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

In 2012, the U.S. Department of Education (USED) granted the Connecticut State 
Department of Education (CSDE) a three-year flexibility request from certain 
requirements of the Elementary and Secondary Education Act of 1965 (ESEA), also 
known as the “No Child Left Behind Act” The waiver provided Connecticut 
educators with the ability to advance state and local efforts for school 
 improvement and utilize federal resources to support learning for all students. As 
part of the flexibility request, CSDE developed a state plan designed to ensure that 
all students are prepared to succeed in college and careers, to close achievement 
gaps through proven and impactful interventions in low performing schools and 
districts, and to support educators in reaching high professional standards and 
receiving meaningful development opportunities in order to ensure all students 
have access to effective instruction. The USED has invited the State to renew our 
request for an additional three years in order to sustain our progress towards these 
goals.

The flexibility renewal submission continues many of the major initiatives outlined 
in Connecticut’s approved plan and seeks to strengthen and evolve others. Many of 
the proposed modifications have been presented and discussed at various stages 
with some educational stakeholders. Last month, the CSDE solicited public 
comment from all interested parties and persons regarding the proposed ESEA 
flexibility request. The Department invited feedback on the proposed renewal 
request which addresses the USED’s three prescribed principles. Provided for 
information was

- an overview of Connecticut's progress made to date in the implementation 
of the existing, approved ESEA flexibility request;
- a listing of the USED’s required components that must be addressed in the 
  ESEA flexibility waiver renewal application; and
- an overview of the key initiatives to be continued or modified that address 
  the required components in the renewal application.

This sets up an accountability system with many parts, including standards, the 
measures used to assess schools and districts, the implications for different 
categories of schools, and the role of teacher evaluation systems.

At a recent meeting (Mar 3), CSDE staff shared with some science educators some 
 of the science specific issues addressed in the State proposal to the Federal 
Government in a request for an extension of the waiver. One of the most 
significant changes is in how science is “counted” in the overall measure of schools 
and districts. For the 2012 and 2013 School/District Performance Index scores, 
CAPT science, reading, writing, math were all counted equally. But for CMT Science, 
it was only used for tested grades (5,8), effectively making science worth 1/10, 
In the future this would change, and each subject would get its own index score (based on CMT/CAPT scale scores, not performance levels as before), so that science will count the same as literacy and math. http://www.sde.ct.gov/sde/lib/sde/pdf/esea/principle_2_performance_and_turnaround_esea_flex_renewal_031715.pdf

"Science index scores will be generated based on results from the Connecticut Mastery Test (CMT) assessments and the Connecticut Academic Performance Test (CAPT) assessments (both the standard form and Skills Checklist) in all available tested grades (i.e., 5, 8, and 10) in the district/school. This indicator weights tested subjects equally" However, Science is NOT counted in the growth part of the achievement score

• Also of note is that 9th grade passing rates count for both high schools AND 8th grade schools
• College and Career Readiness courses could include science AP or UCONN ECE courses or CTE certificates.

In Principle I of the waiver, there is some discussion on an anticipated adoption of NGSS standards, along with a mention of training, presentations, and committee work going on this spring.

Also important to note that CSDE has put forth an RFP for 2016-19 CMT/CAPT science tests which has a draft proposed timeline for transition: online testing, and a switch to NGSS standards testing by 2019 (33% in 2017, 66% in 2018, 100% in 2019). This timeline also shows high school science testing shifting to 11th grade in 2019. See pg.4 and the timeline on pg 27 of the RFP at http://www.sde.ct.gov/sde/lib/sde/pdf/rfp/15sde0001rfp_cmt_capt_science.pdf

(Thanks to Rich Therrien for the above information)

**OPPORTUNITIES FOR TEACHERS:**

**WHAT IS BETTER AND MORE IMPORTANT THAN BEING A JUDGE?**

Being a volunteer!! Even though we have enough judges, we still need your help. Could you please consider supporting us as a general volunteer to help with the million things that have to get done to make this event a success.

Such exciting tasks as:

- Signing in inventors, teachers and judges as they arrive
- Giving inventors their correct size t-shirts. Making sure the inventors set up their displays in the correct location, Putting the correct official Name Lists in the correct Judging Circles.
- OK, they may not be exciting and they certainly are not challenging, but they are important, very important and without people like you doing these vital tasks, this event, which supports 1,000 young people, could not happen.

In additional to feeling really good about yourself by help us as we help students, volunteers will also get some great rewards like a lunch, a super special t-shirt and our eternal gratitude!

Please click here to sign up as one of the most important people at the event! http://www.ctinventionconvention.org/volunteers

**BIOS Educator Training Workshop**

A 6-day educator training workshop to be held at the Bermuda Institute of Ocean Studies (BIOS) in Bermuda. You can find out more at: www.bios.edu/education/6-day-educator-training-workshop/ The tuition has been set at $1085. This covers room & board at BIOS (Bermuda Institute of Ocean Sciences), all admissions & lectures, lab and equipment availability, boat activities, all transportation for the workshop. It does NOT cover your airfare, taxi to BIOS, spending money & on-site food. It does realize the costs of a large workshop. The dates are June 22-27, 2015. Arrangements can be made to stay at BIOS for additional days.

The dates are June 22-27, 2015. Arrangements can be made to stay at BIOS for additional days. The workshop will only accommodate 12 educators. Spots are filled on a first come, first served system. Confirmation of a spot is secured with a $350 deposit and a completed application. (forms can be found at the BIOS workshop web site) You can communicate with either JP Skinner (JP.Skinner@bios.edu) or Jane Burrows (Jane.Burrows@bios.edu)

Ed Argenta been bringing educational groups (8th grade, high school & college) to BIOS for 34 years. It is the object of the workshop to show you how to plan and implement a field study program at BIOS that is uniquely devised for YOUR STUDENTS. Along with participating in all of the scientific activities, time will also be spent discussing the logistics of putting together such a program.

Some activities/sites that we may explore:

• Nonsuch Island (Nature preserve and breeding grounds for the nearly extinct Cahow and the "living museum project" of David Wingate
• Cooper’s Island (former NASA property, now a Bermuda nature reserve where we will plant some endemic trees)
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

Bitten! Humans vs. Mosquitoes: A Deadly Serious Game at the Yale Peabody Museum: Climate Change and Insect-Borne Disease Investigations (Grades 7-12) Yale Peabody Museum of Natural History  DEADLINE EXTENDED: April 30, 2015

What is the most dangerous animal in the world? The Red Cross uses this real-world disease transmission game to teach children and adults in developing countries how mosquito-borne diseases (dengue, malaria) are expanding with climate change; over 2.5 billion people are at risk of dengue. The game promotes prevention by clearing breeding grounds and demonstrates how climate change affects the disease transmission cycle. Students choose Change Cards (like Chance Cards in Monopoly) to model realistic scenarios demonstrating the relationship between climate change, mosquito behavior and human susceptibility to disease. Designed by graduate students from Yale University and Parsons New School for Design, the game was adapted for classroom use by Yale Peabody Museum and Connecticut teachers, as part of a modular curriculum unit and kit. Locally transmitted cases of dengue and chikungunya viruses – originally endemic in Asia and Africa - have recently surfaced in Florida and Texas, where warmer temperatures and standing water are major culprits. Symptoms include excruciating joint pain and high fever. No cure or vaccine exists for either disease, and prevention is limited to avoidance of mosquito bites.

Join the Yale Peabody Museum of Natural History as we investigate how these and other insect-borne infectious diseases (West Nile virus, malaria) expand their ranges as climate variables change. The Peabody has disseminated the curriculum nationally through NSTA, NABT, and state science teacher associations (Alabama, Texas). An Alabama participant used the curriculum as a springboard for an AP Environmental Science project that advanced to the regional finals in the Solve for Tomorrow contest sponsored by Samsung Electronics: https://www.youtube.com/watch?v=LaoCaJyKnPI&index=1&list=PLyUqcFqvV1uF9kZ1w3U-KFrboYmR

We invite grade 7-12 science educators to teach standards-based STEM curriculum mini-units in the classroom:

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

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

- FREE 3-day Summer Institute: July 8-10, 2015
- FREE science kit ($200 value) 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
  - Optional ½ day weekend follow up workshop in Fall 2015
  - Ongoing classroom support from museum educators
  - One FREE class visit to the Peabody and the CT Agricultural Experiment Station mosquito lab
- OR TRACK 2: $100 stipend after teaching 5 selected lessons and providing on-line feedback

To apply, visit http://peabody.yale.edu/climate-summer (deadline: April 30, 2015).
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

The School of Engineering at UCONN is planning its exciting summer learning opportunity for teachers, the Joule Fellows – Teachers in Sustainable Technologies Research Laboratories program. The Joule Fellow program is intended to provide teachers of science, mathematics, and/or technology subjects with a rare opportunity to gain valuable hands-on laboratory exposure to ongoing research in sustainable energy areas such as biofuels, renewable fuels, fuel cells, energy storage devices (including photovoltaics), other environmental and green energy technologies, as well as related fields.

The Joule Fellows program will be conducted at the beautiful Storrs campus. The six-week research program, to begin Monday, July 6th by participating in one week of Da Vinci program at first and will partner you with a UConn faculty member and a graduate student. As a member of a research team, you will hone your research methodology skills and learn to use state-of-the-art equipment for data collection. You will participate in seminars with faculty and graduate students focused on national and international issues in renewable energy, research ethics and the cultural and economic impacts associated with developing sustainable energy.

As a participant in the Joule Fellows program, you will receive a $5,000 stipend, additional support of $500 toward travel and general costs, and a certificate of participation. The most important benefit, however, is the knowledge you will take back to your classroom. Our faculty members and graduate students will work with you to develop experimental setups and curriculum modules for your students that will both engage them and enrich their learning experiences.

Enrollment is limited to a maximum of 18 teachers and preference is given to 2 teachers from same school. Please note the application deadline is May 4. The application for is at http://www.engr.uconn.edu/joulefellows/application/app.php We look forward to your participation in this unique program. If you have any questions, please contact: Aida Ghiaei aida@engr.uconn.edu

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

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/
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

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

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!

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 biology education opportunities, as well as information on the latest developments in marine science research.

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
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

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.

New Environmental Film Series to Kick Off March 30, 2015. The Connecticut River Coastal Conservation District is excited to announce a new environmental documentary film series, The Elements: An Annual Environmental Film Series, to be launched this spring with partners Middlesex Community College, Wesleyan University, and The Rockfall Foundation. Our first film, Elemental, will be screened on Monday, March 30, 2015 at 7:00 pm at the Center for the Arts (CFA) Hall, 287 Washington Terrace on the campus of Wesleyan University in Middletown. A poster for the event is attached. The screenings are open to the public and free of charge. Highly acclaimed and much awarded, Elemental tells the inspiring stories of three activists' efforts to protect air, water and earth around the world, a sort of call for global action. In the film we meet "Rajendra Singh, an Indian government official gone rogue, on a 40-day pilgrimage down India's once pristine Ganges River, now polluted and dying;" Eriel Deranger in northern Canada, "campaigning tirelessly against the Tar Sands and its proposed 2,000 mile Keystone XL Pipeline, which are destroying Indigenous communities and threatening an entire continent;" and Jay Harman, Australian inventor and entrepreneur, who "searches for investors willing to risk millions on his conviction that nature's own systems hold the key to our world's ecological problems, and has created a revolutionary device that he believes can slow down global warming, but will it work?" A second film, WATERSHED, is planned for May 4, 2015 at Chapman Hall, located at 100 Training Hill Road on the campus of Middlesex Community College in Middletown. WATERSHED, which has also received numerous awards, is Executive produced and narrated by Robert Redford. The film tells the story of threats to the "once-mighty Colorado River, now dammed and

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:

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

NSTA Archived Webinars full archive of past programs can be accessed for free.

To get all the latest happenings at the Connecticut Science Center, click on the link to its newsletter.
www.ctsciencecenter.org/newsletter/
diverted and struggling to support 30 million people." It offers solutions for "meeting the competing interests of cities, agriculture, industry, recreation, wildlife and indigenous communities with rights to the waters...and the future of the American West." We hope you can join us! If you have questions, please contact us at our office, 860-346-3282. Jane L. Brawerman, Executive Director, Connecticut River Coastal Conservation District, DeKoven House Community Center - 27 Washington Street, Middletown, CT 06457, Phone (860) 346-3282, www.conservect.org/ctrivercoastal

**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.