

CONNECTICUT SCIENCE CONNECTION

JULY/AUGUST 2017

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

Resources



Connecticut Science Teachers Association

"...to inspire, promote and support the learners of science in the state of Connecticut."

Science Professional Development Opportunities! Are you interested in high quality, low cost, Teacher Professional Development opportunities? Visit the [CSTA website](http://csta.org) and click on Opportunities. You will not be disappointed. Contact us if you have questions.



SciJinks E-Newsletter

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/check-out-these-videos/>

Upcoming webinars

Check out these webinars at the following site:

<http://greenteacher.com/webinars/>



NEW MATERIALS,

PROJECTS NASA

https://www.nasa.gov/audience/for_educators/index.html



Dear Science Educator:

I invite you to join NSTA and other leading education groups on **Tuesday, August 29** for the [National Day of Action](http://nationaldayofaction.org) to advocate for Title II funds under the Elementary and Secondary Education Act (ESSA).

President Trump has called for **no new funding** for ESSA Title II funds, and Congress may eliminate all Title II funding when they return after Labor Day. Title II has been funded at \$2.3 billion since 2014.

Title II is the only dedicated source of funding for professional development of teachers. These funds are also used to pay teachers' salaries and address teacher shortages in hard-to-fill areas, including STEM.

Title II funds will be critical to the science and STEM teacher professional development that will need to take place as more states begin to roll out *Next Generation Science Standards* and the three dimensional learning outlined in the [NRC Framework for K-12 Science Education](http://www.nrc.gov/readingdiv/main.html).

Read more about Title II [here](http://www.nsta.org/advocacy) and find out [how much your state will lose](http://www.nsta.org/advocacy) if Title II funding is eliminated.

I urge you to join NSTA and your colleagues for this [National Day of Action](http://nationaldayofaction.org) and take a minute to send an email or call your member of Congress and tweet out your support for Title II. **In your emails and calls remember to mention how Title II will be needed by science and STEM teachers as we adapt to new ways of teaching and learning to incorporate new standards, bring more engineering into the curriculum, and fully integrate STEM education in classrooms nationwide.**

The loss of Title II will have significant impact on teachers, school leaders, principals, and the students we serve. Please take a moment to advocate for more funding, and send this email to colleagues in your network and ask them to participate.

Thank you for supporting science education.

Sincerely,

David L. Evans
Executive Director, NSTA

Connecticut could lose over 21 million dollars.



Time to register for the biggest

Connecticut Science Educator Event all year! This conference is an amazing opportunity to share what is working in your classroom and meet people with common goals! The event provides opportunities to share with teachers across the state, make connections, meet vendors and science organizations throughout the state, and explore a variety of workshops.

We also have an incredible keynote speaker, Paul Anderson, of [Bozeman Science](http://www.bozeman-science.org)

* When

Saturday, November 18, 2017

*

8:30 AM - 3:30 PM

* Location

Hamden Middle School, 2623 Dixwell Avenue, Hamden, CT 06518

[Registration](http://www.csta.wildapricot.org/) - You can renew your membership and register for the conference at the same time at the CSTA website! [https://csta.wildapricot.org/](http://www.csta.wildapricot.org/)

[Proposals](#) are currently being accepted for the [SENAME](#) (Southeastern New England Marine Educators Annual Conference). They are due on **August 30**.



[Mystic Aquarium Fourth Annual Educator Appreciation Day](#) is Saturday, September 16 - National Estuaries Day. Educators are invited to bring one guest for free and enjoy the Aquarium for the entire day - 9 am to 5 pm (last admission is at 4 pm)

American Museum of Natural History

Curriculum Collections

Collections of activities, articles, videos and more, for educators, families, students and anyone interested in teaching or learning about science.

<https://www.amnh.org/explore/curriculum-collections>



SAM RHINE'S 2017-18 GENETIC UPDATES:

PROGRAMS FOR HIGH SCHOOL STUDENTS AND THEIR TEACHERS

Cancer Mutations: Oncogenes & Tumor Suppressors

Cancer Stem Cells / Asymmetric Mitosis / Cell Cycle Control

#1 Source of Human Cancer Causing Mutations is.....

Inherited Predispositions? / Environmental Factors? / Copy Errors?

CRISPR Update: gene editing in human embryos

at: Plainville High School - Oct 27th

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

Pre-register on line at: www.samrhine.com<<http://www.samrhine.com/>>



FREE TO ALL PHYSICS TEACHERS/STUDENTS: Force Diagram is an Excel-based program that is designed to help students learn how to construct force diagrams (free-body diagrams). It consists of ten conceptual exercises in which students are asked a series of open-ended but leading questions to help them identify if a force acts on the system specified in the exercise. The student will also have to identify the type of force present and its agent and pick an arbitrary length of the vector to represent the force and correctly identify the

direction of the force. Additionally students will have to determine if each system is accelerating or not and if it is, the force diagram must be consistent with the direction of that acceleration, meaning that the student might have to adjust the lengths of one or more vectors. This portion of the program is reminiscent of FREEBODY by Physics Academic Software which is now defunct and is no longer compatible with current technology.

In addition, there are 79 quantitative drill-and-practice problems designed for independent mastery covering the Free Particle Model (equilibrium), Constant Force Particle Model (non-equilibrium), and Central Force Particle Model (uniform circular motion & universal gravitation). These mastery problems generate new numbers each time the student attempts the problem and also provides the answers.

Here is a link to a Youtube Video showing some of the features of the program:

<https://youtu.be/5zryWgXXv0Y>

Mark Lenfestey Physics Teacher, Homestead High School, Fort Wayne, IN 46814

School email: mlenfestey@sacs.k12.in.us



Please check out new Connecticut Science Safety Network safety workshop brochures and online registrations for 3 science safety workshops this fall. See full page flyer at the end of this newsletter. <http://wesleyan.edu/greenstreet/professionaldev/sciencesafety.html>



ARC is seeking qualified candidates to be Science Methods Instructors and/or Evaluator/Coaches for the 2017-18 school year. The program runs on weekends from September through May on Friday evenings and Saturdays. For more information about the program, please visit the ARC website: <http://www.ctohe.org/ARC/>. To apply or to find out more information, please contact Ed O'Connell, Dean at eoconnell@ctohe.org.

CT DEEP is designing some new opportunities for educators to access professional development that helps build understanding of science, environment and sustainability. Part of the development includes improved communication about trainings, webinars and programs offering stipends to educators or schools. We will be using a newsletter, **The Trillium**, to keep educators informed. [Trillium Registration](#)

CASE STUDY CONFERENCE Join us for our annual Fall Case Study Teaching in Science Conference, September 15-16, 2017, in Buffalo, NY, sponsored by the National Center for Case Study Teaching in Science. We are at a new venue this year—the beautiful Buffalo Marriott Niagara. Our conference offers sessions for both the beginner and advanced case study teacher and is formatted for college and high school teachers. In addition to our distinguished group of session teachers, we have brought in a noted scholar to address the general conference; Briana Pobiner, Paleoanthropologist and Educator, Smithsonian National Museum of Natural History, and Associate Research Professor, Department of Anthropology, George Washington University, Washington, DC, to present on the “Effectiveness of Using Human Case Studies to Teach Evolution.” Workshop sessions this year will cover teaching with “flipped” case studies, combining team-based learning and case studies, using cases across multiple classes, personalizing the curriculum, and more! Register now for this rewarding two-day Case Study Teaching in Science Conference, September 15-16, 2017.

Guide PBS Education's Work Today to Improve Resources for Teachers Tomorrow!

Would you like to help shape the resources and services PBS Education offers teachers across the United States?

Join our new research panel to share your insights! **UPDATE:** We encourage participation from teachers across the preK-12 spectrum – but in order to balance our current panel numbers, we are seeking preschool-3rd grade teachers. We appreciate your help in spreading the word!

PBS Teachers' Advisory Group Members:

Provide instant feedback through an easy, online survey once or twice a month.

Share opinions on our curriculum resources, professional development offerings, and other programs in development.

Weigh in on a variety of topics including teacher needs, best practices, classroom experiences and more.

To join the PBS Teachers' Advisory Group, please click (the working) 'Join Now' button below where you can access the qualification and screening

questionnaire.

Join Now

The information you provide will be kept confidential and only shared in aggregate with PBS staff.

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES (NIEHS) recently developed a **Climate and Health learning module** for use in high school classrooms interested in exploring the health impacts of climate change. It promotes learning about the complex interactions between climate change, the environment and human health and uses content from the US Global Change Research Program's 2016 report, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*. The materials are free of charge and can be adapted for other grades and informal educational settings. The module integrates multiple science and engineering practices, disciplinary core ideas, and cross cutting concepts for earth and life science.

NSTA Safety Blog!

Science, technology, engineering, and math (STEM) students will be participating in hands-on activities and demonstrations, which means that safety must be addressed. For a safer and more memorable learning and teaching experience, check out the NSTA Safety Blog:

<http://nstacommunities.org/blog/category/safety>

Science News in High School program. We are in an open enrollment period for the 2017-2018 school year and are currently seeking high schools from around the country for this free resource. Given the number of public high schools in the state of Connecticut, we are seeking more high schools across the state - there are 35 Connecticut schools signed-up currently; by the percentages there should be 58 to be properly represented. (There were 13 that were in the program last year who did not actively renew – we are following-up with them as the school year begins again.) We appreciate if you can share the program with your networks. I am also happy to reach out to the other fair directors across the state.

If you're not familiar with the program already, *SNHS* is a resource that aims to boost science literacy for every U.S. high school student – and gives teachers easy ways to bring today's science developments into teaching. Please share the details about the program. Feel free to post to any message boards, listservs or social media sites. School administrators, science teachers, librarians or anyone else interested on behalf of a high school can learn more at <https://www.societyforscience.org/>

[science-news-high-schools](#) and can sign-up directly at: <https://societyforscience.tfaforms.net/45>. Please don't hesitate to reach out to me or to Michele Glidden, the Chief Program Officer, if you have any questions or further suggestions for us on how to spread the word.

**PLEASE GO TO NEXT PAGE TO VIEW
FLYER FOR SEA GRANT WORKSHOP
SEPT 26 2017.**

Connecticut Sea Grant
Long Island Sound
Mentor-Teacher Workshop
2017



**Seine the Sound with Next Generation Science
Standards**

Phenomena at the beach:

NGSS Practices/Cross-cutting Concepts/ Disciplinary Core Ideas

Grades 4-8 Teachers & Informal Science Educators

Connect your students, wherever they live, to their coastal environment.

Organize your own field study site at Long Island Sound!

ONLY

\$10

Excite your students to work as scientists!

When: Tuesday, Sept. 26, 2017 - 9am to 3:00pm

(Downpour date: Wednesday, Sept 27)

Location: Meigs Point, Hammonasset Beach State Park, Madison, CT

Amazing Take-Home Materials Include:

**Seine Net, Geology Equipmet, \$40 LIS Field Guide, Sea Grant Teacher Curriculum
Resource Guide, ID booklets, digital resources and *more!***



You will LOVE this day!

Cost: Only \$10

Contact: Donna Rand drand@crec.org to register or obtain more info.

www.longislandsoundkids.wordpress.com

Workshop is open to the first 20 people sending \$10 payment.





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.