

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 ENTIT

Resources

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

More on Standards at:

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

EQuIP Rubric for Science Released!

The [Educators Evaluating the Quality of Instructional Products \(EQuIP\)](#)

[Rubric for Lessons & Units: Science](#)

provides criteria with respect to the NGSS.



To get all the latest happenings at

the Connecticut Science Center, click on the link to its newsletter.

www.ctsciencecenter.org/newsletter/

Visit the NGSS@NSTA Hub :

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

<http://nstacommunities.org/blog/2014/11/10/new-from-nsta-quick-reference-guides-to-the-next-generation-science-standards/>

Space Expo 2015: Enjoy Space Day on March 29 at the New England Air Museum where NASA Astronaut (Ret' d) Don Thomas and aerospace educators from across New England will be engaging visitors in activities, demonstrations, and presentations between 10:00 and 4:00. Space Expo welcomes all ages and is geared to a family audience. For more information, go to the Museum website, www.neam.org.



BECOME A JUDGE AT THE INVENTION CONVENTION! Being a judge is simple, fun and very rewarding! The judging process, and your participation, is critical to the success of the Invention Convention. Children's lives are forever changed . by having learned to think critically, creatively, and commercially to solve their very own real problems. Indeed, one of our participant's parents said: "You have no idea what the CIC has done for our child. It opened doors we didn't know existed. It changed her life and ours, too." To enter

the Judges On-Line System Registration process click on

<http://www.cicregistration.org/judges/> We'll work to assign you to one of your preferred Age/Grade groups, team you with a co-worker, spouse, or friend, and provide Judge Training the morning of the event. Judges should register as a "STANDARD" Judge unless you have been asked by a Sponsor to be a Sponsor Judge. Please help us recruit more judges. please pass along this Youtube video:

<http://www.youtube.com/watch?v=mGLeVO86WGc> More Information

As the event day approaches, a more definitive schedule will be sent to you along with a complete set of directions, FAQs, and a Judges overview. In the meantime, here are two important dates: Judges Nominations Close: April 15, 2015 at 2:00 PM. Invention Convention Judging: May 2, 2015, 8:30 am to 1:00 PM . Information about the 2015 Connecticut Invention Convention can be found at

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



On May 5, at a breakfast reception, the Connecticut Science Center will present the 2015 STEM Achievement Awards, recognizing one individual and one organization for

outstanding contributions in the fields of science, technology, engineering, math, and STEM education in Connecticut. The Awards Nomination Form can be found here: <http://www.ctsciencecenter.org/cscaa> . The deadline for nominations is Friday, March 6, 2015.!

The next session of Seminars on Science, the American Museum of Natural History's online professional learning program for educators begins March 16th. Graduate credit is available. Enroll now at learn.amnh.org.

The six-week online courses co-taught by experienced scientists and educators include Evolution; Genetics, Genomics, Genethics; The Solar System, Water and many more. Get access to cutting-edge research, rich content, and powerful classroom resources. Sign up today and receive \$50 off your registration cost! Use code **SCIENCEMATTERS**. For more information about the program, check out Seminars on Science at learn.amnh.org .

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



OPPORTUNITIES FOR TEACHERS:

Attend Honeywell Green Boot Camp and join a select group of international teachers in gaining hands-on experience in teaching renewable energy and environmental responsibility, and in preparing students for the green careers of the future.

WHAT: The Green Boot Camp is an intensive five-day, hands-on interactive educational experience to help educators become familiar with the latest methods of instruction to teach green and sustainable topics, methods, lessons and concepts to middle school students at their respective schools.

HOW: At Green Boot Camp, you'll be able to view sustainable educational methods from the perspective of your students. Educators will discover, examine and identify the roots of green technology, sustainable living and environmental consciousness. These hands-on interactive lessons will provide you with experiences that you'll be able to transfer into your own classroom. You'll discover new concepts by using interactive exploratory projects, such as designing and building a solar house, a wind turbine and more. You'll leave with a whole new understanding of sustainability issues and materials to help you teach what you've learned to your students.

WHERE: The Energy Innovation Center, San Diego, California.

NO COST: This intensive five-day educational workshop is sponsored by Honeywell. Travel & expense will also be reimbursed. Teachers can earn appropriate continuing education units and/or professional development hours. Please visit: <http://www.honeywellinteract.com/greenbootcamp/> for more information and application to apply!

Bitten! FDA Considers Release of Genetically Modified Mosquitoes in Florida Climate Change and Insect-Borne Disease Investigations Yale Peabody Museum of Natural History **DEADLINE: March 31, 2015**



The Florida Keys Mosquito Control District is poised to release millions of genetically modified mosquitoes, pending approval by the FDA. The U.S. would then join 4 other countries in testing this strategy to reduce

the population of deadly *Aedes aegypti* mosquitoes and potentially stem the spread of dengue and chikungunya viruses. The first locally transmitted cases of these diseases in the U.S. appeared in Florida in 2009 and 2014 respectively. Symptoms include excruciating joint pain, high fever, and flu-like symptoms. No cure or vaccine exists for either disease, and prevention is limited to avoidance of mosquito bites. Learn more about the field trials below:

http://www.nature.com/scitable/blog/viruses101/are_modified_mosquitoes_the_future

<http://www.npr.org/blogs/health/2015/01/28/382168407/florida-health-officials-hope-to-test-gmo-mosquitoes-this-spring>

We invite grade 7-12 science educators to teach standards-based STEM curriculum mini-units in the classroom. Yale Peabody Museum and Connecticut teachers designed modular units about climate's effect on the spread of emerging insect-borne diseases such as dengue fever, West Nile virus, chikungunya and malaria. *How does an infectious disease establish itself in a new environment? Does climate change play a role? Could chikungunya be the next major insect-borne disease epidemic in the US?*

Lessons address middle and high school life science standards:

- experimental design
- structure and function; size and scale
- microorganisms; immune system and infectious diseases
- ecosystem change; ecology and population dynamics

Benefits for teachers : *(NOTE Track 1 vs. Track 2 levels of participation)*

- FREE 3-day Summer Institute: July 8-10, 2015
- FREE science kit and standards-based curriculum mini-units
- Peabody Museum family membership with free admission to 280 science museums
- 26 hours credit toward state-mandated professional development requirement
- **TRACK 1:** \$300 stipend after teaching and assessing entire mini-units in your classroom
 - Required ½ day weekend follow up workshop in Fall 2015
 - Ongoing classroom support from museum educators
 - One FREE class visit to the Peabody or the CT Agricultural Experiment Station mosquito lab
- **OR TRACK 2:** \$100 stipend after teaching 5 selected lessons and providing on-line feedback

This program is funded by a *Science Education Partnership Award* (SEPA) from the National Institutes of Health. SEPA projects immerse students in science practices; increase science literacy and numeracy; and encourage biomedical careers and partnerships between scientists and educators. To apply, visit <http://peabody.yale.edu/climate-summer> (deadline: March 31, 2015).

BOYCE THOMPSON INSTITUTE (BTI) FOR PLANT RESEARCH AND BIOENERGY and Bioproducts Education Programs (BBEP) presently are accepting applications for three teacher development opportunities: BTI's summer institute entitled, "Curriculum Development Projects in Plant Biology," and two BBEP National STEM workshops. The institute and workshops are geared toward grade 7-12 and 6-16 science teachers, respectively, and, withstanding a complete collapse of the thermohaline circulation in the Atlantic Ocean, we can assure warm(er) weather will prevail this summer. Provided below is an overview of each opportunity and how to apply. If you have any questions regarding any of these programs or your application, please contact Shawn Kenaley (BTI, Teaching Laboratory Coordinator) or BTI's education team.

Boyce Thompson Institute (BTI): Curriculum Development Projects in Plant Biology : Discover how BTI's research and education resources can be integrated into middle and high school classrooms. **Date:** July 13-17, 2015

Location: Boyce Thompson Institute for Plant Research (click here for directions) on the campus of Cornell University (Ithaca, NY). **Overview:** Be inspired this summer at the Boyce Thompson Institute (BTI) for Plant Research as you join educators from across the nation and prominent scientists employing cutting-edge science in a weeklong exploration examining connections among the plant sciences, agriculture, bioenergy, biotechnology, environment, and genetics. The summer institute, **Curriculum Development Projects in Plant Biology (CDP)**, brings together researchers and teachers to learn, design, and implement curricula that integrate Next Generation Science Standards, the study of plant model

systems, and STEM learning. Participants receive access to BTI-developed plant experiment kits, lesson plans, teaching materials, and faculty expertise. Visit BTI's Education homepage and the CDP webpage <http://bti.cornell.edu/education/teachers/summer-institutes/> to learn more about this, and other, exciting teacher opportunities. We look forward to having you on campus in July!

Institute highlights: Seminars topics and curriculum

- Algae and biodiesel
- Biotechnology and U.S. agriculture
- Epigenetics: It's a ball!
- Biofuel grasses to sugar
- Next Generation Science Standards (NGSS)
- Plant-insect interactions
- Plants, pathogens, and proteins
- Integrating collaborative research in the classroom
- Tours of BTI and Cornell University research and field Facilities

How to apply: Visit the CDP webpage, or click here to apply.

Application deadline: **March 15, 2015**, with rolling admission until all positions are filled.

Eligible participants: Informal science educators, in- and pre-service 7-12 grade science teachers, and community college faculty. Please note, the CDP summer institute is supported in part by the National Science Foundation (NSF) and United States Department of Agriculture (USDA); therefore, applicants must be either citizens or legal residents of the U.S.

Funding: Housing and a small stipend are provided to help offset the cost of the institute. Please click on the following link for more information.

<http://bti.cornell.edu/education/teachers/summer-institutes/>

STEM Educators, Are You Ready to Refuel?

Come Explore and Integrate Science Learning in Sustainable Agriculture, Bioenergy, and Biotechnology at the National STEM Teacher Workshops hosted by the Bioenergy and Bioproducts Education Programs

Location: Horseheads, NY

Workshop 1: National STEM Teachers and BBEP Alumni Workshop, July 16-18

Workshop 2: National STEM Teachers Workshop: Bioenergy and Bioproducts Education, July 27-30

The Bioenergy and Bioproducts Education Programs (BBEP) is accepting teacher applications for participation in two, USDA-supported STEM (Science, Technology, Engineering, and Mathematics) workshops to be held in mid- and late July. Teachers will take part in intensive, two-day programs focused on integrating a 'systems-thinking' approach to 6-16th grade science exploring the links among sustainable agriculture, agro-forestry, and plant biotechnology to the production of bioenergy, biofuels, and renewable plant-based products. Teachers will learn STEM concepts and practices fundamental to sustainable biomass production, renewable energy technologies, and environmental resource management. These workshops offer laboratory activities, panel discussions, poster sessions, science seminars, and curriculum resources with accompanying workbooks designed by scientists and educators. All take-home classroom resources (workbook and accompanying lesson plans) are aligned with Next Generation Science Standards. Visit BTI's BBEP webpage and the BBEP website to learn more about this, and other, teacher opportunities.

<http://bti.cornell.edu/education/teachers/summer-institutes/>

Green Athenaeum--Spring 2015 Science Writing Workshops

Workshops for middle school and high school science and ELA teachers on writing about science topics and STEM disciplines, aligned with the Next Generation Science Standards and the Common Core State Standards

Workshop 1: Science Writing: Integrating the Common Core and PARCC Friday, April 10, 10 am-4 pm, Tower Hill Botanic Garden, Boylston, MA

The Common Core and PARCC assessments call for argumentative writing in which students make claims, organize textual evidence, build logical arguments, and summarize their conclusions—all while writing in an objective, formal style. This one-day workshop will focus on controversies in science and technology that provide excellent platforms for student investigation and argument. We will begin with research strategies to identify unbiased, authentic sources. Then we will use graphic organizers and writing templates to organize arguments with logical claims and textual evidence—the claim, evidence, reasoning model. STEM controversies provide exciting classroom springboards for objective writing and evidence-based discussion. Materials include several topical STEM e-packets that are ready for classroom use.

Workshop 2: Science Writing: Integrating the NGSS , Friday, April 17, 10 am-4 pm, Tower Hill Botanic Garden, Boylston, MA :

The Next Generation Science Standards and the Massachusetts ST/E Standards draft include research and writing expectations that reflect the Common Core State Standards. We will examine specific types of writing (narrative, informational, and argumentative styles) and writing prompts, from lab-based abstracts and discussions to science essays and text-based summaries. We'll examine creative ways to integrate science content into writing that engages, motivates, and supports learning. The workshop will include electronic templates of all materials, including handouts on academic language, open response templates, academic honesty, editing, developing writing prompts, citation style and other skills essential for science writing in your classroom.

For more information, contact Dr. Judith Sumner, jsumner@wpi.edu

CSI: CLASSROOM STUDENT INVESTIGATIONS: Do you like using science to solve mysteries? So do we! CSI: Classroom Student Investigations is an excellent PROFESSIONAL DEVELOPMENT opportunity for science teachers. Forensic cases will be developed in which teachers and students will engage in inquiry-based activities to solve the cases. A wide variety of science fields (life, chemical, physical, and technology) will be included in this program. All cases will incorporate “real-world” activities and teachers will be given information how to adapt to their own classrooms. The workshop will be held June 15-26, 2015 (preference will be given to grades 7-10, but others will be considered as space allows), and a limited amount of travel support may be available. Teachers will receive room/board and up to \$2000 stipend for successful completion of summer and academic year activities. Workshop is held on the campus of Arkansas State University, Jonesboro, AR. You'll have the weekend free to explore the area- go shopping, go to movies or out to eat, travel to Memphis (about an hour away) or explore the many outdoor activities in the “Natural State” <http://www.arkansas.com/> . For more information and application forms, see our website <http://altweb.astate.edu/csiscience>

DEADLINE APRIL 10

- Receive classroom materials for over 20 laboratories and activities aimed at building students' interest and science literacy in sustainable agriculture and bioenergy systems.
- Tour biomass cropping systems (e.g., switchgrass and shrub willow).
- Attend seminars and participate in open discussions with leading researchers/scientists in science literacy as well as biomass production systems, liquid biofuels, renewable energy crops and resources, and environmental policy, providing a deep understanding of how to interpret “good science” and advance student critical thinking skills as well as their knowledge base on emerging “bioenergy pipelines” and “green economies.”
- Conduct classroom-friendly, hands-on laboratories (wet-labs) involving the culture of perennial biomass crops and microalgae, anaerobic digestion of urban waste, conversion chemistry in bio-liquid transportation fuels, and bioproducts.
- Receive on-site housing during the workshop(s).
- Earn a program certificate and professional development credit hours.

How to apply: Visit the BTI's BBEP webpage or click here to apply. Space is limited and workshops fill up quickly. Application deadline: To be announced, check the BBEP application webpage. Eligible participants: US citizens or legal residents who are either teaching in a US school (grades 6-16) or (pre-service) training to become a teacher in agriculture and/or STEM are encouraged to apply.

CT SCIENCE SAFETY NETWORK

WORKSHOP SERIES: March 5 – Safety in the Arts (new) March 19 – Science Safety for Special Education Teachers and Paraprofessionals (new) FOR INFORMATION, CONTACT: Sara MacSorley, PIMMS

HERE IS AN INTERESTING SCIENCE CHALLENGE!

A colleague, while teaching her



Biology class, had set a film strip projector (one which automatically advanced the film strip) on the side counter

in the classroom, still plugged in but not running. Strangely enough, the projector would periodically make a loud chattering noise. The instructor hypothesized that cell phone signals to student phones were causing this anomaly since she asked students if their cell phones were ringing, and the response was a nervous reaction. Do we serendipitously have a cell phone detector hiding in the back of our closets with the obsolete media equipment? Hunt through your media center for obsolete equipment, find one, and check it out!

SPACE DAY IN CONNECTICUT!

Applications are welcomed from schools interested in getting \$500-\$1000 to fund a program for Space Day in CT, which is March 29, 2015. All you have to do is send us a 1 page proposal on a program you'd like to run—can be anything relating to space in order to promote Space Day. Please send me a proposal! Thanks again.

Beth A. Taylor, PhD

Assistant Professor, Health Sciences
Assistant Director, CT Space Grant Consortium

Director, Center for Health, Care and Well-being

University of Hartford

<http://www.uheart.wordpress.com>,

860.768.4831 and

betaylor@hartford.edu

Workshop at Project LEARN, Tectonic Fury: Geology Unit.

Incorporate NGSS Science & Engineering Practices with JASON Learning, March 26, 2015, 8:30am - 3:30pm, LEARN, 44 Hatchedts Hill Road, Old Lyme, CT 06371. Register Today! Registration Fee: \$25.00. This workshop offers an opportunity for educators to gain hands-on practice with labs and digital resources, and participate in science standards discourse. Educators will have access to a host of downloadable resources from all 6 JASON Learning curricula and will understand how to access and use them with students after participation.

https://gallery.mailchimp.com/a8e8fe4bb836787077844ed29/files/JASON_Learning_LEARN_wrkshp_flyer_2014_5.pdf

Presidential Awards for Excellence in

Mathematics and Science Teaching (PAEMST). NOMINATE A GRADE 7-12 TEACHER OF SCIENCE, MATHEMATICS or COMPUTER SCIENCE. There are outstanding science and mathematics teachers in every school system throughout Connecticut, including charters, magnets and independent schools. Eligible teachers must have completed 5 years of K-12 teaching prior to this year and currently be teaching science (including computer science) or mathematics in Grades 7-12. NOMINATE NOW at www.paemst.org (click on "Nominate a Teacher"). Anyone may nominate – principals, colleagues, parents, students or members of the general public. Qualified teachers may also self-nominate.

PAEMST recognizes teachers who incorporate innovation and creativity in their classroom teaching, make significant contributions to curriculum development, and demonstrate leadership within the education community. APPLICATIONS ARE DUE BY MAY 1, 2015. Once nominated, teachers must access www.paemst.org to certify their eligibility and to learn more about the program.

Thank you for your support,

Liz Buttner, State Coordinator- PAEMST Science

GOING TO NSTA in CHICAGO? Some special things for you! You are invited to participate at the Aerospace Education Programs Share-a-thon on Saturday morning, 10:00 – 11:30, at McCormick Place, Vista/S406b. Come to network, share ideas, and inspire. Aerospace educators will be attending from around the United States with programs for you and your students. We've got proven methods to boost literacy in your school with sessions on science and literacy, and connecting with CCSS-Math!

At the NGSS@NSTA Share-a-Thon join 30 presenters—including NSTA's NGSS Curators, NGSS writers, and other education experts—as they share resources to help teachers implement the new science standards.

BILL NYE IS COMING TO CHICAGO!!

Bill Nye—the man with a mission to help foster a scientifically literate society and to help people everywhere understand and appreciate the science that makes our world work—is coming to Chicago for our National Conference on Science Education this March. Making science entertaining and accessible is something Bill has been doing most of his life and we're thrilled to have him come speak at our conference.

SACRED HEART UNIVERSITY

Sacred Heart University may be the right fit for you.

Graduate Open House

Saturday, March 28, 9:00 A.M.

Fairfield Campus | University Commons

Attend our Graduate Open House and learn how you can take your career to the next degree. Over 80 master's and doctoral degrees, certificates and certification programs. At Sacred Heart University, we know that continuing your education is one of your most important decisions. SHU is distinct in its unwavering commitment to the growth and development of each student, supporting your academic, career and civic pursuits. Small class size and mentorship by our distinguished faculty are measures of academic quality that only begin to define the degree and consistency of individualized care that is the norm at our University. The care with which every student is selected, welcomed, advised and ushered into graduate life, is a testament to our institutional philosophy.

Join us for Sacred Heart University's Graduate Program Open House . Learn more about our graduate programs in individual presentations by program directors and faculty. Admissions and Financial Aid staff will be available to discuss admission requirements and procedures, as well as financial aid options for each of our academic programs.

NEW ENGLAND
BOARD OF
HIGHER EDUCATION

You're Invited!
Attend NEBHE's AM
PBL Workshop and

SME's Bright Minds Program at EASTEC 2015 May 13, 2015, West Springfield, Massachusetts, (Co-located at EASTEC). SME's Bright Minds reinforces the value of education in manufacturing careers by showcasing real world outcomes

and results to middle school, high school, and college students, educators, and administrators. The Bright Minds program will feature NEBHE's AM PBL workshop and The Dream It! Do It! Student Challenge.

Participants in NEBHE's Advanced Manufacturing Problem Based Learning (AM PBL) Workshop will learn how to use the AM PBL multimedia Challenges, developed in collaboration with New England manufacturers. Participating educators will learn how to work with industry partners to enhance student's content knowledge, critical thinking skills and ability to work in teams.

Students, and all educators are invited to participate in SME's Bright Minds Dream It! Do It! Manufacturing Student Challenge. Student teams and individuals can submit a project entry to membership@sme.org with team name, school, challenge choice (challenge options, details and agenda are at easteconline.com), and the name and contact information (phone and email) for the main educator/chaperone. Teams can be no less than 3 students but no more than 6 students.

EXTENDED DEADLINE! Project entries are due by March 6, 2015.

Cash prizes and awards will be presented to the winning teams and individuals. A stipend for travel expenses and lunch will be provided

Full registration for the AM PBL workshop and other programming are available in at www.easteconline.com . Questions? Please contact Project Coordinator Becky Eidelman at reidelman@nebhe.org or by phone at 617-357-9620 x 113.



Project Food, Land and People is designed to provide educational materials emphasizing natural resources, soils, food, nutrition, and food systems. It promotes an educational approach

that allows students to understand the large picture of the interrelationships among, natural resources, agriculture, the environment and the people of the world, while meeting National and State education standards and applying personal choice. Workshops provide participants with classroom ready activities and supporting materials along with local contacts and materials to help integrate concepts into classroom needs. Contact susan.quincy@ct.gov , 203-734-2513.

Workshop fee is \$40.00 for any workshop,

Help students understand the basics of nutrition and the pathway of nutrients from environment to us. Learn how to connect cafeteria activities and support new lunch standards through better nutrition in the classroom. This educational resource has great connections to Common Core math and Literature standards with activities that apply to grades k-12. **March 11, 2015, 9:00 am – 3:00 pm**
James L. Goodwin Conservation Center, James L. Goodwin State Forest
23 Potter Road, Hampton, CT 06247

Registration forms available by emailing

Susan Quincy at susan.quincy@ct.gov or call 203-734-2513

What is NMEA 2015? June 29 - July 2, 2014 SENEME, SouthEastern New England



Marine Educators is proud to be the host of the 2015 National Marine Educators Association annual. You can choose the days you would like to attend –or just one day -to concentrate on the strand that interests you most or all or up to five days to absorb the full impact of marine science education; from lectures and workshops to our vast array of experiential learning opportunities in the Newport Area.

Join us at the Newport Marriott, June 28 to July 2, 2015. The National Marine Educators Association Annual Conference is attended by both formal and informal educators, and students from public and private institutions as well as from aquariums, for profit and nonprofit organizations including government agencies.

This three to five day event will be filled with an amazing amount of current marine science information. Some of which is related to STEM education and next generation Science standards.

More information can be found online At the NMEA site

http://marine-ed.site-ym.com/general/custom.asp?page=NMEA_2015 Or on our site SENEME <http://seneme.org>

Grants and Resources For K-12 Teachers

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

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/>

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

Teaching About Invasive Species : A new book from Green Teacher!! Whether working inside or outside schools, youth educators will find in Green Teacher's new book the tools to engage young people from 6-19 years of age in this challenging topic. Invasive species, if unchecked, will continue to have significant negative impacts on our environment and on our economy. Fortunately, the spread of many invasives can be checked. To succeed, we'll need effective education strategies to be widely deployed. This book aims to fill that gap. Included in its 80 pages are descriptions of 13 innovative, youth education programs, and 14 ready-to-use activities that are appropriate for various age groups. *\$14.95 single copy, bulk pricing as low as \$5.25.* **To learn more or place an order visit:** greenteacher.com ,email: info@greenteacher.com call: toll free 1-888-804-1488

OPPORTUNITIES FOR STUDENTS

CHALLENGE! Chemical Educational Foundation® (CEF), a nationally recognized non-profit organization dedicated to enhancing grade K-8 students' appreciation of the science and value of chemistry. CEF has created a series of *You Be The Chemist*® (YBTC) programs, including the YBTC **Challenge**, an academic competition for grade 5–8 students. The YBTC Challenge engages grade 5–8 students in learning about important chemistry concepts, scientific discoveries, and laboratory safety. The Challenge is organized into three competitive levels: local, state, and national. Local and state competitions take place throughout the school year, and culminate in a national competition held each June in Philadelphia, PA (see our [YouTube video](#)). This year the Challenge will celebrate its tenth anniversary with over 23,000 participants in 30 states. Connecticut currently has three Local Challenge sites in New Haven County, Fairfield County, and Waterbury. For more information, including information about our YBTC [Activity Guides](#) (available for FREE online download) www.chemed.org.

REMINDER! 2015 Medal of Science Call for Nominations Due Date: March 13, 2015
Connecticut Academy of Science and Engineering

The Medal of Science is Connecticut's highest honor for scientific achievement in fields crucial to Connecticut's economic competitiveness and social well-being.

Modeled after the National Medal of Science, this award is bestowed on behalf of the State of Connecticut in alternate years with the Connecticut Medal of Technology. For more information or to nominate someone, please click on: the [ONLINE MEDAL NOMINATION FORM](#)

BELOW IS A REPEAT FROM THE FEBRUARY ISSUE FROM THE CONNECTICUT STATE DEPARTMENT OF EDUCATION ON DEVELOPMENTS IN SCIENCE . From Liz Buttner, State Science Coordinator. BEGINS ON PAGE 8

Science CMT and CAPT 2015

CMT and CAPT Science Assessments will be administered during March 2015. The CMT and CAPT Science will continue to assess Connecticut Expected Performances described in the 2004 Core Science Curriculum Framework and the 2010 Curriculum Standards and Assessment Expectations for Grades PK-8.

A representative sample of schools have been selected to participate in a first cycle of “piloting” new kinds of test items that integrate three “dimensions” of knowing science: its practices, core ideas and crosscutting concepts. Connecticut’s current assessment Expected Performances address each dimension separately. Student performance on pilot items administered in “Supplemental Sessions” is not counted in student scores on the actual CMT or CAPT. The purpose of Supplemental Sessions is to try out new items that may be used for various purposes in the future. Over the next several years, items will be piloted in both paper-and-pencil and online formats. Districts were recently notified if their schools have been selected to participate in piloting items during the 2015 state science assessment window. For selected schools, participating in paper-and-pencil supplemental testing is required, while participation in the online supplemental testing is optional. Questions can be directed to Jeff Greig (jeff.greig@ct.gov).

Next Generation Science Stakeholder Engagement Committees

In summer 2014, all school districts, charter schools and magnet schools were invited to designate a representative to serve on the CSDE NGSS District Advisory Council (DAC). Sixty-three districts are currently represented on the Council. The DAC met in August and October 2014. Each meeting featured information about aspects of Next Gen Science, followed by individual and group surveys to elicit district perspectives on adoption readiness and challenges. To date, district reps have provided feedback on the comparability of NGSS to Connecticut’s current science standards; Connecticut educators’ views on NGSS development; district attitudes about standards in common with other states; and the benefits and drawbacks of making Connecticut changes to NGSS. The Council is open to any district that wishes to be represented, with a limit of one Connecticut State Department of Education

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representative per district. For district participation questions, contact Liz Buttner at Elizabeth.buttner@ct.gov. The State Science Assessment Advisory Committee (SSAAC) consists of 45 members selected to represent different districts, grade levels and content areas. The committee met in July and October 2014 to begin to contemplate a new comprehensive assessment system that reflects the vision of the NRC Science Framework. Participants have learned about key aspects of Next Gen Science, and are building upon this knowledge to envision a system of local classroom assessment tools as well as statewide summative assessments, as called for in the NRC Report, Developing Assessments for the Next Generation Science Standards. State Board of Education to Learn about NGSS The Connecticut State Board of Education is slated to discuss Next Generation Science Standards at its next meeting on February 4, 2015. This is the first of what will likely be several State Board meetings that will address NGSS. Several State Board members who serve on the Academic Standards and Assessment Committee have received NGSS briefings from SDE Science Consultants on 3 occasions. Minutes of these meetings are available at the following links:

☞ November 12, 2014 [PDF]

☞ May 21, 2014 [PDF]

☞ April 17, 2014 [PDF]

Next Generation Science Resources from Achieve

Achieve publishes a monthly Next Generation Science newsletter highlighting recent developments and tools in the pipeline. The newsletters can be accessed at <http://www.nextgenscience.org/december-ngss-now-newsletter>. Recent newsletters from Achieve include information about resources such as:

☞ Newly-released Classroom Sample Assessment Tasks for middle and high school and their intended uses.

☞ Newly-released Evidence Statements for High School;

☞ Using the NGSS EQiP Rubric to examine instructional materials to determine if they embody the 3-Dimensional teaching and learning envisioned in the NRC Framework. January editions of NSTA journals include “EQiPped for

Success”, an article by Achieve’s Molly Ewing describing the rubric and its uses.

To subscribe to Achieve’s monthly newsletter, go to <http://www.nextgenscience.org/newsletter-signup>

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CT Department of Education Partners with CT Science Center

CSDE and the CT Science Center are partnering to develop a system of Next Generation Science professional learning workshops, institutes and web-based blended learning modules. On November 24, 2014, science leaders from 60 school districts in Connecticut attended “A Leader’s Introduction to Next Generation Science”, a full-day workshop facilitated by NRC Framework contributor Brett Moulding and Nicole Paulsen. The workshop was billed as an “appetizer”, intended to raise district leaders’ awareness of the ambitious changes to science teaching and learning envisioned by the NRC Framework and NGSS.

Watch for Next Gen upgrades to the Science Center’s familiar Inquiry Institute series and a new Next Gen Curriculum Development Institute to be offered in partnership with the American Museum of Natural History. Watch for opportunities to participate in field tests of these curriculum and instruction institutes in June-July 2015! The goal is to develop a “suite” of expert-facilitated professional learning experiences that will be accessible to educators statewide by the 2015-16 school year.

CT Department of Education Partners with National Next Gen Science Experts

In January 2014, the Department awarded two Math Science Partnership (MSP) grants aimed at building capacity within the teacher preparation pipeline and in K-12 schools to promote Next Generation Science teaching and learning approaches. Both projects are developing web-based/in-person “blended” learning modules and curriculum mini-units that will be accessible to educators statewide as of the 2015-16 school year.

- The New Terrain Next Generation Science Teaching Project is coordinated by Sacred Heart University in Fairfield, CT, in partnership with NRC Framework contributors Brian Reiser of Northwestern University in Evanston, IL and Sarah Michaels

of Clark University in Worcester, MA. Under the leadership of Drs. Reiser and Michaels, science education professors from eight Connecticut teacher preparation institutions – CCSU, ECSU, Quinnipiac, SCSU, Sacred Heart, UCONN, WCSU and University of New Haven – are collaborating with twenty-six K-12 educators from Bridgeport, Bristol, Cromwell, Danbury, Hamden, Hartford, Mansfield, North Haven, Norwich, Trumbull, Willimantic and Windham.

- The Connecticut Center for Advanced Technology, Inc. (CCAT) has partnered with CCSU, the University of Hartford, UConn and eleven Connecticut school districts to design a K-12 Next Gen Science Professional Learning Community that can ultimately be replicated in districts statewide through web-based, blended learning modules. Next-Gen Science CT (NGS-CT) learning modules will provide in-service science educators in CT with a strong common

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understanding of science teaching and learning that represents the vision and instructional shifts called for in A Framework for K-12 Science Education and the Next Generation Science Standards.

Teaching NGSS in Fourth Grade Is Topic of January 21 NSTA Webinar

On January 21, 2015 NSTA continues its series of webinars for K–5 teachers focused on teaching the Next Generation Science Standards (NGSS) in elementary school. Join presenters Carla Zembal-Saul, Mary Starr, and Kathy Renfrew as they review the general architecture of the NGSS and the specific expectations for fourth grade students. Then explore how to use the standards to plan curriculum and instruction.

The NGSS K-5 webinar series concludes on February 18, 2015, with a focus on Grade 5. All webinars are FREE and are archived at http://learningcenter.nsta.org/products/symposia_seminars/NGSS/webseminar47.aspx .

Find more information and/or register.

Presidential Awards Nominations Sought The Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) are the highest honors bestowed by the United States government specifically for K-12 mathematics and science (including computer science) teaching. Nominations are now being accepted at www.paemst.org for exemplary science, mathematics and computer science teachers in Grades 7 to 12. Anyone may nominate a teacher, and teachers may also self-nominate. Eligible nominees must have completed 5 years of teaching in a public or private school.

Additional eligibility requirements and information about the PAEMST Program and the application are available at www.paemst.org . The program recognizes classroom teachers who submit an application demonstrating how they

develop and implement a high-quality instructional program that is informed by content knowledge and enhances student learning. The National Science Foundation administers PAEMST on behalf of The White House Office of Science and Technology Policy.

A MESSAGE FROM LIZ BUTTNER, CONNECTICUT STATE DEPARTMENT OF EDUCATION: Listed below are a variety of professional learning opportunities and resources that may be of interest to you as you think about your professional goals for the 2014-15 school year:

NSTA Archived Webinars [full archive of past programs](#) can be accessed for free.

Liz Buttner, 165 Capitol Avenue, P.O. Box 2219, Hartford, CT 06106, PHONE: 860-713-6849 FAX: 860 713-7018

Materials Available to Connecticut Middle Schools! *Free Online Teaching Materials & Professional Development for Connecticut Public School Students and Educators through June 2016.* Sea Research Foundation, based in Mystic, Connecticut, is home to Mystic Aquarium, JASON Learning and the Ocean Exploration Center. Through the support of the **Connecticut Department of Economic and Community Development**, Connecticut middle schools have access to a set of multimedia instructional materials and professional development **free of charge through the 2016-17 academic school year.**

a. **Online access** to the gated, JASON Expedition Center featuring curricular resources, videos, digital labs and games, simulations, and more.

b. **Professional development workshops** in JASON curricula including teacher and student print editions, and DVD.

Best suited for Grades 5-9, the curricular themes include:

Climate, Weather, Geosphere, Ecology, Forces and Motion, and Energy.

Visit <http://www.jason.org/roll-outs/ct-statewide> to sign up to receive free access to the JASON Expedition Center and to learn more about professional development workshops being offered throughout the state. **For more general information about JASON Learning and its programs, visit <http://www.jason.org> or call 1-888-527-6600**

MUSEUMS and INSTITUTIONS: the Connecticut State Museum of Natural History and Connecticut Archaeology Center, part of the College of Liberal Arts and Sciences at UConn. 860.486.4460 - www.mnh.uconn.edu



Connecticut's Beardsley Zoo is closer than you think and open daily from 9:00 am to 4:00 pm.

THE MARITIME AQUARIUM AT NORWALK, 10 N. Water Street, Norwalk, CT; (203) 852-0700, www.MaritimeAquarium.org. Hours: 10 a.m. to 5 p.m. daily.. IMAX® theater offers the largest movie screen in Connecticut. The name of the Aquarium's new research vessel will be R/V Spirit of the Sound – chosen through a recent Name the Boat contest open to Norwalk school students

For more information about The Maritime Aquarium's educational programs, or its exhibits and IMAX movies, go to www.maritimeaquarium.org or call (203) 852-0700.

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.