



CONNECTICUT SCIENCE CONNECTION

November 2014

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

State Coordinator..David Lopath
List Moderator..Eloise Farmer

lopath@comcast.net
eloisef302@gmail.com

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

IMPORTANT

ANNOUNCEMENT!

Please note my change of email address above in the heading

Resources

CSDE's [science curriculum web site](#).

More on Standards at:

<http://www.nextgenscience.org/>

EQulP Rubric for Science Released!

The [Educators Evaluating the Quality of Instructional Products \(EQulP\) Rubric for Lessons & Units: Science](#) was released today. The

Rubric provides criteria with respect to the NGSS.



To get all the latest happenings at the Connecticut Science Center, click on the link to its newsletter!
www.ctsciencecenter.org/newsletter/

Visit the NGSS@NSTA Hub :

The [NGSS@NSTA Hub](#) now offers a dynamic version of the *Next Generation Science Standards*. Standards can be accessed via a simple matrix, then displayed in a clear and easily understood format. Accompanying each standard are student performance expectations, and the corresponding science and engineering practices, disciplinary core ideas, and crosscutting concepts. The hub also provides key connections to the *Common Core State Standards* in literacy and mathematics.

OPPORTUNITIES FOR TEACHERS:

To Science Teachers of All Science Areas, The development of Science Lessons with Embedded News Literacy Principles project is in place, complete with all the approvals of the necessary documents, and is ready to begin. The goal of the project is to produce science lessons at grade levels 6-8, 9-10, 11-12 that embed News Literacy Principles. These lesson will be placed online as free resources for teachers. This project is supported by the McCormick Foundation in collaboration with the Journalism Education Association (JEA) and American Society of News Editors (ASNE). Our current deadline for electronic lesson plan submission is November 30th. Teachers selected who complete the requirements will be reimbursed as follows:

\$300 for Completed lesson plan following provided lesson plan guidelines

\$100 for field testing lesson with a class and responding to evaluation surveys.

\$50 for submission of video of lesson along with parent/guardian permission forms.

Further information regarding the project description can be found at this link:

https://docs.google.com/document/d/1RmMP0F2HBRQ9RI2RJGHep98zwAwRKh0U4oVP_GRCsxg/edit Teachers interested in being considered for this opportunity are

requested to complete the information on the following two links: Information on this first link is to obtain general contact information and topic of lesson plan:

<https://docs.google.com/forms/d/17mCk6k6gD7v28eKZCg7ih7fc-sXwfw8Fy48CfVh93oo/viewform>

Information on this link is to provide information for MOU's and payment distribution: https://docs.google.com/forms/d/1z6-r1fC57a0WqXhWaxrAKSwDuDSZ3CMvKwdjbzIDqgE/viewform?c=0&w=1&usp=mail_form_link

Albert Einstein Distinguished Educator Fellowship Program November 20

The Albert Einstein Distinguished Educator Fellowship (AEF) Program provides a unique opportunity for accomplished K-12 educators in the fields of science, technology, engineering, and mathematics (STEM) to serve in the national education arena. Fellows spend 11 months working in a Federal agency or U.S. Congressional office, bringing their extensive classroom knowledge and experience to STEM education program and/or education policy efforts. Program applications are due November 20, 2014, and must be submitted through an online application system.

To be eligible, applicants must be U.S. citizens, be a current employed full-time in a U.S. public or private elementary or secondary school or school district, and must have taught full-time in a public or private elementary or secondary school for at least five of the last seven years in a STEM discipline.

The AEF Program is managed by the DOE Office of Science, Office of Workforce Development for Teachers and Scientists, in collaboration with the Triangle

Coalition for STEM Education and the Oak Ridge Institute for Science and Education.

Go to the [Albert Einstein Distinguished Educator Fellowship Program](#), for more information, including eligibility requirements, program benefits, application requirements, and access to the online application system. For any questions, please contact the [AEF Program](#).

Fulbright Distinguished Awards in Teaching Program: deadline November 5
You may be eligible to participate in an international professional development opportunity for 3-6 months through the Fulbright program. This program is sponsored by the US State Department, Bureau of Educational and Cultural Affairs. Eligibility Requirements: www.fulbrightteacherexchange.org

\$1000 SCHOLARSHIPS FOR AMAZON RAINFOREST PD WORKSHOP

Educator Academy in the Amazon Rainforest + Machu Picchu

The July 1-11, 2015 Educator Academy in the Amazon Rainforest of Peru is a cross-curricular professional development workshop for K-12 formal and informal educators to learn and use:

21st Century Instruction: 5E Lesson Design ~ Inquiry-based Exploration ~ STEM

Inquiry Protocols &

Resources: [Project Learning Tree](#) ~ Cornell Lab of Ornithology ~ & More!

Global and Cultural

Perspectives: Service Learning ~ Sustainability ~ Global Education. Join Al Stenstrup, Project Learning Tree (PLT); Lilly Briggs (Cornell Lab of

Ornithology), Christa Dillabaugh, Amazon Rainforest Workshops; and Dr. David Pearson, Wildlife Travellers' Guide to Peru; and work side-by-side with scientists Dr. Steve Madigosky, Widener University; and Randy Morgan, Curator/Entomologist, Cincinnati Zoo as you:

Participate in citizen science projects and inquiry based field studies on a 1/4-mile Rainforest Canopy Walkway in one of the most biologically diverse environments on the planet.

Spend **a day in an Amazon village** as you **explore the complexities of sustainability** and the role of education in creating a sustainable future for Amazon children.

Work with fellow educators to explore strategies for using the Amazon as a vehicle for incorporating STEM education, inquiry-based learning, and sustainability science education into your classroom. PLT Certification, BirdSleuth resources and 50 ASU PD Hours included. Academic Credit and Machu Picchu Extension optional. \$1000 scholarship deadline March 1, 2015. Program cost is \$1240 + air for scholarship recipients. Space is limited! Register early to secure your spot! Get the details and download a syllabus and scholarship application at:

<http://www.amazonworkshops.com/educator-academy.html>

Contact christa@amazonworkshops.com or 1-800-431-2624 for more information.

GEEO

Global Exploration for Educators Organization (GEEO) is a 501c3 non-profit organization that runs professional development travel programs designed for teachers.

GEEO is offering the following travel programs for 2015: India/Nepal, Sri Lanka, Bali/Lombok, Italy, Eastern Europe, Greece, Uzbekistan, Vietnam/Cambodia, Thailand/Laos, Belize/Guatemala, Morocco (Winter, Spring and Summer) China, Eastern Turkey, Western Turkey, Zambia/Botswana/Namibia/South Africa, New Zealand, Costa Rica, Peruvian Andes (Summer and Spring), Peruvian Amazon, and The Galapagos Islands. The registration deadline is June 1st, but space is limited and many programs will be full well before the deadline. **From now until October 13th, GEEO's spring and summer programs will be discounted an additional 5%.**

Educators have the option to earn graduate school credit and professional development credit while seeing the world. The trips are 8 to 19 days in length and are designed and discounted to be interesting and affordable for teachers. GEEO provides teachers educational materials and the structure to help them bring their experiences into the classroom. The trips are open to all nationalities of K-12 and university educators and administrators, as well as retired educators. Educators are also permitted to bring along a non-educator guest.

Detailed information about each trip, including itineraries, costs, travel dates, and more can be found at www.geeo.org. GEEO can be reached 7 days a week, toll free at [1-877-600-0105](tel:1-877-600-0105) between 9AM-9PM EST.

Chemistry Teachers! Get this \$1500 grant to enhance your instruction. Details available for many forms of professional development. Due Dec. 15, details available at: <http://www.nsta.org/shellsciencelab/>

Herb Society of America has grants for projects on plants in schools. Use the \$5000 to buy materials and/or programs presented in an innovative way. Apply online by December 31. Get information by clicking on: <http://www.herbsociety.org/resources/educator-grants.html>

Do you use Vernier tools in teaching an engineering or STEM class? You can enter a contest with really neat rewards. Applications are due January 15. For a full description, click on: <http://www.vernier.com/grants/engineering/>

UPCOMING EVENTS:



New England Air Museum to Hold Women Take Flight on Sunday, November 2, 2014

The New England Air Museum is open from 10:00 a.m. to 5:00 p.m. Seven days a week and is located in Windsor Locks, Conn. adjacent to Bradley International Airport. Take I-91 north or south to CT. exit 40 (Route 20) to Route 75 north. Admission prices: Ages 12 and up \$12.00; children 4-11 \$6.50; ages 3 and under are free; seniors 65 and up \$11.00.

For more information, visit www.neam.org or call (860) 623-3305.

SENEME, SouthEastern New England Marine Educators is proud to be the host of the 2015 National Marine Educators Association annual conference

The National Marine Educators Association Annual Conference is attended by both formal and informal educators, and students from public and private institutions as well as from aquariums, for profit and nonprofit organizations including government agencies. This three to five day event will be filled with an amazing amount of current marine science information. Some of which is related to STEM education and next generation Science standards. You can choose the days you would like to attend –or just one day -to concentrate on the strand that interests you most or all or up to five days to absorb the full impact of marine science education; from lectures and workshops to our vast array of experiential learning opportunities in the Newport Area.

Join us at the Newport Marriott, June 28 to July 2, 2015

More information can be found online

At the NMEA site

http://marine-ed.site-ym.com/general/custom.asp?page=NMEA_2015

Or on our site SENEME

<http://seneme.org>



The **Connecticut Science Education Conference** is **November 22, 2014** at Hamden Middle School. The conference serves science educators in grades K-12, so there will be sessions of value to you. All disciplines, from general interest/general science, to biology, physical science, chemistry, earth and environmental science, and physics are welcome. For a full description of workshops so you can plan your day, please go to: <http://www.csta-us.org/images/2014%20CT%20Science%20Education%20program.pdf>

CT SCIENCE SAFETY NETWORK WORKSHOP SERIES:

- November 13 – OSHA's Chemical Hygiene Plan: The Path to a Safer Science Lab
- December 11 – Chemical Hygiene Officer Training: Responsibilities and Liabilities!
- February 12 – STEM Safety (new)
- March 5 – Safety in the Arts (new)
- March 19 – Science Safety for Special Education Teachers and Paraprofessionals (new)

FOR INFORMATION, CONTACT: Sara MacSorley, Director of the Green Street Arts Center and Project to Increase Mastery of Mathematics and Science (PIMMS) smacsorley@wesleyan.edu 860-685-7870:

A Science Argumentation rubric has been developed by Mary Lou Smith and her colleagues. If anyone tries it out, they would really like to get some feedback! To get a copy, you can request one by email from Eloise Farmer at eloisef302@gmail.com



What is NMEA 2015? June 29 - July 2, 2014

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More information can be found online
At the NMEA site
http://marine-ed.site-ym.com/general/custom.asp?page=NMEA_2015

Or on our site SENEME
<http://seneme.org>

Grants For K-12 Teachers



Would you like to share a science lesson video that illustrate how the Next Generation Science Standards can facilitate learning at the elementary (K-6) level? Can you share one or more of your lessons to illustrate this for K-6 teachers? If you have the lesson but not the video, NSF can fund us to provide a free at-a-distance videographer (via PolyCom) to record your lesson. We have 73 K-

6 lesson videos (physical, biological, and earth & space sciences), all of them recorded prior to the availability of the NGSS. We would like K-6 teachers to see how teachers are using the NGSS to facilitate learning in science and how the application of these standards can facilitate learning in other areas of the curriculum.

The National Science Foundation funds the "Teachers Helping Teachers Teach Inquiry Science: Just ASK" project. Our [website](#) (now open to all teachers) offers a portal that functions as an "specialty shop" where, so far, about 800 K-6 teachers are going to receive and give ideas about inquiry science and how it helps their students learn in areas other than science.

You can check out our project at <http://justaskateacher.com> and you can see our newsletters on that website or at the links below.

Questions, comments, suggestions? We would like to hear from you. Use our "Contact Us" link on our [website](#) or just use the Email address below.

Charles C. Matthews, Ph. D.
Academic Research Scientist
University of Missouri at St. Louis
matthewscc@umsl.edu
Skype: [dr.charles.c.matthews](#)

Email to schedule Skype, PolyCom, or Elluminate **Connecticut Green LEAF Schools has been awarded a Teacher Quality Partnership Grant through the CT Office of Higher Education.**

. More information about Connecticut Green LEAF Schools can be found at www.ctgreenleaf.org

Would you like a complete list of grants that has been provided by the National Science Teachers Association? NSTA has put these grant and their deadlines in an easy to follow calendar. It includes: deadline date, description, category, and grade level. To view this list, please visit:
<http://www.nsta.org/publications/calendar/>

OPPORTUNITIES FOR STUDENTS

World of 7 Billion Contest

Create a short video (up to 60 seconds) about human population growth that highlights one of the following global challenges.

1. The world is in the midst of the sixth mass extinction.
2. Most of the world's suitable farmland is already under cultivation.
3. Worldwide, 1 in 10 primary school age children and 1 in 3 secondary age children are not enrolled in school.

All videos must include a) how population growth impacts the issue, b) why the issue is important, and c) at least one idea for a sustainable solution.

Deadline for video submissions:
Thursday, February 19, 2015 (5:00pm Eastern US time)

NEW CHALLENGE! Chemical Educational Foundation® (CEF), a nationally recognized non-profit organization dedicated to enhancing grade K-8 students' appreciation of the science and value of chemistry. CEF has created a series of *You Be The Chemist*® (YBTC) programs, including the YBTC

Challenge, an academic competition for grade 5–8 students. The YBTC Challenge engages grade 5–8 students in learning about important chemistry concepts, scientific discoveries, and laboratory safety. The Challenge is organized into three competitive levels: local, state, and national. Local and state competitions take place throughout the school year, and culminate in a national competition held each June in Philadelphia, PA (see our [YouTube video](#)). This year the Challenge will celebrate its tenth anniversary with over 23,000 participants in 30 states. Connecticut currently has three Local Challenge sites in New Haven County, Fairfield County, and Waterbury. For more information, including information about our YBTC [Activity Guides](#) (available for FREE online download) www.chemed.org.



Dear Colleague in Science,

Norwalk secondary schools are considering a change in schedule to an A-B block schedule. I have been requested to compile a list of high schools that currently use an A-B Block schedule.

Please email me if your high school is on an A-B Block schedule and your contact information for a few science teachers to visit your school if allowable to do so.

Thank you,

Tammy

Tamre Mockus

K-12 Science/Health Instruction Specialist

Norwalk Public Schools

125 East Avenue P.O. Box 6001

Norwalk, CT 06852

mockust@norwalkps.org

Teaching About Invasive Species : A new book from Green Teacher!! Whether working inside or outside schools, youth educators will find in Green Teacher's new book the tools to engage young people from 6-19 years of age in this challenging topic. Invasive species, if unchecked, will continue to have significant negative impacts on our environment and on our economy. Fortunately, the spread of many invasives can be checked. To succeed, we'll need effective education strategies to be widely deployed. This book aims to fill that gap. Included in its 80 pages are descriptions of 13 innovative, youth education programs, and 14 ready-to-use activities that are appropriate for various age groups. *\$14.95 single copy, bulk pricing as low as \$5.25*

To learn more or place an order visit: greenteacher.com **email:** info@greenteacher.com **call:** toll free 1-888-804-1488

A MESSAGE FROM LIZ BUTTNER, CONNECTICUT STATE DEPARTMENT OF EDUCATION: Listed below are a variety of professional learning opportunities and resources that may be of interest to you as you think about your professional goals for the 2014-15 school year:

NSTA'S NEXT GENERATION SCIENCE IN THE CLASSROOM District Science Coordinators and K–5 teachers will not want to miss **NSTA's upcoming series of web seminars focused on teaching the *Next Generation Science Standards (NGSS)* in elementary school**. Each month from September through February, we will focus on a particular grade level, kindergarten grade. Presenters will review the general architecture of the *Next Generation Science*

Standards and the specific expectations for each elementary grade level. Then participants will learn how to use the standards to plan curriculum and instruction. During each of these 90-minute web seminars, you will also have an opportunity to deepen your understanding of: how the three dimensions of *NGSS* (practices, core ideas, and crosscutting concepts) are designed to blend together during classroom instruction; dive into one or two examples of what the teaching and learning to achieve *NGSS* looks like in a specific grade; and discuss instructional practices with other teachers of the same grade level; and begin the development of a grade-level community in the NSTA Learning Center to support students learning.

[Teaching NGSS in Elementary School—Second Grade](#), Wednesday, November 19, 2014

[Teaching NGSS in Elementary School—Third Grade](#), Wednesday, December 17, 2014

[Teaching NGSS in Elementary School—Fourth Grade](#), Wednesday, January 21, 2015

[Teaching NGSS in Elementary School—Fifth Grade](#), Wednesday, February 18, 2015

NSTA Archived Webinars [full archive of past programs](#) can be accessed for free.

NEW

Join us for an intensive [one-day virtual conference](#) on Saturday, November 15, from your home

(we give you permission to wear your PJs) and learn how to integrate the *Next Generation Science Standards*

(*NGSS*) into your K–12 classroom.

This web-based professional learning opportunity includes interactive sessions on modeling, explanation and argumentation, and engineering, plus breakouts by grade level and discipline.

Engage with leading experts, discuss ideas with colleagues, and gain practical insights and strategies to better understand and apply key principles from the *NGSS*—all from the convenience of your home.

[Read the agenda](#) and [register](#) today for this one-of-a-kind opportunity. Presenters include these four experts below as well as others. See the [full list here](#).

Jiz Buttner, 165 Capitol Avenue, P.O. Box 2219, Hartford, CT 06106, PHONE: 860-713-6849 FAX: 860 713-7018

Materials Available to Connecticut Middle Schools! *Free Online Teaching Materials & Professional Development for Connecticut Public School Students and Educators through June 2016.* Sea Research Foundation, based in Mystic, Connecticut, is home to Mystic Aquarium, JASON Learning and the Ocean Exploration Center. Through the support of the **Connecticut Department of Economic and Community Development**, Connecticut middle schools have access to a set of multimedia instructional materials and professional development **free of charge through the 2016-17 academic school year.**

a. **Online access** to the gated, JASON Expedition Center featuring curricular resources, videos, digital labs and games, simulations, and more.

b. **Professional development workshops** in JASON curricula including teacher and student print editions, and DVD.

Best suited for Grades 5-9, the curricular themes include:

Climate, Weather, Geosphere, Ecology, Forces and Motion, and Energy.

Visit <http://www.jason.org/roll-outs/ct-statewide> to sign up to receive free access to the JASON Expedition Center and to learn more about professional development workshops being offered throughout the state. **For more general information about JASON Learning and its programs, visit <http://www.jason.org> or call 1-888-527-6600**

In the News Too busy to sift through the news in search of interesting stories? Click on the link to read current news stories collected for you by NSTA staff members.

Triangle Coalition has many STEM articles of interest to science educators: to read these articles, go to: [TRIANGLE COALITION](#)

Connecticut Academy of Science & Engineering

CASE Partners with Hartford Courant News in Education Program

Special for Academy Bulletin Subscribers,

Check out the [Science Matters](#) articles from the Academy's partnership with the Hartford Courant's [News in Education \(NIE\)](#) program. NIE is an online interactive classroom resource to help teachers connect students to science and engineering topics that might spark their interest and passion and that relate to events in the news or everyday life. Volunteer writers share information about an aspect of their work and explain how they became interested in science, medicine, technology, engineering or mathematics.

The [CASE Homepage](#) now offers a link directly to NIE!

Contributors this Academic year to date are:

- [UConn Freshman William Tait on *Type 1 Diabetes, Medication Innovation*](#)
(Tait was a 2014 H. Joseph Gerber Medal of Excellence winner.)
- [Yale Astronomy Graduate Student Allen B. Davis on *Visiting a Distant Comet*](#)
- Danbury High School Senior **Janine Kerr** on *Controlling Invasive Species, Biologically*
(Publication Date: Nov. 7. Kerr was a 2014 Gerber Medal winner.)
- UConn Associate Professor **Andrew Bush** on *Paleontology and Mass Extinction*
(Publication Date: Dec. 5)

805 Brook Street, Building 4-CERC, Rocky Hill, CT 06067-3405 • Telephone: 860-571-7143

Email: acad@ctcase.org • Website: www.ctcase.org

CASE Member Portal: www.casemembers.wildapricot.org

NASA HAS MANY RESOURCES AVAILABLE TO EDUCATORS...MANY MORE THAN WE CAN DESCRIBE IN THIS NEWSLETTER. PLEASE EXPLORE WHAT IS AVAILABLE BY CLICKING ON

<http://www.nasa.gov/audience/foreducators/index.html>

Want to be a NOAA-it-all about the weather and oceans? Explore these fantastic FREE NOAA resources

and print publications [click here to shop our entire NOAA publications collection](#).



Connecticut's Beardsley Zoo is closer than you think and open daily from 9:00 am to 4:00 pm.

THE MARITIME AQUARIUM AT NORWALK, 10 N. Water Street, Norwalk, CT; (203) 852-0700, www.MaritimeAquarium.org. Hours: 10 a.m. to 5 p.m. daily.. IMAX® theater offers the largest movie screen in Connecticut. The name of the Aquarium's new research vessel will be R/V Spirit of the Sound – chosen through a recent Name the Boat contest open to Norwalk school students

For more information about The Maritime Aquarium's educational programs, or its exhibits and IMAX movies, go to www.maritimeaquarium.org or call (203) 852-0700.

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.