

September 2015

THE CONNECTICUT BUILDING A PRESENCE FOR SCIENCE NETWORK IS SUSTAINED THROUGH THE ADVOCACY OF THE CCAT, CONNECTICUT SCIENCE SUPERVISORS ASSOCIATION, AND THE CONNECTICUT SCIENCE TEACHERS ASSOCIATION

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NAMES AND E-MAIL ADDRESSES OF OUR POINTS OF CONTACT AND KEY LEADERS ARE NOT SHARED WITH ANY OTHER ENTITY

Resources



CSDE's [science curriculum web site](#).

EQuIP Rubric for Science Released!

The [Educators Evaluating the Quality of Instructional Products \(EQuIP\) Rubric for Lessons & Units: Science](#)

Visit the NGSS@NSTA Hub :

The [NGSS@NSTA Hub](#) now offers a dynamic version of the *Next Generation Science Standards*..

Would you like a complete list of grants that has been provided by the National Science Teachers Association? NSTA has put these grant and their deadlines in an easy to follow calendar. It includes: deadline date, description, category, and grade level. To view this list, please visit:

<http://www.nsta.org/publications/calendar/>

SAVE THE DATE! CONNECTICUT SCIENCE SUPERVISORS ASSOCIATION:

All educators welcome! DATE: Wednesday, October 7th, 2015, 5:30 - 8:00pm
Crowne Plaza Hotel, Cromwell, CT
Speaker: [Dianna L. Wentzell, Commissioner, CT State Department of Education](#).

Cocktails and Social Time, Meet w/ Sponsoring Exhibitor 4:30-5:30 PM
Buffet Dinner and CSSA Business Meeting 5:30-7:00. For more info, click on:

<http://www.cssaonline.org/dinner-meetings.html>

MORE DATES TO RESERVE FOR THE 2015-16 SCHOOL YEAR:



Monday, October 5 at the Connecticut Science Center in Hartford
This fourth annual conference will draw educators from throughout the state at the exciting Connecticut Science Center to explore and discuss ideas and innovations for

STEM (science, technology, engineering, and mathematics) curricula.

WE ARE EXCITED ABOUT OUR TWO KEYNOTE SPEAKERS:

Bruce Dixon is an educational innovator, social entrepreneur, youth advocate, former corporate director, motivational speaker and current Chief Executive Officer of the Connecticut Pre-Engineering Program (CPEP).

Dr. Ainissa Ramirez is a science evangelist who is passionate about getting the general public excited about science. She co-authored *Newton's Football: The Science Behind America's Game* and authored *Save Our Science: How to Inspire a New Generation of Scientists*. For full information, please click on:

<https://www.ctsciencecenter.org/education/stem2015/>



Connecticut Science Educators Professional Development Day
Date: Saturday, November 21, 2015 Time: 8:00 AM - 4:00 PM
Hamden Middle School, Hamden, CT.

The 2015 Connecticut Science Educators' Professional Development Day will be held on Saturday November 21 at Hamden Middle School, Hamden, CT. This annual event attracts hundreds of science educators from across the state and throughout New England for workshops, seminars, speakers and commercial exhibitors. This event is co-sponsored by the Connecticut Science Teachers Association and the Connecticut Science Supervisors Association.

The conference program runs from 8:00 AM to 3:30 PM, and it is expected that over 300 K - college science educators from around the state of Connecticut will attend.

This year's theme is <Towards NGSS: Where Science and Education Meet>

For early registration, go to: <http://www.csta-us.org/event.htm?id=2azessfl>



**SAVE THE DATES!
CONNECTICUT SCIENCE SAFETY NETWORK CSSN**

2015-16 WORKSHOP CALENDAR can be found at:

http://www.wesleyan.edu/greenstreet/professionaldev/science_safety/2015-16%20CSSN%202015-16%20Workshop%20Calendar.pdf
PROFESSIONAL DEVELOPMENT

Professional Development Days: Join a NESS Educator and learn some of our programs that you can bring back to your classroom.

Each program is an hour and a half long and is **FREE**. Registration is limited to 10 people and you must pre-register. To register call 860-535-9362.

Offerings are as follows:

October 7, 2015: Living Lessons Provide your students with an interactive and “hands-on” living display in your classroom. Instill passion, curiosity and interest that will increase your student’s scholastic performance.

A living aquarium in your classroom becomes an interactive tool with a variety of relevant topics and visual aids for learning biology, anatomy, chemistry, ecology and physics! This program will show you how NESS can provide you with the needed equipment, lesson plans and the know-how of a simple aquarium set-up. Suitable for all grades.

December 2, 2015: Weird & Wild Pinchers, antennae, tube feet and more! All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, and protect themselves. These weird and wild features allow our local animals to survive in the harsh Long Island Sound habitat. Explore hands-on learning techniques using these concepts and bring them back to your classroom. Suitable for grades K-4.

February 3, 2016: Sailing Sys-STEMS

Sailing is a wonderful avenue to actualize STEM education in an exciting real life application. Learn the physics behind sailing, simple machines or basic navigation principles to name just a few. This class will focus on model sail boats, built from simple materials, including

determining how much cargo your boat can hold, the proper keel to cargo ratio and best rudder shape and placement. Suitable for grades 5-8.

May 4, 2016: Physical Oceanography: Learn about physical properties and dynamics influencing our coastal waters by collecting samples using our sampling tools including a Van Dorn Bottle and an Eckman Grab. Measure the quality of the water by determining density, temperature, salinity and dissolved oxygen, and analyze findings using the scientific method. Apply discoveries to understand trends occurring in our oceans, harbors, estuaries and lakes surrounding where we live. Suitable for grades 9-12.

New England Science & Sailing, P.O. Box 733 · 70 Water Street, Stonington, CT 06378, 860-535-9362 · office@nessf.org www.nessf.org



AMERICAN MUSEUM OF NATURAL HISTORY

Fall schedule coming together? Looking for professional development and graduate credit? Registration is open for Seminars on Science from the American Museum of Natural History. Our 6-week online courses can be taken for up to 3 graduate credits each. You can register now at amnh.org/learn/calendar Courses include: Climate Change; Earth: Inside and Out; Evolution; The Ocean System; Space, Time and Motion; Water and more. All of the courses are online and are led by both an experienced classroom teacher and a research scientist. The next session runs from September 21st to November 1st. Sign up today and receive \$50 off your registration fee! Use code **SCIENCEMATTERS**.

For more information about the program, check out Seminars on Science at amnh.org/learn.

If you have any questions, send us an email at learn@amnh.org, or call us at 800-649-6715.



From Donna Ellis at UConn: IPM curriculum kits are now available to any teachers or other educators who could use them in their classes, at no cost as long as the teachers can pick them up at UConn. We still have quite a few curriculum kits available. Teachers can view the curriculum

and the excellent curriculum alignments completed by Mary Lou Smith on the UConn IPM website at http://www.ipm.uconn.edu/pa_curriculum/. I am available to conduct workshops or other curriculum training by request if any teachers are interested. To schedule a pickup of kits please contact Donna Ellis at donna.ellis@uconn.edu and make arrangements to pick up the curriculum kits at the UConn Depot campus.

www.CLEANet.org has more than 640 units, lessons, videos, and diagrams that have been rigorously reviewed by both scientists and teachers. While their focus is on Middle and High school, there are some middle school activities that would be appropriate. There may also be some resources on the k12 portal of the SERC website: <http://serc.carleton.edu/k12/index.html>

NSTA LEGISLATIVE UPDATE: Senate Passes Legislation to Overhaul No Child Left Behind

By Jodi Peterson | Published: July 20, 2015:

Fourteen years after it was first signed into law and seven years after it expired, the U.S. Senate passed legislation on Thursday, July 16 to overhaul the Elementary and Secondary Education Act—commonly known as No Child Left Behind—by a vote of 81 to 17.

The Every Child Achieves Act, the bipartisan agreement by Senate education committee Chairman Lamar Alexander (R-TN) and Ranking Member Patty Murray (D-WA), contains a significant program for STEM education and retains the requirement that states continue testing in math and science. Overall the bill reduces the role of the federal government and gives states the flexibility not found under No Child Left Behind.

On July 8, the House of Representatives passed the largely partisan Student Success Act (H.R. 5) their bill to reauthorize the Elementary and Secondary Education Act.

Next up is work on the final House-Senate conference agreement, as education leaders work to find a compromise between many of the differing issues/ policies (greater accountability, students opting out of testing, Title I portability) in the two bills and produce a final bill acceptable to their respective caucuses and to the White House. Chairman Alexander is quoted as saying he would like to get a bill to the president this fall.

STEM advocates are gearing up now to ensure that the final bill will retain the Senate’s strong STEM focus. Watch for upcoming issues of NSTA Express and special NSTA Legislative Alerts to find out how you can help ensure STEM education

remains a priority in the final federal education law. For the latest on what Congress is up to, click on <http://www.ed.gov/esea> . It is worthwhile for every science educator to belong to NSTA to remain abreast of all that is happening in our profession, and for help in coping with all the latest educational changes. You can join by clicking on:

<https://secure.nsta.org/membership/membership.aspx?promo=>



**Connecticut Sea Grant
Long Island Sound Mentor-
Teacher Workshop 2015**



**Seine the Sound with
Next Generation Science Standards**



You will be able to:

Teach at the beach - Apply science inquiry skills!
Connect your students, wherever they live, to their coastal environment.

Have fun organizing a field study site at Long Island Sound.

Apply science concepts to improve test scores.

Excite your students to work as scientists!



Address CT Science Framework Inquiry and Content Standards for
Grades 4-12

Align Next Generation Science Standards Crosscutting Concepts and
Core Ideas!

Date/Time: Mon., September 21, 2015
9am to 3pm

Location: Meigs Point, Hammonasset Beach
State Park, Madison, CT

Who should attend: Grade 4-12 Teachers &
Informal Science Educators

COST: ONLY \$10!

Contact: Donna Rand, drand@crec.org to register or obtain more information.

<https://longislandsoundkids.wordpress.com/>

Workshop is open to first 20 people who return \$10 payment.

Take-Home Materials include:

Teacher Curriculum Resource Guide, field-tested and aligned to Science Standards, Seine net, minnow trap, several field guides including \$40 Field Guide to LIS, geology tools, and more!

You will LOVE this day!



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PROGRAMS FOR STUDENTS:

WANTED: "High-Tech Pen Pals"

Fifth grade classes near Albuquerque, New Mexico, are looking for partners to exchange information about watersheds, rivers, stormwater, and other water resources topics!

RiverXchange is a FREE year-long program focused on communication between classes around the world about water resources issues. Our hands-on lessons can be used for reference, to enhance your existing curriculum, or as a complete program that explores rivers, watersheds, stormwater, municipal water supplies, ecology, and conservation.

Students communicate 4 times throughout the school year on a private website. We provide training and support to ensure a successful experience. Through writing and creative sharing about rivers, we integrate science with language arts, social studies, and 21st-Century learning skills, all correlated to Common Core Language Arts Standards!

Check out our public website, www.RiverXchange.com, for more information and to access the registration form. I'd love to hear from you if you have any questions about the program.

Susan Quincy
Environmental Education Specialist
Coordinator Project Food, Land & People and Project WET
State Parks Public Outreach
Natural Resource and Recreation
Connecticut Department of Energy and Environmental Protection
Kellogg Environmental Center, 500 Hawthorne Ave, Derby CT 06418
P: 203-734-2513
susan.quincy@ct.gov

DO YOU HAVE STUDENTS INTERESTED IN STUDYING BEETLES? GRADES 7-12 AWARD

Youth Incentive Award, The Coleopterists Society, an international organization of professionals and hobbyists interested in the study of beetles, has established a program to recognize young people studying beetles. The Society has pledged to provide up to \$300 each year for the Youth Incentive Award Program. Each of the two awards (Junior and Senior) is a monetary grant of \$150, award recipients also will receive up to \$200 (Junior Award) and \$400 (Senior Award) of equipment credit from the BioQuip Products catalog, In addition to monetary and BioQuip grants, award recipients will receive a one year subscription to the society journal, The Coleopterists Bulletin
This is for children of grades 7-12 only. The objectives of the Youth Incentive Award are to:



- * provide encouragement and assistance to young beetle enthusiasts (grades 7-12).
- * promote the study of beetles, the most diverse group of insects, as a rewarding lifelong avocation or career.
- * provide opportunities for young people to develop important life skills such as leadership, cooperation, communication, planning and conducting a scientific study, grant writing and managing funds.
- * provide some financial support to enrich activities or projects.

A Youth Incentive Award Committee from the Coleopterists Society will evaluate the applications and will select up to two winners annually; one each in junior (grades 7-9) and senior (grades 10-12) categories. The selection committee invites proposals for topics such as field collecting trips to conduct beetle species inventories or diversity studies, attending workshops or visiting entomology or natural history museums for special training and projects on beetles, studying aspects of beetle biology, etc. The proposed activities or projects will be evaluated on their degree of creativity, educational benefit to the applicant, scientific merit, feasibility and budgetary planning. This Award is for proposals by individuals only. Each applicant is strongly encouraged to find an adult advisor (teacher, youth group leader, parent, etc.) to provide guidance in proposal development, but the proposal MUST be written by the applicant. The Coleopterists Society would also be happy to assist in establishing contacts between youth and professional Coleopterists.

Additional details and application forms for The Coleopterists Society Youth Incentive Award Program can be obtained from: Dr. David G. Furth; Entomology, NHB, MRC 165; P.O. Box 37012; Smithsonian Institution; Washington, D. C. 20013-7012 (phone: 202-633-0990, FAX: 202-786-2894, email: furthd@si.edu). Also check The Coleopterists Society WebPage:

http://www.coleopsoc.org/default.asp?Action=Show_SocietyInfo&ID=Youth

EARTH SCIENCE WEEK 2015 CONTESTS: The American Geosciences Institute is sponsoring a series of contests to celebrate Earth Science Week 2015. This year's celebration takes place Oct. 11-17, 2015.

Earth Science Week 2015 Photography Contest -- Open to All Ages
<http://www.earthsciweek.org/contests/photography/index.html>

Geoscientists study our planet's geosphere (land), hydrosphere (water), atmosphere (air), and biosphere (living things). These spheres -- or Earth systems -- continually affect and influence one another. With a camera, you can capture

evidence of the dynamic impact of change processes in your home, neighborhood, school, workplace or local public spaces. In a photo, show at least one Earth system affecting another Earth system in your community.

Earth Science Week 2015 Visual Arts Contest -- Open to Students in Grades K-5

<http://www.earthsciweek.org/contests/visualarts/index.html>

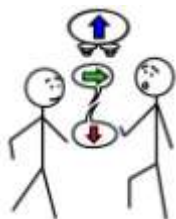
Earth science is the study of Earth systems -- land, water, air and living things. Scientists pay special attention to the ways these things affect each other, such as the way wind shapes the landscape or falling rain nourishes plants. Use artwork to show how land, water, air and living things interact in the world around you.

Earth Science Week 2015 Essay Contest -- Open to Students in Grades 6-9

<http://www.earthsciweek.org/contests/essay/index.html>

Since the earliest hand-drawn maps and diagrams, "visualization" has been an important way of explaining and understanding the interactions of land, water, air and living things. Earth scientists today use more sophisticated technology to monitor and represent these Earth systems -- the geosphere, hydrosphere, atmosphere and biosphere. In an original essay no more than 300 words in length, explain one way that geoscientists' use of cutting-edge visualization is advancing Earth science today.

The entry deadline for all three contests is Oct. 16, 2015. If you have any questions about these contests, please email the Earth Science Week staff at info@earthsciweek.org



A Science Argumentation rubric has been developed by Mary Lou Smith

and her colleagues. If anyone tries it out, they would really like to get some feedback! To get a copy, you can request an updated one by email from Eloise Farmer at eloisef302@gmail.com

YOU CAN HELP A STUDENT WITH HER PROJECT: I am a candidate for a Masters of Science in Science Education degree through Montana State University. For my capstone project, my contribution is to research current science issues and teacher resources for the Next Generation Science Standards (NGSS).

My goal is to connect scientists and educators through this project, including with conversations like scientist interviews and teacher forums. Part of this project includes surveying teachers on their current knowledge of NGSS and access to technology.

This is a special request to ask you to complete this voluntary survey, which takes approximately 10-15 minutes, with optional fields and is confidential. Here is the survey link: <http://teachingcontinuum.com/survey>

This survey is open to any and all teachers, regardless of the topic or if they are involved with NGSS. Please feel free to send along to any of your peers. I'm afraid I don't have much to offer as a thank you other than a genuine thank you, so thank you.

If you are interested in being involved with the teacher forums, I think this is a place for you to share! Let me know if you have any questions and thank you again for your tremendous support.

Jess



OCEAN CLASSROOMS
Inspire New Depths

You can sign up for a free 30-day trial to check out a new online course, Marine Science 101. It is a comprehensive online (with offline components), high school, semester-long course.

<https://oceanclassrooms.com/learning/marine-science-101>

We also have a free Ocean Literacy online course on our home page:

<https://oceanclassrooms.com/> as well as a free portal with live ocean data from around the globe. <https://oceanclassrooms.com/sciencenodes>
cyndi@oceanclassrooms.com



FOR SCIENCE EDUCATORS: Things I received or people sent this summer that are of interest, and might even provide a chuckle: Have you seen the movie set in the year 2022 with Charlton Heston, Leigh Taylor Young and Edward G. Robinson (his final film) called **Soylent Green**? The dystopian plot takes place in a densely overpopulated, starving New York City of the future, NYPD detective Robert Thorn (Charlton Heston) investigates the murder of an executive at rations manufacturer Soylent Corporation.

Well, there is now soylent available as a powder (not a biscuit, thank heavens)! See for yourself at <https://www.soylent.com/> The movie is worth viewing (with these ratings (7.1/10-IMDb, 3/4-Roger Ebert, 71%-Rotten Tomatoes) Let's hope that now that Soylent is here, the rest of the plot is not inevitable. <https://www.youtube.com/watch?v=SVpN312hYgU> is the trailer.

Some of us laugh, others of us think this is not so funny...a humorous skit on education by Key and Peele. <http://www.cc.com/video-clips/aimepr/key-and-pee-teachingcenter>

WE ARE LOOKING FOR RETIRED SCIENCE CONTENT SPECIALISTS

willing to support K-6 science teachers on our free website at <http://justaskateacher.com>. Our project asks the science content specialist to (1) first view a video of a K-6 science lesson, (2) then meet with the teacher online to discuss the science content, and (3) finally, allow us to post the video of the session with the teacher so that other K-6 teachers can benefit. Interested? Please let us know.

Charles Matthews
Academic Research Scientist
University of Missouri at St. Louis
Email to schedule Skype or PolyCom Session matthewscc@umsl.edu
Skype: dr.charles.c.matthews
PolyCom IP Address 98.172.76.67

IF YOU TEACH COURSES WITH CHEMISTRY OR PHYSICS CONTENT, WE NEED YOUR EXPERTISE.

Currently, our website shares 30 K-6 lessons with physics content and 32 K-6 lessons with chemistry content. In anticipation of increased numbers of K-6 teachers sharing lessons in 2015-16, we would like to have more physical science content specialists who would consider viewing a video of a K-6 lesson, meeting online with the teacher who taught the lesson to discuss the lesson's science content, and then sharing the recorded discussion on our website for the benefit of K-6 teachers nationwide. (We make all our video recordings at-a-distance). Meanwhile, you can get our Summer 2015 Newsletter, share it, and give us your ideas. Our Summer Newsletter focuses on the past,

present, and future of the "Teachers Helping Teachers Teach Inquiry Science: Just ASK" project and invites suggestions and questions.

Teachers currently sharing their adapted science inquiry lessons always appreciate comments and suggestions. Have a great summer.

Charles Matthews, Academic Research Scientist, University of Missouri at St. Louis. Email to schedule Skype or PolyCom Session, matthewscc@umsl.edu
Skype: dr.charles.c.matthews PolyCom IP Address 98.172.76.67. **STEM PROGRAM AT CENTRAL CONNECTICUT STATE UNIVERSITY!** The MS in STEM Education for Certified Teachers will prepare certified teachers in the trans-disciplinary areas of Science, Technology, Engineering and Mathematics (STEM). Courses are aligned with National and/or CT state content standards in each discipline: Science, Technology, Engineering, and Math, and the Common Core for Mathematics and Language Arts. Does not lead to CT state teacher certification or cross-endorsement <http://ccsu.smartcatalogiq.com/current/Undergraduate-Graduate-Catalog/Masters-Degree-Programs/STEM-Education-for-Certified-Teachers-M-S>. For further information, contact Marsha Bednarski at: bednarskim@ccsu.edu

Connecticut Green LEAF Schools has been awarded a **Teacher Quality Partnership Grant** through the CT Office of Higher Education. More information about Connecticut Green LEAF Schools can be found at www.ctgreenleaf.org

NEW MATERIALS AND PROJECTS FROM NASA!

<https://www.nasa.gov/audience/foreducators/index.html>

NGSS K-8 Evidence Statements Now Available The NGSS Evidence Statements for elementary grades (K-5) and middle grades (6-8) are now available. These statements were developed and reviewed by educators and scientists, including many members of the NGSS writing team. The evidence statements are intended to identify clear, measurable components that, if met, fully satisfy each performance expectation (PE) described within the NGSS. Given that each PE is three-dimensional, the statements describe how students can use the practices, crosscutting concepts, and disciplinary core ideas together to demonstrate proficiency on the PEs by the end of instruction. They are not meant to limit or dictate instruction and were written to allow for multiple methods and contexts of performance, including students' performance on multiple related PEs together at the same time.

For more information, see the Introduction and Overview, which applies to the evidence statements for all grade levels. Additional materials, including appendices for K-2, 3-5, and middle school are coming soon.

AN IMPORTANT LINK FOR EDUCATORS TO VISIT FOR INFORMATION ON THE STATUS OF SCIENCE STANDARDS IN CONNECTICUT:

<http://www.sde.ct.gov/sde/cwp/view.asp?a=2683&Q=333862>



What Is Science Matters? Science Matters is an initiative by the National Science Teachers Association (NSTA) to bring content, news, and information that supports quality science education to parents and teachers nationwide. Science Matters builds on the success of the Building a Presence for Science program, first launched in 1997 as an e-networking initiative to assist teachers of science with professional development opportunities. Building a Presence for Science—now Science Matters—reaches readers in 34 states and the District of Columbia. Why does Science Matter? Science is critical to understanding the world around us. Most Americans feel that they received a good education and that their children will as well. Unfortunately, not many are aware that international tests show that American students are simply not performing well in science when compared to students in other countries. Many students (and their parents!) believe that science is irrelevant to their lives. Innovation leads to new products and processes that sustain our economy, and this innovation depends on a solid knowledge base in science, math, and engineering. All jobs of the future will require a basic understanding of math and science. The most recent ten year employment projections by the U.S. Labor Department show that of the 20 fastest growing occupations projected for 2014, 15 of them require significant mathematics or science preparation to successfully compete for a job. This is why Science Matters. Quality learning experiences in the sciences—starting at an early age—are critical to science literacy and our future workforce. Feel free to publish this information in school newsletters and bulletins, and share it with other parents, teachers, and administrators.