CONNECTICUT SCIENCE CONNECTION

November 2020

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

State Coordinator.David Lopath lopath@comcast.net , List Moderator..Eloise Farmer eloisef302@gmail.com

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 some distance learning ideas? This may help you to get through the difficult times we are experiencing. Visit CSTA.wildapricot.org and click on Opportunities. You will not be disappointed. Contact us if you have questions.
https://csta.wildapricot.org/

Join the CSSA!
www.cssaonline.org
All Teacher leaders welcome You do not have to be in a formal Supervisor Position, but should be interested in helping keep your colleagues informed on the latest in science education. At this time, we hope to provide support to teachers in a leadership situation.

BOOKMARK THIS SITE!

The Connecticut State Department of Education wants to provide valuable resources to the field and is continually working to make these resources easy to find in one central location. Therefore, beginning January 1, 2020, the CTCoreStandards.org website will no longer be operational. All of these resources have been moved to the CSDE website at https://portal.ct.gov/SDE. They can be accessed under K-12 Education, Academics, CT Core Standards. The direct link is https://portal.ct.gov/SDE/CT-Core-Standards. Please bookmark this for future reference.

COV-Ed Website: A Partnership between Yale School of Medicine and CT State Department of Education

COVID-19 looms over us like a menacing force, and here you will find the tools to make a difference for yourselves, for your families, and for your communities. In this on-line learning tool, follow the story of 3 high school students as they encounter the pandemic. Learn how COVID-19 works, why it spreads, and what you can do to help contain it. Run the same simulation tools that experts in the field are using, learn to draw conclusions from data, and explore potential solutions even as you build the skills to help prevent pandemics in the future.
COV-Ed Website description

"Dealing with Science/STEM Lab Chemical Safety During the COVID-19Pandemic!" Virtual safety workshop presented by Dr. Ken Roy and sponsored by the Connecticut Science Center and Connecticut Science Safety Network. DATES: Nov. 4 & 18, 2020, time: 1:00PM-2:30PM. Register online at https://ctsciencecenter.org/eworkshopchemistry/

Some good offerings from NSTA to brighten your November!

Join us for @NSTA #Engage20, November 13–15 for sessions on #distancelearning, equity and inclusion, three-dimensional learning, and teacher/student wellness, *plus* our rapid fire show-and-tell expos where you will pick up teaching strategies and resources from a number of presenters. facilitated discussions on key issues such as #Science and COVID, #distancelearning, #global warming, backyard science and more, plus coffee chats, social networking happy hours, and of course NSTA professional learning sessions exclusive to science teaching and learning, prominent speakers, and the NSTA marketplace. Check out the agenda and register here. https://www.nsta.org/nsta-engage-fall20 , and did we mention that we have Miss America 2020 as a speaker? Sessions on #distancelearning, equity and inclusion, and three-dimensional learning plus #teaching strategies and resources, plus networking opportunities, plus a year of NSTA membership, and the NSTA marketplace—don't miss out this November for @NSTA #Engage20. Sign up and join us live for the event that starts on November 13. Can't make it then? Sign up now and access it later https://www.nsta.org/nsta-engage-fall20. #scied #STEM #education
Join educators from across the country at @NSTA #Engage20, November 13–15! Learn more: https://www.nsta.org/nsta-engage-fall20 #scied #STEM #distancelearning #blendedlearning #education.

Paleontological Research Institution Announces New Exhibit on Climate Change

Ithaca, NY- The Paleontological Research Institution (PRI) is excited to announce the launch of a new online exhibit based on the *Warren D. Allmon Changing Climate: Our Future, Our Choice* exhibit, which will be open to the public at the Museum of the Earth in November 2020.

On naming the exhibit after PRI's longtime Director, the exhibit's major donor, Susan Fleming, explained, "I want to honor Warren's decades of tireless and passionate work in not only creating the Museum and running PRI, but more specifically, in using paleontology to educate people around the world about the dire effects of human activity on our climate. Without Warren, the Museum of the Earth and this important new exhibit simply would not exist."

The exhibit will highlight that although the Earth's climate has changed many times in the past, it is now changing at an unprecedentedly rapid rate because of the actions of humans. Fortunately, there are actions that everyone can take to address climate change. The *Changing Climate* exhibit is intended to empower visitors to recognize the things they can do to reduce climate change and its harmful effects, including discussing it with friends, family, and government officials.

The online exhibit will include visualizations of global temperature and carbon dioxide levels, two of our most important climate records over time, with highlights of key events in natural history, human history, and climate history along the way. It will also feature educational sections on greenhouse gases, energy, and how we know about ancient climates.

Throughout the online exhibit visitors will find videos, interactive animations, 3D images, original graphics, a quiz to measure their impact on the environment, and an opportunity to share their views and read what other people are saying. This online exhibit is filled with questions and prompts to facilitate climate change conversation.

"Climate change is one of the great challenges of our time, and a topic that every person needs to understand and act on. From the day the Museum of the Earth opened in 2003, climate change was a major theme of its exhibits and programs. This new permanent exhibit updates our approach and content for the issues that we read about in the daily news. It tries to place today's climate change in the context of the Earth's long history. That history tells us to be very concerned about our future," stated Warren Allmon.

The online exhibit launched on September 25, 2020 and can be viewed at www.museumoftheearth.org/climate-exhibit. The physical exhibit at the Museum of the Earth will be available for the public to visit next month. Due to COVID-19, the Museum is currently limiting the number of visitors at a time and encourages guests to make reservations online.

About the Paleontological Research Institution
The Paleontological Research Institution (PRI) pursues and integrates education and research, and interprets the history and systems of the Earth and its life, to increase knowledge, educate society, and encourage wise stewardship of the Earth. PRI and its two public venues for education, the Museum of the Earth and the Cayuga Nature Center, are separate from, but formally affiliated with Cornell University, and interact closely with numerous University departments in research, teaching, and public outreach.

Our Discovery Center Virtual Classroom Programs are a great way to bring an NGSS aligned lab experience to your class in a safe and convenient format. Modeled after our popular Discovery Center Lab field trip programs, our STEM Educators lead students through an exciting in-person, real-time experience.

Teachers will be provided with a supportive digital package that includes student handouts. No additional materials are needed. A Zoom account is not needed to participate.

Length: 40 minutes & up to 25 students per class.

Professional Learning

Workshops for Teachers

We remain committed to safely giving educators the tools they need to transform instruction and increase student interest and performance in science and othersubjects. We have numerous new Virtual Offerings to check out - here are some upcoming ones:

Engineering Equity in the NGSS - (FREE)

Supporting Student Sense-Making During Virtual Learning

The Power of Wondering: Leveraging Student Questioning to Drive Your Unit Through a Phenomenon

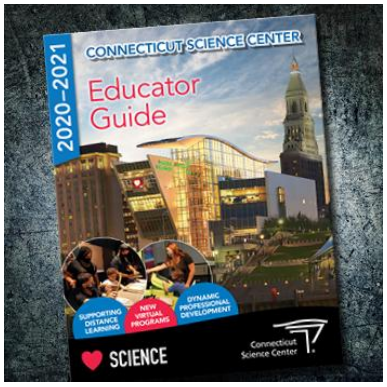
Digging Deeper: Unpacking the Disciplinary Core Ideas

STEM Career Showcases

Grades 7-12

We invite middle and high school students to connect informally with professionals from corporate partners across the state through a series of virtual panels and discussion rooms, to engage in meaningful conversations and learn more about exciting STEM opportunities.

These programs are currently being conducted virtually.



Digital Educator Guide

2020-2021

Our 2020-2021 Educator Guide is packed with new programs and learning opportunities for you and your students. We've adapted many of our programs to be accessible whether you are in the classroom, running a hybrid model, or fully teaching from a distance. Students can access the content from our safe website, and materials are not needed.

NGSS and Universal Design for Learning

Making Instruction in the New Science Standards Meaningful and Achievable for Diverse Learners

The Next Generation Science Standards (NGSS) allow students to actively engage with practices and apply crosscutting concepts to deepen their understanding of science and engineering through phenomena and design problems. The authors of NGSS explicitly name Universal Design for Learning (UDL) as a necessary tool for creating meaningful, accessible, and challenging units for all students. UDL is a lens through which teachers can analyze curriculum goals, methods, and materials to ensure multiple pathways to success for all learners. This asynchronous workshop will run over 4-6 weeks and provide participants with opportunities to become familiar with shifts in NGSS instruction, become familiar with UDL guidelines, and identify potential barriers in NGSS lessons and units and use strategies to make them more aligned with UDL.

K-5	6-12
Price: $125	**Price:** $125

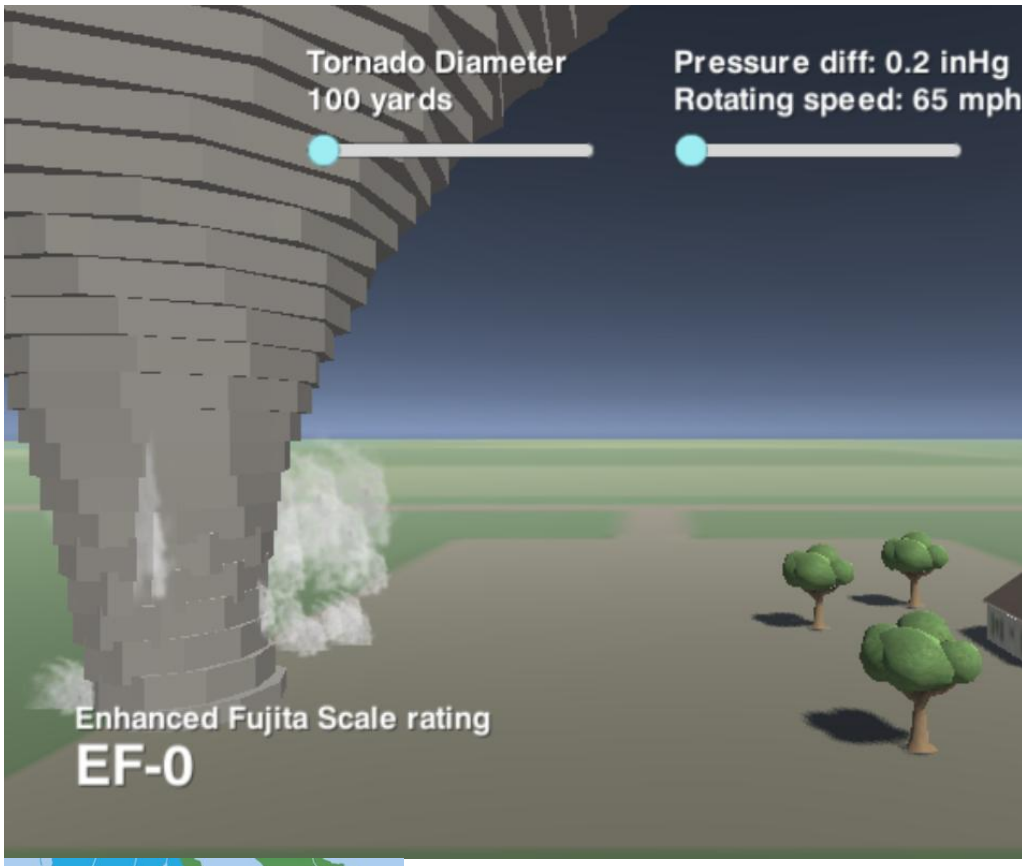
Start Date:	Start Date:	Start Date:	Start Date:
12/1/20	1/21/21	11/4/20	3/25/21
Register	Register	Register	Register

Participants will receive a confirmation email after registering for a workshop. For workshop information, email Meg Hanly at mhanly@crec.org or Lisa Fiano at lfiano@crec.org. For assistance with registration, please contact the CREC Resource Group at 860-524-4040, or services@crec.org. For special accommodations, please contact PD Support at 860-509-3787 or pdsupport@crec.org.

What's new at NOAA SciJinks

Make a Simulated Tornado!

A tornado is a powerful, swirling storm that forms from a large thunderstorm. A strong tornado can even pick up massive objects like trucks and drop them miles away. In our newly updated simulator, students can learn all about tornadoes by creating one themselves!

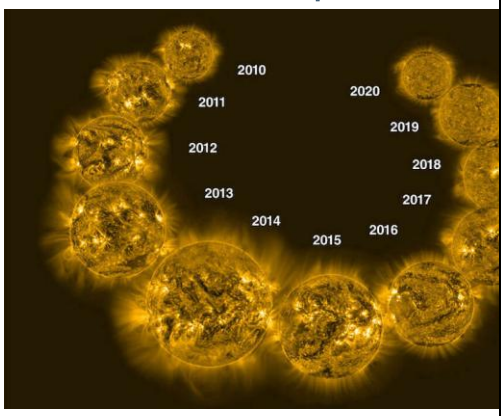


What Is La Niña?

Why Do Leaves Change Color?

How Does a Hurricane Form?

How Do Wildfires Spread?



The Solar Cycle

Spread the Word

Do you know someone who might like to learn more about weather? Forward this email to them to make sure they know all about NOAA SciJinks!

Earth@Home is your free online toolkit for learning about Earth and its 4.5-billion-year history.

We are excited to share that PRI has developed a free new online learning platform designed to help anyone in the United States learn about the Earth where they live. Earth@Home™ is rich with interactive content about Earth and its life, with a focus on geology, paleontology, climate, and the connections of Earth's different systems.

The major components of this new online platform include regionally-based guides to Earth science, an online, open-access Earth science textbook, and virtual fieldwork experiences that will bring Earth science to the online classroom. We encourage you to use the regional guides to learn about local geology and the landscape right outside your backdoor!

Earth@Home™ aims to teach everyone about the natural environment where they live. The open-access Earth science textbook and virtual fieldwork experiences, which are accessible to all learners, will also help educators create robust Earth science lesson plans and offer free learning resources for their students to utilize.

This website will continue to grow considerably over the next several years and we can't wait to share updates with you! Be sure to sign up with your email address on Earth@Home™ to receive updates and notifications whenever new resources are added.

From Bob Riddle: To sign up for ISS sightings: https://spotthestation.nasa.gov/

General article - How to Reopen Schools: What Science and Other Countries Teach Us - New York Times, July 11, 2020. What concerns to you have about reopening your science class? Let us know at ctsciteachers@gmail.com

The Maritime Aquarium in Norwalk is currently open. Visitors do have to reserve times ahead of their visit to ensure crowd control. The research vessel Revolution is also cruising Long Island Sound.

Teaching Science During a Pandemic
A National Study of K–12 Science Instruction

Science teachers, from Kindergarten to 12th grade, are critical for providing accurate and timely information about urgent health-related issues like coronavirus/COVID-19. But how do teachers respond when important and urgent issues like these emerge? How do they decide whether to address these issues in their teaching? What types of resources do they draw on to design instruction?

With a grant from the National Science Foundation, researchers are trying to answer these questions about coronavirus/COVID-19. *Whether or not you taught about coronavirus/COVID-19, we need your help.* The goal is to have over 3,000 science teachers across the country complete an online questionnaire. The results will inform how science teachers respond to coronavirus/COVID-19, as well as future urgent and emerging health issues. All teachers who complete a survey will be entered into a drawing for 1 of 50 $100 cash awards. To read more and register for the study, please follow this link.

NSTA's Daily Do

Check out three Daily Dos, featured below, from the NSTA collection. Share your photos of your class and/or students with their families completing these Daily Dos with us on Twitter @NSTA #DailyDo and explore our entire collection of Daily Do sensemaking tasks.

Science Learning Activities for Families

Explore this featured resource: LE 1.B Family Learning Across Places.

A link to the CDC recommendations for schools…the 9 page document you have read about in the news can be found here: https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/School-Admin-K12-readiness-and-planning-tool.pdf

CEA's Safe Learning Plan

Delayed openings, staggered schedules, distance learning, and guranteed funding are among the six specific actions outlined in CEA's Safe Learning Plan that must be taken to ensure safety for all, before schools reopen.
Read the CEA Safe Learning Plan.

Science Teaching During Coronavirus School Closures—NSTA Is Here to Help

As tens of thousands of schools across the country close their doors in the wake of the coronavirus outbreak, teachers are scrambling to find materials and resources.

To support all educators during this difficult time, NSTA is offering a free 30-day membership, providing you with access to more than 12,000 digital professional learning resources and tools. Simply create an account here and start developing your own personalized digital learning experience.
Check out the online resources we have available, including our Interactive eBooks+, web seminars, and free book chapters. Or take advantage of our new lesson plans on the coronavirus for secondary and elementary students.
Check out the NSTA website daily for featured content and tips on how to use these resources.

The following are from the CSTA:

Many thanks to the many teachers who are putting together Distance Learning Activities during this unprecedented event. A page of possible resources - https://csta.wildapricot.org/Distance-Learning-Resources/ - that we are continually updating with your input. Thanks for your contributions. Let us know about any resource that is working for you!
Join CSTA - New membership plan

Regular membership - $20.00
Retired teacher membership - $10.0
Pre-service teacher/education student membership - $10.00
First Year Teachers(one time trial membership) - $10

As an affiliate of the National Science Teachers Association we recommend membership in NSTA. You can now use the code NSTA20PROF to save $15 on a Professional Membership. This includes a print copy of the journal of your choice. You can also become and Associate Member for free. This will enable you to register for the web seminar below and 3 other resources each month.

We are beginning to receive information on student activities, competitions and scholarships. They will be listed on our website. Below are some of the recent ones:

In case you have not seen this website, take a look!
https://blog.google/products/earth/tips-to-learn-at-home-with-google-earth/
A spin around the earth with an "I'm Feeling Lucky" button and activities to measure the earth are on this interesting interactive site.
Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

In response to the school's new hybrid learning environments, the New England Science & Sailing Foundation is here to help!

NESS is launching its Shore Support Program—designed to provide in-person support to students grades K-8 for their virtual school days. The program provides a safe learning environment for your students while providing academics with additional science, sailing, and adventure sports enrichment classes.

Every day at NESS students will be provided mentorship and homework help—keeping students engaged in their schools' online learning. NESS will also provide STEM enrichment classes that are designed to promote socio-emotional benefits and a love of learning.

The Shore Support Program educators will work with parents to determine student's individual needs and create a Shore Support Plan that assists each student in online learning world with the support of NESS educators and NESS SEA AmeriCorps members.

Information on scheduling and sign-ups is coming soon, but we wanted to reach out to tell you about this exciting new program at NESS!

Not every student excels in online learning. Regardless of their challenges, NESS is prepared to support all students by providing the opportunity to utilize NESS resources to actively engage in learning.

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 administrator.