CONNECTICUT SCIENCE CONNECTION

MAY 2016

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

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

Resources

CSDE's science curriculum web site.

Visit the NGSS@NSTA Hub : IT now offers a dynamic version of the *Next Generation Science Standards*.. Nextgenscience.org

Subscribe to Green Teacher at http://greenteacher.com/subscribe/

Connecticut Green LEAF Schools www.ctgreenleaf.org

Would you like a complete list of grants that has been provided by the National Science Teachers Association? To view this list, please visit: NSTA GRANTS

www.CLEANet.org has more than 640 units, lessons, videos, and diagrams While their focus is on Middle and High school, there are some middle school activities that would be appropriate for both. http://serc.carleton.edu/k12/index.html

You can find all our newsletters at the Just ASK a Teacher website justaskateacher.com
We are sharing assessment items for lessons most used by K-6 teachers. Please share your own assessment items with us at matthewscc@umsl.edu

Next Generation Science in Connecticut:

2016 Leadership Development Academy

The Connecticut State Department of Education, in partnership with the Connecticut Science Center, is expanding its network of Next Generation Science professional development leaders. Graduates of the Next Generation Science Leadership Development Academy (LDA) will become part of the second cohort of professional learning facilitators that is supporting Connecticut's efforts to transition to a Next Generation approach to science teaching and learning.

If you have the following experience, we encourage you to apply!

- A developed understanding of Next Generation Science teaching and learning
- Experience teaching K–12 science in formal or informal settings
- Expertise in teaching adult learners
- Availability to lead professional learning sessions during school year and summers

Full information on this exciting new initiative, as well as application materials, can be found HERE. The application deadline is May 6, 2016. Questions? E-mail Cheryl Tokarski at ctokarski@ctsciencecenter.org .

Connecticut Pre-Engineering Program (CPEP) has just launched the search for a new Executive Director. This executive search is being conducted by Third Sector New England's Executive Transitions Program with Transition Consultant Michael Negrón. All submissions are confidential. Interested candidates should submit materials to: CPEP DIRECTOR OPENING Candidates should include a resume and a cover letter that describe how their qualifications and experience match the needs of CPEP, along with salary requirements, how they learned of the position and any other relevant information (such as published articles). All applications will be acknowledged. Applications will be accepted until the position has been filled. CPEP is an Equal Opportunity Employer and actively seeks a diverse pool of candidates. Located in Middletown, Connecticut, CPEP was founded in 1986 by a group of educators and engineers who recognized the dire need to attract, inspire, nurture and assist underrepresented students in their efforts to pursue careers in STEM. [OR…Located in Middletown, Connecticut CPEP serves as a catalyst to significantly change underrepresented students' knowledge, attitudes and behaviors relating to the pursuit of careers in science, technology, engineering and mathematics.] From its humble beginnings [in 1986], CPEP has grown across the state and now serves 14 school districts, 34 schools

and over 1,700 students per year. The organization has been recognized with several awards, including the New York Life Excellence in Summer Learning Award from the National Summer Learning Association. CPEP is seeking an Executive Director who can build upon past successes to shape a future strategy and vision for the organization.

Hank Gruner
Vice President of Programs
Connecticut Science Center
250 Columbus Boulevard
Hartford, CT 06103
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COLLEGE OF TECHNOLOGY
Regional Center for Next Generation Manufacturing
www.nextgenmfg.org
A National Science Foundation Center of Excellence

Engineering Technology Challenge Teachers' Dissemination Program Applications are now being accepted for the annual Engineering Technology Challenge Teachers' Dissemination Program on July 11, 2016 through July 15, 2016 at Tunxis Community College in Farmington, CT. This is a great professional development opportunity for community college faculty and high school teachers to engage in problem based learning exercises while learning how to successfully integrate professional skills into curriculum. Professional and technical skills include teambuilding, understanding behavioral diversity, 3D printing, computer-aided drafting (CAD), and microcontrollers. The Connecticut College of Technology's Regional Center for Next Generation Manufacturing, a National Science Foundation Center or Excellence, is a proud sponsor of this workshop!
Application Deadline: June 3, 2016
Teachers' Dissemination Workshop Application

The Long Island Sound Study has created a new website to help Long Island Sound residents, educators, and municipal officials learn more about climate change issues that can impact Long Island Sound. Climate Change in Long Island Sound: A Long Island Sound Resource Guide, at www.lissclimatechange.net, is divided into four sections:

- What You Should Know — a primer on key concepts about climate change as well as access to web resources, including indicators of climate change in Long Island Sound.
- Town and City Resources — a portal providing links to what communities are doing to adapt to climate change and reduce greenhouse emissions, including cases studies from five Long Island Sound communities.
- Science and Monitoring — examples of research and monitoring being conducted in Long Island Sound.
- Educators' Toolbox — Resources for teaching about Earth's climate system and the changing climate, including "Science Spotlights" of local scientists conducting climate change research, and highlights of a teachers' workshop on climate change (note: we hope to work with scientists as well as other resource managers to include more "spotlights" and other features in the future).

Besides the four theme's the website's homepage includes a "newsroom" with two climate change newsfeeds, and a list of "hot" links for more climate change information. The project was initiated by Long Island Sound Study's Sentinel Monitoring for Climate Change program, and includes representatives from the Connecticut and New York Sea Grant Programs, the Connecticut Department of Energy and Environmental Protection, the New York State Department of Environmental Conservation, NOAA's Northeast Fisheries Division, Milford Laboratory, and the New England Interstate Water Pollution Control Commission.
Robert Burg, NEIWPCC Information Officer;
Long Island Sound Study Communications Coordinator c/o EPA Long Island Sound Office Stamford Government Center, 888 Washington Blvd., Suite 9-11, Stamford, CT 06904, P: 203-977-1546, rburg@longislandsoundstudy.net
www.neiwpcc.org , www.longislandsoundstudy.net

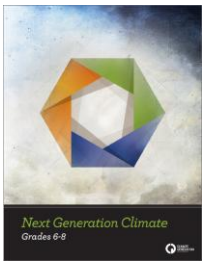
Where: Mill River Park, Stamford/STEMford
When: Saturday, May 14, 2016
(Rain date will be Sunday, May 15, 2016) Time: 10 AM – 4 PM
http://www.stemfest.us/ stamfordstemfest@gmail.com
Visit STEMfest: Date: Saturday, May 14 (rain date Sunday, May 15)
Time: 10am-4pm. Location: Mill River Park, Stamford/STEMford, CT
Cost: Free! What: Activities and displays designed to give preK-12 students and their families a chance to experience STEM (Science, Technology, Engineering and Mathematics) Purpose:

1) To help students and their families learn about what STEM is;
2) To show how much fun these disciplines can be;
3) To show how these disciplines are inherent in many of the things we do every day
4) To share future opportunities available through college and career paths in STEM

Celebrate Seminars on Science's 15th year of teaching and learning with 15% off a summer online course!* Use code CELEBRATE15.

The next session of the American Museum of Natural History's online teacher education program begins May 23rd. Deepen your knowledge, engage with other science educators, and get access to powerful classroom resources with online courses in the life, Earth, and physical sciences. The 6-week online courses co-taught by world-class museum scientists and classroom educators include The Brain; Climate Change; The Diversity of Fishes; Evolution; Genetics, Genomics, Genethics; The Ocean System; Sharks and Rays; The Solar System and more. Graduate credit is available from our university partners. For more information about the program, check out Seminars on Science at www.amnh.org/learn .

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



Next Generation Science Standards (NGSS) and the fact that they include climate change. Our newest curriculum, Next Generation Climate for grades 6-8, supports NGSS and we want to help you incorporate both these new standards and climate change into your educational setting. Register today for our 11th annual Summer Institute for Climate Change Education to get hands-on training to teach climate change and network with other educators. For more information, click here: CLIMATE SUMMER INSTITUTE

BioBlitz

A program of the CENTER FOR

The University of Connecticut's Center for Conservation and Biodiversity will be teaming up with the Connecticut State Museum of Natural History, Connecticut Geographic Alliance, and Two Rivers Magnet Middle School to host this year's BioBlitz. Made possible by a grant from the Richard P. Garmany Fund at the Hartford Foundation for Public Giving, this year's BioBlitz in East Hartford responds to the call from the National Geographic Society and National Park Service for every state to run a BioBlitz in 2016, in celebration of the Park Service's 100th anniversary.

More than 100 scientists will begin the species survey on Friday at Great River Park, and will canvass habitats found within a four-mile radius of the Two Rivers Magnet School. Surveyors will be sampling the Connecticut and Hockanum rivers, floodplains, forests, freshwater ponds, open fields, as well as more human-dominated and developed areas, and are hoping to catalogue more than 1,500 species.

On Saturday June 4, beginning at 10am, the public is invited to come to the school and participate in a variety of activities. People of all ages are invited to come and see a rich sampling of Connecticut's plant and animal life, attend presentations about biodiversity, talk with scientists and naturalists, and participate in the ongoing activities.

For more information, call (860) 486-4460.

AUBURN UNIVERSITY

Auburn University in conjunction with the Alabama Cooperative Extension System, and the MS/AL Sea Grant Consortium are offering a crash course in aquaponics and aquaculture. This will be the 18thyear we have offered such a course and thought it would be of interest to Connecticut science, math and career technology teachers. Historically attendance has been dominated by Agriculture Education and CTE teachers but we are also trying to include other science educators as well. We have had teachers from as far as CA, OR, CT, AZ, and MA to attend the workshop and it has consistently received excellent reviews and the teachers are eligible for continuing education credit. We would like to ask for your assistance in helping to get the word out about this great opportunity. Can you recommend the best mechanism to reach the Connecticut teaching community? Attached is the flyer and registration form for the workshop if you can help directly. Thanks for your time and help.

http://www.aces.edu/dept/fisheries/education/Teacher%20Workshop/Aquaponics101Workshop.php

ETHNICALLY-DIVERSE CONNECTICUT TEACHERS!

Enhance your environmental education methods and knowledge. We are awarding SIX 80% Scholarships for summer 2016

WHAT: Sharing Nature: An Educators' Week Workshop WHERE: Hog Island Audubon Camp, Muscongus Bay, Maine

WHEN: JULY 17 - JULY 22, 2016

SCHOLARSHIP: $900 towards $1,095 registration fee *(Price includes program, lodging, boat travel, all meals)*

Features of Educators' Week:

- **Designed for science and non-science educators to generate exciting ideas for creating and incorporating environmental education activities into your curriculum.**
- **Inspiring and experienced instructors will share their favorite approaches, methods, and activities for engaging you, and your students, with nature.**
- **Workshop presentations and guided field trips on the island share techniques in field biology, art, music, photography, theater, journaling, and other disciplines.**

Interactive workshop: "Increasing Diversity in Environmental Education" led by Chandra Taylor Smith, Ph.D. Vice President, , National Audubon Society.

TO APPLY: E-mail letter of interest and names & contact info. of 2 professional references to Camp Director Pete Salmansohn at psalmansohn@audubon.org.

Awards given on a rolling basis, so early application is strongly suggested. For details, photos, videos about the camp visit: hogisland.audubon.org.

5th Annual STEM Forum & Expo, hosted by NSTA IN Denver: July 27–29, 2016! STEM Forum & Expo hosted by NSTA, brings together educators and organizations who are actively implementing STEM programs in their schools or districts. Held in Denver next July 27-29, come prepared to learn tactics that work, build your professional learning network, connect with effective outreach programs and partnerships, discover new resources, and build a strong curriculum. Keynote Speaker: Derek Muller, Australian-Canadian science communicator, filmmaker, and television presenter created the leading science YouTube channel, Veritasium, that features experiments, expert interviews, cool demos, and discussions with the public about "everything science." Join the over 2 million subscribers and see him in person at the Expo! https://www.youtube.com/user/1veritasium

A great place to hang out! Hubble Hangouts can also be found on HubbleSite: http://hubblesite.org/get_involved/hubble_hangouts/

Free, Online Access to JASON Learning's Award-Winning Programs Available to Public School Educators in CT. Through generous support from the Connecticut Department of Economic and Community Development, JASON Learning is providing complimentary access to JASON's gated website to all public school educators in CT through August of 2017. Each comprehensive JASON program highlights a diverse group of STEM role models, their research and real-world phenomena to engage students and motivate deeper interest in learning. JASON's online platform includes reading selections, hands-on labs and field assignments, videos, digital simulations and learning games for students; and lesson plans, implementation tips, and a powerful classroom management tool for educators. Live, interactive events throughout the year connect JASON participants with inspirational STEM role models. Educators will have access to a host of downloadable resources from all 7 JASON Learning curricula. Sign-up today by visiting www.jason.org : Logon and create teacher account.

Lunar Workshops for Educators
June 27–July 1
NASA's Goddard Space Flight Center

NASA's Lunar Reconnaissance Orbiter (LRO) mission is sponsoring a pair of workshops for grade 6–9 science teachers. Each workshop is a week full of lunar science and exploration, complete with tours, presentations and a lunch with NASA scientists, tons of hands-on activities, pedagogical discussions about how effectively to share lunar science with your students – and more!

The workshops are free, and we have a limited number of $500 stipends for those who need financial assistance to participate (available on a first-come, first-served basis to those in need).

All pre-service and in-service grade 6–9 science teachers are encouraged to apply! More information about the workshops and a link to the applications are available here: http://lro.gsfc.nasa.gov/lwe/index.html

LEARN MORE

http://bscs.org/digging-deeper

PlantingScience: Digging Deeper Together: A Model for Collaborative Teacher/Scientist Professional Development. BSCS, the Botanical Society of America, and the American Society of Plant Biologists are looking for high school life science teachers who are interested in participating in a unique professional development opportunity involving collaborations with research scientists, teachers, and students.

- **Are you interested in collaborating with scientist mentors to help students learn how to conduct research on plants?**
- **Are you interested in taking part in face-to-face and online professional development to help enhance your teaching practices?**
- **Would you like to participate in a research project to find out how collaborations among teachers, research scientists, and students can lead to enhanced student learning?**
- **Are you interested in having your students work more with plants?**

Digging Deeper is a professional development (PD) research project that builds on the success of PlantingScience, an online science mentoring community for high school biology students.

The Digging Deeper project will develop, implement, and test a professional development (PD) model whereby teachers and scientists work closely together over extended periods to guide students in authentic science investigations and then to reflect on instructional and mentoring strategies that are effective for enhancing student learning.

Connecticut Energy Education
www.ctenergyeducation.com

Are you a high school teacher looking to give your environmental class a great challenge? Check out the new Our Town Microgrid Challenge for great NGSS engineering connections beyond the usual "….compare and contrast renewables and nonrenewables…." Our Town Microgrid Challenge

What are microgrids and why would you want one? This unit leads students to understand and apply the answers to that question. The unit includes a multiple step process, with industry and policy readings, investigation of town maps and properties, consideration of emergency needs in the event that electric power is lost, and design of a system that will meet that need. Throughout the unit students hold a "public hearing" with their peers to discuss and fine-tune their ideas, and a capstone presentation to town leaders to discuss their solutions in a real-world context. The unit is supported with readings and background information, suggested "building" and energy "generator" cards, and a suggested process to lead students to an understanding of the unit question. This lesson is listed at CT Energy Education www.ctenergyeducation.com

IF YOU TEACH ABOUT MATTER, HERE IS A RESOURCE www.mysteryofmatter.net

As you may know, last summer PBS broadcast a series called The Mystery of Matter: Search for the Elements. The three-hour NSF-funded series, which tells the amazing human story behind the Periodic Table, was praised by the press and warmly received by chemistry teachers. "This was one of the most inspirational and educational programs I have ever seen on television," one teacher wrote. "I applaud PBS for their leadership in developing such wonderful educational shows. I hope there is an effort to ensure that all chemistry students will have this series as part of their curriculum." After the premiere of The Mystery of Matter, we continued working on the project, using extra grant money we had raised to create a rich collection of educational materials for teachers. They include a Teacher's Guide aligned with the latest science teaching standards, 60 short clips lifted from the series, and 32 short videos, mostly on topics of interest to chemistry teachers. These resources – all free – live at our website at www.mysteryofmatter.net . (When you get to the site, click on <For Teachers> in the top menu bar.) Having created all this, we're now working to spread the word so that as many teachers as possible can take advantage of these resources. We've already been in touch with NSTA and the American Association of Chemistry Teachers, and they'll be using their social media and publications to put out the word.

CSTA Connecticut Science Teachers Association
2012 Conference

JOIN YOUR STATE SCIENCE ORGANIZATIONS AND SHARE YOUR EXPERTISE. WE ALL LEARN FROM ONE ANOTHER AND SUPPORT THE ADVANCEMENT OF SCIENCE EDUCATION IN CONNECTICUT. GO TO THE CONNECTICUT SCIENCE TEACHERS ASSOCIATION WEBSITE https://www.csta-us.org/

CSSA

WHY JOIN JUST ONE GROUP? TEACHER LEADERS AT ALL LEVELS ARE GREAT CANDIDATES TO JOIN THE CONNECTICUT SCIENCE SUPERVISORS ASSOCIATION! LEARN HOW TO SUPPORT YOUR COLLEAGUES AND BE A LEADER IN YOUR SCHOOL! JOIN CSSA AT HTTP://WWW.CSSAONLINE.ORG/

NEW MATERIALS AND PROJECTS FROM NASA!
https://www.nasa.gov/audience/foreducators/index.html

PROGRAMS FOR STUDENTS:

PLEASE SHARE WITH YOUR PROMISING MIDDLE AND HIGH SCHOOL STUDENTS.
LIMITED SPACES ARE AVAILABLE FOR THIS INCREDIBLE OPPORTUNITY.
DEADLINE MAY 9!!

The BioBlitz Jr. Scientist Program
Students selected as Jr. Scientists for the 2016 Connecticut BioBlitz will have an unique opportunity to work side-by-side with notable scientists from respected institutions throughout the region. The program begins on Friday, June 3rd at 3pm with check-in and setup followed by a tour, dinner and introduction at a reception for BioBlitz supporters. The students will start interacting with the scientists at 7 pm, continuing through midnight. Then, on Saturday, students will get an early start at 7 a.m. to observe birds. Students will rotate among collecting specimens, making presentations, and sorting and counting species throughout Saturday. The BioBlitz concludes at 3p.m on June 4th with the official wrap-up ceremony and announcement of the total number of species discovered.

Middle and high school students interested in participating in the Jr. Scientist program should submit an application with an essay. Selected applicants will be notified and given detailed instructions regarding their participation.
All students and their families are welcome to attend the public portion of the BioBlitz on Saturday, June 4th from 10 a.m. to 3 p.m. Please contact Edmund Smith with questions about the Jr. Scientists program at esmith@crec.org.

May 16, 2016: **Deadline for Students ages 9 – 18 to apply for the $3000 Brower Youth Award. Please visit:**
http://www.scholarshipguidance.com/scholarship_brower_youth_award_8974.php?&utm_source=newsletter01&utm_medium=email&utm_campaign=201603&utm_content=4ab258778f736ac551699e89a48ba9b4

May 18, 2016: **Deadline to enter the Google Science Fair for students ages 13 – 18. Please visit:**
https://www.googlesciencefair.com/en/

May 31, 2016: **Deadline for Middle School and High School Students to enter the National Academy of Engineering 3rd Annual Engineering for You Video Contest Grand Prize - $25,000 Please visit**
http://www.nae.edu/e4u3/?mc_cid=e71acba515&mc_eid=5639c29c07

New Women in STEM Resource Available The Connecticut Women's Hall of Fame is pleased to announce the release of STEMfems: Women Transforming Our World, a new module in our award-winning DIY History series. Specifically designed to help educators bring women's perspectives into the classroom, STEMfems includes Common Core-aligned information and activities related to pioneering Connecticut women in diverse STEM fields from 3D printing and architecture to biology and astronomy. Training and support in how to incorporate STEMfems content into your existing lesson plans is also available from CWHF staff. Register and download STEMfems today by visiting www.cwhf.org/DIY! It's free! Contact Bambi Mroz, Director of Education, for more details or with any questions (203-392-9013 |).

HOW TO RECEIVE THIS NEWSLETTER BY BECOMING A POINT OF CONTACT.
We welcome new recipients to NSTA's Science Matters network! Please click on: http://bap.nsta.org/ and sign up! You will receive information from NSTA and get this State newsletter each month. You can also email me at eloisef302@gmail.com so that I make sure you are on our mailing list. NSTA sends our newsletter to all the recipients on our State list of Points of Contact. Please join us!

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.