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 to join the CSSA
All Teacher leaders welcome! You do not have to be in a formal Supervisor Position, but be interested in helping keep your colleagues informed on the latest in science education.

A FREE workshop designed exclusively for Green LEAF schools • Meet other Green LEAF schools • Learn what is NEW in Green LEAF • Develop and support your school’s Green Team • Evaluate your school’s progress & set goals using the Green LEAF Self-Assessment tool • Share success stories and challenges • Build resources for school implementation

Wednesday, August 21, 2019 9:00 am – 3:00 pm
Kellogg Environmental Center
500 Hawthorne Ave., Derby, CT

OR

Tuesday, November 5, 2019 (Election Day) 9:00 am- 3:00 pm
Connecticut Forest & Park Association
16 Meriden Rd., Rockfall, CT

SAVE THE DATE for (SENEME) Fall Conference & Annual Meeting
Saturday, October 19, 2019 at University of Rhode Island, Narragansett Bay Campus

Mark your calendar! The Southeastern New England Marine Educators (SENEME) will be hosting its 2019 Annual Conference on Saturday, October 19th from 8:00 am – 4:00 pm at the University of Rhode Island Narragansett Bay Campus. This event will include: a panel discussion on ocean exploration, networking opportunities, skill-building workshops, field trips, and a silent auction. All are welcome, come join us!

CALL FOR PRESENTERS! We are also announcing the call for presenters! We welcome a broad range of sessions addressing any and all ocean topics and ocean literacy. All concurrent workshops will run for 60 minutes. Come share your best practices, lessons, tips, or strategies for making oceans come alive and relevant for your students.

Please complete the following form: https://tinyurl.com/SENEME2019 no later than July 15, 2019. The conference committee will make its selections and notify you by August 15, 2019. Panel Presenters, Workshops, Field Trips, Silent Auction and More! For more information about SENEME, visit our website at: https://seneme.wildapricot.org/ Please contact Amy O’Neal with questions at 860.885.4688 or email senemeinfo@gmail.com.

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Professional Development resource for educators, 11 Teacher Tips for Top PD Programs, https://www.ecologyproject.org/about/blog/11-teacher-tips-for-getting-into-professional-development-programs

Broadening Perspectives on Broadening Participation in STEM: Tools for Professional DevelopmentA new toolkit from the Center for Advancement of Informal Science Education’s (CAISE’s) https://www.informalscience.org/broadening-perspectives

Broadening Participation in STEM Task Force can help informal STEM education and science communication professionals reflect on and strengthen their organizations’ efforts to broaden participation in STEM. You can use the resources to plan and lead reflective discussions about current practices, with an eye to developing goals, strategies, and priorities that can make your work more inclusive
Advance your career, earn graduate credit, and connect with a global network of educators with our six-week online courses in the life, Earth, and physical sciences. Participants gain access to Museum scientists, valuable classroom resources, and new science content from the comfort of home.

**Summer Session 2**
July 8–August 18
Registration deadline: July 1

To see some great pictures and learn more about courses, you can click on the following links:

**Explore our upcoming session's exciting courses**

If you are a current student at one of our partner institutions, promotions and discounts do not apply. Please check your school's academic calendar to enroll in the course through your registrar as registration deadlines may vary.

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**eesmarts Summer Institute Giveaway**

2019 eesmarts Summer Institute is [here](#)! Register now and have the chance to win one or more of the $1,050 in gift cards for school supplies!

Attendees will be entered in a random drawing at the end of each workshop. Gift cards are $100 and $50 in value. eesmarts offers Professional Development workshops, led by CREC, free of charge to K-12 formal and informal educators across the State of Connecticut. Workshops are interactive and cross disciplinary, featuring inquiry-based, hands-on activities.

**Benefits of Attending the eesmarts Summer Institute Workshop**

- Receive free program lessons and materials for your classroom. All eesmarts lessons are fully aligned to Next Generation Science Standards, and Common Core Standards for Math & English Language Arts.
- Gain knowledge, confidence, and skills for teaching your students about energy, energy conservation, renewable energy sources, and efficient technologies.

**eesmarts Summer Institute Workshop Schedule**

All workshops will be conducted from 9 a.m. to 1 p.m. To view each workshop agenda, topics covered and to register, please visit: [EnergizeCT.com/eesmarts-summer-institute](EnergizeCT.com/eesmarts-summer-institute)

There are a limited number of seats available for each workshop, so register today!

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**NATIONAL MARINE SANCTUARIES WEBINAR SERIES**

Catch and Release: Large whale entanglements and response efforts to mitigate the threat

Entanglement or by-catch is a global issue that affects many marine animals, including large whales like the charismatic humpback whale. Hundreds of thousands of whales die worldwide each year, but the impacts go beyond mortality. When conditions and resources allow, trained responders under NOAA’s Marine Mammal Health and Stranding Response Program attempt the dangerous task of freeing whales from life-threatening entanglements. However, the ultimate goal is to gain information to reduce the threat for whales and humans alike. The Hawaiian Islands Humpback Whale National Marine Sanctuary working closely with its partners and the community, coordinates response efforts for Hawaii, the principle breeding and calving ground of humpback whales in the North Pacific. The effort represents a unique and valuable opportunity to gain a broader understanding of large whale entanglement threat. Learn more about whale entanglements and response efforts from expert Ed Lyman.

This webinar series provides formal and informal educators with educational and scientific expertise, resources, and training to support ocean and climate literacy in the classroom. Visit our [archives](#) to watch past webinar recordings.

More information on the series and upcoming webinars can be found [here](#). After registering you will receive a confirmation email containing information about joining the webinar. The Webinar ID is 462-571-163.
Sam Rhine's 2019-20 Genetic Update Conferences for High School Students and their Teachers

Plainville High School - Oct 10th

Program runs from 9:00 am to 12:30 pm / Lunch on your own

Pre-registration begins Sept 1, 2019: at www.samrhine.com

- Developing Viruses as Antibiotics
- CRISPR/Cas3 - the 'DNA Shredder'
- Chromosome Tips & Life Expectancy
- Producing Human Organs in the Lab
- 3-D Printing of Human Body Parts / Human-Animal Chimeras
- CRISPR Modified Pigs produce Organs for Humans Transplants
- Human Brain 'Organoids' / Decellularization & Recellularization

If you teach an AP or Honors Biology class and have not experienced a visit to Sam Rhine's presentation, I highly recommend planning attendance to this event next fall. It is well worth the trip to centrally located Plainville High School!

NSTA NEWS! A members-only community forum is now available for NSTA members! An opportunity to share ideas, express opinions, ask questions about the proposed name change. Click here to sign in and join the conversation. Not a member? join here!

Evidence of Environmental Change in the Long Island Sound: A Workshop for Secondary Life and Earth Science Teachers

Water- and land-based workshop

Relevant to NGSS HS-LS2-6; MS-LS2.2; HS-ESS3-5; MS-ESS3-3

Explore scientific data collection and analysis methods (NGSS SEP and CCC) as we traverse the Long Island Sound on a SoundWaters schooner

Introduction to Tuva – a free data visualization resource that may be leveraged in future state science assessments

Receive complimentary instructional resources from sponsor -- NOAA SeaGrant

Registration: https://tinyurl.com/StamfordLIS

Contact: tspSTEM@gmail.com

Secondary life and Earth science teachers... please register for a water- and land-based NOAA-funded NGSS workshop on Saturday, September 7th. More information: tinyurl.com/StamfordLIS

Present at this year's Science Educators Conference Proposals for presentations are now being accepted for our 2019 Connecticut Science Educators Conference on November 8-9. Can you share your ideas for embedding more science instruction into the elementary classroom? Submit your proposal to us by JULY 1.
Partner with a chemist who can help provide support inside and outside the classroom through the AACT Science Coaches program. This is a unique opportunity for teachers to work closely with a chemist who can: provide advice on real-world applications of lessons, demos, or experiments; help develop and enhance lesson plans; promote inquiry-based learning; serve as a science mentor; support classroom-based experiments; and more. Applications are open now through September 1. Learn more and apply 8.

AACT webinar, May 9, 6:00 pm CT Science Coaches. Join Adam Boyd, AACT Program Director, as he outlines the advantages for teachers and chemists who participate in the Science Coaches program. REGISTER

Many online climate change lessons are actually junk and propaganda. Michael Melia reports about misinformation that is provided for educators regarding climate change. There are materials produced by climate change doubters, lesson plans developed by the oil industry, and countless other sites with misleading or outdated information.

https://cleanet.org/index.html Literacy and Energy Awareness Network funded by federal grants, reviewed more than 30,000 free online resources and found only 700 acceptable for use in schools. "There's a lot of information that's out there that is broken, old, misleading, not scientifically sound, not sound technically," said Frank Niepold, a climate education coordinator at the National Oceanic and Atmospheric Administration. Leigh Foy, a science teacher at York Suburban High School in Pennsylvania, said a social studies teacher at her school has told students for years that climate
change is a hoax and he could prove it with an experiment. He would fill a cup in the classroom with ice and water, mark the water level, and show students it didn’t rise as the ice melted. The problem, Foy said, is his lack of accounting for the difference between sea ice and land ice or the expansion of water as it gets warmer. “This is just an example of what we’re up against.”

Orion’s Quest was founded in 2004 following founder and current Executive Director Peter Lawrie’s service as an educational consultant to NASA when the Space Shuttle Columbia carried the Ladybugs in Space experiment into orbit on July 23, 1999. The mission was a project within NASA’s Educational Program that allowed students to observe science experiments being conducted in space and to replicate the experiment in their classroom as controls. Lawrie saw a unique opportunity to put NASA directly into classrooms across the nation. Since inception, our program has empowered over 24,000 students to participate in research experiments being conducted by NASA or a NASA supported scientist. To date we have averaged 25 participating teachers and 70 students per teacher per year. In 2016 our count of 41 teachers equated to almost 3000 students in the program.

Our goal for the 2017-18 school year is to serve 50 teachers each semester equating to approximately 7,300 students.

Project-Based Learning (PBL) Skill Institute
Sponsored by the CT State Department of Education Career and Technical Education (CTE) Unit

July 22-24, 2019
CREC Central, 111 Charter Oak Avenue, Hartford

Orion’s Quest was founded in 2004 following founder and current Executive Director Peter Lawrie’s service as an educational consultant to NASA when the Space Shuttle Columbia carried the Ladybugs in Space experiment into orbit on July 23, 1999. The mission was a project within NASA’s Educational Program that allowed students to observe science experiments being conducted in space and to replicate the experiment in their classroom as controls. Lawrie saw a unique opportunity to put NASA directly into classrooms across the nation. Since inception, our program has empowered over 24,000 students to participate in research experiments being conducted by NASA or a NASA supported scientist. To date we have averaged 25 participating teachers and 70 students per teacher per year. In 2016 our count of 41 teachers equated to almost 3000 students in the program.

The PBL Skill Institute provides teachers with a research-informed model for measuring, calibrating, and improving instructional practice. This model includes student-driven projects focused on acquiring key knowledge, understanding, and success skills.

The CTE Unit of the Connecticut State Department of Education is offering this innovative institute to CTE educators new to PBL and looking to successfully and sustainably implement PBL. This immersive experience actively engages all participants in deep, focused, collaborative work.

The Institute spans three (3) consecutive days, July 22-24, 2019, and a follow-up session will be held for all participants in December 2019 or January 2020. CTE teachers must commit to attend all 3 days as well as the follow-up workshop. Building level administrator support is required.

Content Information:
https://www.pblworks.org/what-is-pbl

Registration:
Send an email to Mary Lou Molloy (mmolloy@crec.org) if you wish to participate. Please include the name and email of your building level administrator. You will receive an email with complete registration instructions.

Residential Summer Workshops at the
University of Connecticut’s
School of Engineering

The daVinci Project
July 15-19, 2019

Introducing our students to engineering is a national need. Most students love to be creative and to connect academics to the real world.... this is what engineers do while making technologies that solve serious world problems. The UConn School of Engineering is holding its 19th annual daVinci Project. It is a weeklong (Mon-Fri) residential series of hands-on workshops for middle and high
school science and math teachers. This year it’s being held July 15-19. Teachers live on campus and participate in one of 8 very engaging workshops, as well as many other seminars, a variety tours through research labs, our state of the art water reclaim and wastewater facilities, and our CoGen plant. Come and be part of an exciting week of exploration! We have 33 fellowships available. Please share this professional development opportunity with the other STEM teachers in your school or district. Workshop links below.

1. **Innovative Underwater Robotics for STEM projects** – 8 Fellowships available
2. **Mathematical Optimization with Applications to Smart Grid and Intelligent Buildings** – 10 Fellowships available
3. **Understanding Pain: Sensory and emotional stimulus to your brain** – 2 Fellowships available
4. **Bioinformatics: Using Computer Science to Understand Life** – 3 Fellowships available
5. **Monitoring and Maintaining Stream Health in a Developed Watershed** - 2 Fellowships available
6. **Air Quality and Health: Building an Air Pollution Measurement Device with an Arduino®** – 2 Fellowships available
7. **From Geometry to Algorithms** – 4 Fellowships available
8. **Robots: Use in Industry and Elderly Assistance** – 2 Fellowships available


Confirmation will be sent after your registration is received. If you have questions or need further information please contact us at engr-edpsw@uconn.edu or 860-486-5536.
Spend the dates for our annual conference!

November 8th and 9th, 2019
Heritage Hotel & Conference Center

Friday, November 8th: Special Session with Entertainment & Refreshments

Saturday, November 9th from 8:00 - 3:30 featuring:
- Workshops
- Exhibitors
- Networking
- Giveaways
- Light breakfast
- Lunch Buffet
- Beautiful Venue
- Modern Meeting Rooms
- President’s Reception with Desserts & Door Prizes

Keynote Speaker: Okhee Lee

Okhee Lee is a professor in the Steinhardt School of Culture, Education, and Human Development at New York University. She is currently leading collaborative research between New York University and Stanford University to develop instructional materials aligned with 3-Dimensional Learning to promote effective science education for all grades, K-12.

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.