, answering eco-centric questions in categories such as Enviro 101, Soils, Politics, Government, and Eco-Justice, and more.

<https://www.eventbrite.com/e/earth-day-houston-environmental-trivia-contest-registration-32536810476>

### **World Oceans Day**

The Ocean Project coordinates World Oceans Day, held every year on June 8. The theme for 2017 is Our Oceans, Our Future. Check out the promotional materials, register an event, and more.

<http://www.worldoceansday.org/resources>