

CONNECTICUT SCIENCE CONNECTION

July/August 2018

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

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

Professional Development
Opportunities! Are you interested in high quality, low cost, Teacher
Professional Development
opportunities? Visit the CSTA
website and click on Opportunities.
You will not be disappointed.
Contact us if you have questions.



Click on the link to learn more about JPSS! https://scijinks.gov/subscribe/

Green Teacher Green

Teacher has recently launched a YouTube Channel. In time, we hope this will grow into a valuable resource for educators.

https://greenteacher.com/checkout-these-videos/





Connecticut
Science Teachers
Association
Sponsored Events

more information and registration links at https://www.csta-us.org/events

Think FALL for field trips!

Looking for your next field trip? Students LOVE to come learn at NESS. Get them out on the water kayaking, sailing and tidepooling! We're filling dates now for FALL...email Pam Gibbs at pgibbs@nessf.org.



NESS News: Long Island Sound Calendar Contest

Congratulations to this year's winners of the Long Island Sound Calendar contest! Two winners and two honorable mentions were selected from each grade. Over 2,000 students participated in this year's state-wide contest!

Click here for full contest results

Teach Climate Science is an initiative of the Paleontological Research Institution (PRI, Ithaca NY, www.priweb.org). In response to cuts in federal funding for climate science research and education, removal of scientists from federal environmental panels and agencies, and widespread dissemination of climate science denial propaganda, PRI has embarked on a campaign to distribute The Teacher-Friendly Guide™ to Climate Change to every public high school science teacher in the country. The Teacher-Friendly Guide™ to Climate Change is the tenth book in PRI's Teacher-Friendly Guide series (www.teacherfriendlyguide.org). Following the Heartland Institute's national mailing of "Why Scientists Disagree about Global Warming," PRI decided to step up and counter the dissemination of disinformation by providing teachers with access to peer-reviewed climate science and vetted strategies on teaching a potentially controversial topic. While all of the Teacher-Friendly Guides are available as free pdf downloads, PRI has embarked on a crowdfunding campaign in order to reach out to teachers and send each one their own copy of the climate change guide. We are reaching out for help with both dissemination and fundraising. Buying the book supports both of these efforts. You can order the book and download the free pdf at http://priweb.org/tfgcc. While the book was written with teachers in mind, it's friendly to any reader.

As of summer 2018 50,000 teachers in 36 states will receive copies of *The Teacher-Friendly Guide™ to Climate Change*. You can help PRI achieve the goal of reaching 200,000 teachers. We are striving to identify a point person in each school who will be the addressee for the package, and help to insure that the books actually reach teachers. Sign up to be a point person here: http://bit.ly/TFGCCcontact.

Connecticut State Museum of Natural History UConn Summer of Discovery & Adventure

Ancient Technologies Workshop-Flint Knapping, Morning Tea with Mr. Darwin, Archaeology Field School for Kids, Archaeology Field School for Educators, Archaeology Field School for Veterans and Active Duty Military Personnel, UConn Bug Weekend, Archaeology Field School for Adults, Exploring Connecticut's Towns-Middletown, and Mysterious Mushrooms are some of the activities and talks being offered this season by the Museum and Archaeology Center. Don't miss out on exciting special events, workshops, field learning programs, and notable presentations.

For a full listing of programs and registration information visit www.cac.uconn.edu/mnhcurrentcale ndar or call 860.486.4460 Find us on Facebook



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MORE PD for 2018: Check the link below:

The link is as follows:

https://ctsciencecenter.org/education/mandell/ngsx-info/



Do you know the the Connecticut Academy of Science and Engineering is an organization that is highly supportive of Science Education and Educators? It has collaborated over the years with Science

Education Organizations such as CSTA and CSSA in promoting events and in introducing science educators and students to practicing scientists and engineers . Student winners of Science Competitions in the State and Nation and their teachers are provided with a way to showcase their knowledge and talent in scientific education and to interact with CASE member scientists and engineers at their annual meeting and dinner. They are introduced and honored at this dinner meeting as they have a chance to talk and answer questions with CASE Scientists and Engineers. One comes away from these meetings feeling very impressed with the extent and variety of science in the State of Connecticut and with great respect for the dedication to learning that is demonstrated by the scientific community.

CONTACT: FOR IMMEDIATE RELEASE: May 11, 2018

Silvio Albino, CCAT, 860-282-4211; salbino@ccat.us Richard Strauss, CASE, 860-571-7135; rstrauss@ctcase.org

Connecticut Students Named H. Joseph Gerber Award

Winners: Rocky Hill, CT — Outstanding young Connecticut scientists were awarded the H. Joseph Gerber awards at the 43rd Annual Meeting and Dinner of the Connecticut Academy of Science and Engineering (CASE) on May 24, 2018 at the Red Lion Hotel — Cromwell. The award, created by the Connecticut Academy of Science and Engineering and presented in partnership with Connecticut Center for Advanced Technology (CCAT), is in recognition of H. Joseph Gerber's (1924-1996) technical leadership in inventing, developing and commercializing manufacturing automation systems for a wide variety of industries, making those industries more efficient and cost-effective in a worldwide competitive environment. "The Academy greatly appreciates CCAT's continued support of the H. Joseph Gerber Medal of Excellence and Gerber Award of Excellence presented annually to Connecticut's top high school student scientists and engineers for their outstanding achievements and honors the memory of the inventor, entrepreneur and CASE member for whom the medal is named," said CASE President Laura Grabel.

Mr. Gerber —Founder, Chief Executive Officer, Chairman of the Board and President for South Windsor-based Gerber Scientific, Inc. —was a leader for nearly half a century in inventing and producing factory automation equipment designed to solve global manufacturing problems. An elected member of the National Academy of Engineering and the Connecticut Academy of Science and Engineering, Mr. Gerber received the National Medal of Technology in 1994 followed by the Connecticut Medal of Technology in 1995. The recipients of this year's H. Joseph Gerber awards are top winners of the 2018 Connecticut Science & Engineering Fair. Recipients of the H. Joseph Gerber Medal of Excellence were: Emily Philippides, Greenwich High School (1st Place, Life Sciences — Senior Division) and Maya Geradi, Wilbur Cross High School (1st Place, Physical Sciences — Senior Division). Additionally, recipients of a H.Joseph Gerber Award of Excellence were the team of Srikar Godilla and Cristian Rodriguez from the Academy of Aerospace and Engineering (1st Place, Urban School Challenge — High School Division).

Philippides's winning Science Fair project was entitled, "Controlled-Release Delivery of Ovarian Anticancer Paclitaxel via Vortex Ring, Donut-shaped Hydrogels" and Geradi's project was entitled, "Synthesis and Separation of a Chiral Compound in Preparation of a Positron Emission Tomography (PET) Radiotracer." Godilla and Rodriguez won for their project, "Effect of Experimental Parameters on Forming Prince Rupert's Drops for Maximum Strength and Toughness."

CCAT sponsors the award as part of its goal to advance context-based STEM education and promote career opportunities. "The

Gerber Medal of Excellence and the Gerber Award of Excellence recognize the creativity and ingenuity of Connecticut's young scientists," said Elliot Ginsberg, CCAT's President and Chief Executive Officer. "It is a tradition that CCAT is proud to support.

Want to Enhance Your Knowledge of the Next Generation Science



Standards? Enroll in our Shifting to the NGSS: Professional Book Study in October 2018!

This four-week online book study will help you move towards classroom implementation with insightful webinars, discussions, and resources.

During the online book study, you'll participate in four webinars and moderated discussions with six hours of live exchange with experts and other educators. All of this learning occurs from the convenience of your own home or office without the hassle of conference travel. The accompanying ebook offers a comprehensive introduction to the *Next Generation Science Standards*. All told, the e-book offers up to 40 hours of interactive professional learning and covers background information, each of the three dimensions in depth, and steps to move teachers toward classroom implementation.

By the end of the book study, you'll be able to:

- Communicate an understanding of the three-dimensions and 3D learning
- Begin to design NGSS lessons that work coherently within a storyline or unit of study
- Identify phenomena that can drive student learning

Register Yourself Today

Before you leave for the summer, ensure the success of your Fall by <u>registering</u> for this online book study.

Learn More About Group Registrations

Please contact Flavio Mendez via e-mail or by phone at 703-312-9250 for a quote.

Looking for a science position?? HARTFORD PUBLIC SCHOOLS HAVE SCIENCE OPENINGS!

Interested applicants should email Sandra Inga a copy of their resume: ingas001@hartfordschools.org

Science certification needed in: General Science, Biology and Chemistry at Capital Prep Magnet. Teachers begin July 9th.

Science teachers also needed at SMSA Magnet (Physics) and HMTCA Magnet (General Science, Biology).



DEEP Offers Free Environmental Education Academy Workshops
Phenomena Modeling for Climate Change Education
July 10-12, 9:00 am – 3:00 pm
Free with Stipend \$100.00/Educator

All curriculum guides for Project WET, Project WILD, Project Learning Tree, Project Food, Land, and People

To provide educators with a library of resources and skills to implement lessons for NGSS units we are offering this special opportunity to all educators. Join us In July to learn how to integrate Climate Change education into your units while meeting NGSS requirements. Materials will be provided along with information from local scientists on climate content and local implications. Participants will be part of follow up free webinars in the fall to further implementation and expand content reosurces from the summer. Space is limited so please register early-Registration Link

Contact susan.quincy@ct.gov 203-734-2513 for help with questions or more information. www.ct.gov/deep

Mark Your Calendars for NSTA's 2018 Fall Conferences

Which Conference Do You Want to Attend?

October 11-13, 2018

Reno, Nevada Reno-Sparks Convention Center

November 15-17, 2018

National Harbor, Maryland Gaylord National Resort & Convention Center

November 29-Dec. 1, 2018

Charlotte Convention Center Charlotte, North Carolina

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- An incredible dinosaur path, which even shows the tracks of a baby dinosaur, has been discovered at NASA's Space Flight Center.
- The tracks of at least 70
 mammals and dinosaurs
 from more than 100 million
 years ago were found in
 sandstone on the grounds of
 the NASA site in Greenbelt,
 Md.
- The amazing discovery, which was described in the journal <u>Scientific Reports</u>, was made in 2012 by Ray Stanford, a local dinosaur expert whose wife Sheila works at the NASA site. After dropping his wife off at work one day, Stanford noticed a rocky outcrop on the hillside behind her building.

https://dinotracksdiscovery.org//

A Workshop on Supporting Three-Dimensional Learning and Teaching with New Curriculum Materials Thursday, August 2, 2018 Sponsored by Project 2061 of the American Association for the Advancement of Science (AAAS) Washington, DC

Middle school science and high school biology teachers are invited to submit an application to attend a free one-day workshop hosted by Project 2061, the science education initiative of the American Association for the Advancement of Science. The

workshop is also open to science specialists or administrators with science curriculum responsibilities. The workshop, "Supporting Three-dimensional Learning and Teaching with New Curriculum Materials," will be held on Thursday, August 2, 2018, at AAAS Headquarters, 1200 New York Avenue, NW, in Washington, DC. Led by the Project 2061 research and development team, the workshop will introduce participants to a pair of curriculum units designed to give students a coherent understanding of matter and energy in living organisms: Toward High School Biology is designed for use in middle school and focuses on helping students understand what happens to atoms and molecules during the chemical reactions that result in the growth and repair of living organisms. Matter and Energy for Growth and Activity is for high school biology students and expands on the middle school unit to help students understand the relationship between matter and energy changes. The unit also explores how energy-releasing and energy-requiring chemical reactions are coupled in living systems so that organisms can carry out basic life functions. The workshop will demonstrate how the units tackle some common learning difficulties, including persistent misconceptions that many students have about matter and energy. Participants will also see how the units align with Next Generation Science Standards and will have an opportunity to try out some sample activities and explore online teacher resources that are available with the units. Teams of two or more middle and high school educators are encouraged to apply, but all team members must submit separate applications. You will be notified by email if you are selected to attend. Certificates of participation in this AAAS-sponsored professional development workshop will be provided to all teachers who attend. A complimentary light breakfast and lunch will be served.

Submit your workshop application here. ct2061.org jroseman@aaas.org



Archaeology Field School for Educators, Dr. Brian Jones, State Archaeologist, UConn, Monday, July 16 through Friday, July 20, 9 am to 3 pm, Windsor, CT

Advance registration required: \$50 : Educators will spend a week doing hands-on archaeology at

the Archaeology Field School for Educators sponsored by the Connecticut State Museum of Natural History and Office of State Archaeology. This field school is designed to give educators who teach history or social science in a classroom or museum setting a deeper appreciation of the importance of archaeology as a tool for learning about Connecticut's fascinating past. The field school will cover the basics of field methods, paperwork, data management, and artifact identification. Learning proper archaeological methods will develop the participant's understanding of the ethical aspects of archaeology and the archaeologist's responsibility to preserve the data they retrieve so that it will remain valuable to future researchers. These lessons provide a first step toward developing the skills needed to undertake your own archaeological investigations with students. Participants will experience an authentic and significant archaeological investigation, working with primary sources at a historic site in Windsor, Connecticut. They will also learn about the role of the Connecticut Office of State Archaeology and how it can be an important resource in developing archeological lessons and activities for students. Space is limited. To request a registration form please contact David Colberg at david.colberg@uconn.edu or 860.486.5690. www.cac.uconn.edu/mnhcurrentcalendar — (860) 486-4460

Find us on Facebook

LONG ISLAND SOUND STUDY

A PARTNERSHIP TO RESTORE AND PROTECT THE SOUND

Long Island Sound Mentor Teacher applicants sought

Connecticut Sea Grant is accepting applications for four Long Island Sound Mentor Teachers (LISMT) for the LISMT program in Connecticut. Pairs of teachers from each of the following grade-level bands are encouraged to apply: K-8 and 9-12.

Each grade-level specific pair will work together to plan and execute a one day professional development session for their peers. Workshops will take place in Connecticut. There is funding for each pair to provide an outdoor component as part of the

session. Each teacher will receive a stipend (\$40.00/hour for 35 hours = \$1,400 stipend per teacher).

LISMT positions are open to current Connecticut K-12 teachers.

The Long Island Sound Mentor Teacher (LISMT) program is sponsored by Connecticut Sea Grant and funded by the US EPA Long Island Sound Study. Program goals are to promote the use of Long Island Sound educational resources and to promote the interdisciplinary use of the Long Island Sound watershed and its resources in K-12 classrooms.

Ready to apply? Complete the application form below.

- For information regarding previous LISMT workshops, please visit: http://longislandsoundstudy.net/get-involved/teaching-resources/mentor-teacher-program/
- Please become acquainted with the Long Island Sound Curricular Resource Guide, developed by LISMT: https://seagrant.uconn.edu/2010/03/02/long-island-sound-curricular-resource-guide/

Questions? Please contact Diana Payne, Education Coordinator, at diana.payne@uconn.edu







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.