

**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



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.



The UConn Integrated Pest Management (IPM) and

Environmental Science curriculum kits are available **at no cost** to any teachers or other educators for use in their classrooms. Curriculum kits for grades K/1, 2/3, and 4/5 are available, and they can be picked up at UConn Storrs campus. The curriculum, and alignments completed by Mary Lou Smith, can be viewed on the [UConn IPM website](http://uconn-ipm.org). Please contact Donna Ellis (email [donna.ellis@uconn.edu](mailto:donna.ellis@uconn.edu); 860-486-6448) for more information.



In New Jersey, their state dept of education has

created an integrated model NGSS curriculum that is required in some specially funded districts and optional in others. To see the topic sequence details and rationale, click on <http://www.state.nj.us/education/modelcurriculum/sci/ms.shtml>.

We have some great proposals for this year's conference. I'm

just missing yours!

If you've been letting your idea for the CT Science Educators Conference percolate, now is the time to [submit your proposal](#) before the deadline on **June 2nd**.

This year we are looking for proposals from professional scientists and engineers in addition to presentations from experienced science educators that meet the variety K-12 science educators' professional development needs. Our goal is to develop a diverse and comprehensive program ready for members to view by the beginning of July. Help us reach this goal by submitting your proposal or reaching out to a colleague!

Contact [Heather Toothaker](#), Program Chair, with questions. If you know a scientist or engineer who you think would like some feedback on how to make a presentation about their field relevant to science educators, let us know. Some questions they might focus on: "What does team work look like in your profession?" or "What part of your education best prepared you for the field you entered?"

**Thank you for your participation!** Diane Hart, Vice President, Connecticut Science Teachers Association

## Green Teacher

Green Teacher has recently launched a YouTube Channel. To date, we've posted 8 videos on our website, with several more in various editing stages. In time, we hope this will grow into a valuable resource for educators. Among those currently posted, are those describing:

- + How Google Earth was used by high school students as part of an invasive species removal project
- + How an elementary school in a northern resource town created partnerships so that their students could explore the natural and cultural environment in their area.
- + How to build better bug houses – and pack waste free lunches.

Check out the posted videos here: <https://greenteacher.com/check-out-these-videos/>

Upcoming webinars

Check out these webinars at the following site:

<http://greenteacher.com/webinars/> where you can also learn

Best Practices in School Gardens,  
Presenter: Mary Dudley  
Wednesday, September 27th 2017,  
7:30-8:30pm EST

Eco-System Monitoring Programs,  
Presenter: Daniel Shaw  
Wednesday, October 25th 2017,  
7:30-8:30pm EST, [Register](#)

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

We're keen to both receive short (i.e. 2-6 minute), practical videos – edited or unedited – from teachers and other youth educators on a wide variety of topics. Like the articles and activities we seek for *Green Teacher* magazine, we're looking for innovative green learning strategies on a wide variety of topics. Your presentation should provide sufficient detail and enough guidance that will enable viewers to replicate the activity in their own communities. Your video should specify early on the age group for which your learning activity or strategy is most appropriate. For more details of what we're looking for, check out:

<https://greenteacher.com/send-us-your-videos/>

Finally, if you see a short environmental video that deserves a wider audience, send us a quick note about it.

Tim Grant, Editor  
, [tim@greenteacher.com](mailto:tim@greenteacher.com),

## Residential Summer Workshops at the University of Connecticut's School of Engineering *The daVinci Project*, July 10-14, 2017

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 18<sup>th</sup> 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 10-14. Teachers live on campus and participate in one of 10 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 27 fellowships available.** Please share this professional development opportunity with the other STEM teachers in your school or district.

1. [Understanding Pain: Sensory and emotional stimulus to your brain](#) – **2 fellowships available**
2. [Bioinformatics: Using Computer Science to Understand Life](#) – **3 fellowships available**
3. [Topology Optimization: A computational technique for design of 3D-printed parts](#) – **2 fellowships available**
4. [Low Cost Solar Cells](#) – **5 fellowships available**
5. [Air Quality and Health: Building an Air Pollution Measurement Device with an Arduino®](#)
6. [Basic Arduino® Programming for STEM Projects](#) – **3 fellowships available**
7. [Mathematical Optimization with Applications to Smart Grid and Intelligent Buildings](#) – **10 fellowships available**
8. [Fuel Cell: Construction and Operation](#)
9. [Robots: Use in Industry and Elderly Assistance](#)
10. [Monitoring and Maintaining Stream Health in a Developed Watershed](#) – **2 fellowships available** Kevin McLaughlin, Director, Engineering Diversity and Outreach Center

**Teaching & Learning in 3D: An Orientation for Next Generation Science Standards** Introduces the NGSS' three dimensions, hands on experience with key instructional shifts, and practical tools for immediate changes in the classroom and long term curricula updates.  
<http://www.crec.org/protraxx/docs/355739/att.pdf>

**"Engaging Elementary & Middle School Students through Scientific Inquiry"** AM half-day. Explores inquiry-based instruction strategies and how they support the NGSS. <http://www.crec.org/protraxx/docs/364617/att.pdf>

**"Employing Engineering Practices in Middle & High School Science Classes"** PM half-day. Explores the role of engineering in the NGSS with exemplars of engineering-integrated science activities.  
<http://www.crec.org/protraxx/docs/364615/att.pdf>

**"Teaching & Learning in 3D: An Orientation for Next Generation Science Standards"**

June 19, 20 & 21. Same as above.

<https://www.protraxx.com/scripts/ezcatalogny/ViewClass.aspx?ID=364484&CustomerID=128>

**"Three-Dimensional Lesson Planning for the NGSS"**

June 22. Explores the NGSS' three dimensions, and provides templates for using the BSCS "5-E" model to plan lessons with all three.

<https://www.protraxx.com/scripts/ezcatalogny/ViewClass.aspx?ID=364586&CustomerID=128>

**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!

Our conference is led by Dr. Clyde (Kipp) Herreid, SUNY Distinguished Teaching Professor and Director of the National Center for Case Study Teaching in Science. The conference is open to anyone interested in case study education, including high school teachers and international teachers. It also includes a poster session and we would be pleased if you submitted a proposal by September 1, 2017.

Register now for this rewarding two-day Case Study Teaching in Science Conference, September 15-16, 2017.

<http://sciencecases.lib.buffalo.edu/cs/>

An Online Three-Course Program that Takes Your Science beyond STEM to STEM+ -- University of Missouri-St. Louis

Please share with your PreK-3 Colleagues--(<http://bit.ly/2qP9iSw>)  
**Science • Technology • Engineering • Mathematics • Reading/Language Arts**  
**• STEM+ Program for PreK-3 Teachers •**

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An Online Three-Course Program that Takes Your Science beyond STEM to STEM+  
University of Missouri-St. Louis

The [University of Missouri-St. Louis](http://www.umsl.edu) (UMSL) is pleased to offer an online STEM+ program through which PreK-3 teachers can learn how to blend science, technology, engineering, and mathematics (the “three-dimensions” of science described in the [Framework for K-12 Science Education](#) and the [Next Generation Science Standards](#)) with their own district’s reading and language arts programs, areas so critical to primary grade instruction.

See details [here](#) or contact us by [Email](#) to become a STEM+ specialist. Please share our STEM+ announcement (<http://bit.ly/2qP9iSw>) with your preK-3 colleagues.

Thanks. Your STEM+ Team at [matthewscc@umsl.edu](mailto:matthewscc@umsl.edu)

NASA Wallops Flight Facility is pleased to announce the seventh Wallops Rocket Academy for Teachers (WRATS), June 19 –June 23, 2017. This professional development opportunity offers high school teachers a unique look into NASA’s Sounding Rocket Program utilizing the expertise of program engineers and



technicians to learn the basics of rocketry as well as flight and safety operations. The week culminates in the launch of Terrier-Orion rocket containing payloads

built by college and university students in the Rock ON! And Rock SAT-C programs. These programs are being held simultaneously along with the WRATS workshop as part of NASA Wallops’ Rocket Week. Space is limited. Participants must be US Citizens. A \$1000 stipend will be provided upon completion of the workshop requirements to help offset any travel and lodging expenses. A block of rooms at the Wallops Lodge has been reserved for participants. Lodging costs per night are \$59 for single occupancy (double occupancy is not possible). Contact information for the Wallops Lodge will be provided once you have been accepted as a participant. For information regarding the WRATS workshop or to apply, contact Linda Sherman at [linda.a.sherman@nasa.gov](mailto:linda.a.sherman@nasa.gov)

Goddard Space Center has a whole series of webinars for you to join this summer. Go to <https://www.nasa.gov/content/goddards-summer-stem-workshop-for-educators-2017> to see what is available.



BERMUDA NEXT SUMMER!! Interested in a professional development workshop this summer from June 26-July1 in Bermuda at the Bermuda Institute of Ocean Sciences? Learn the latest in data collection techniques including ocean “gliders.” Also learn how to plan and implement a field study course at BIOS for your students. Contact Ed Argenta at: [Edandpat74@comcast.net](mailto:Edandpat74@comcast.net) or Kaitlin Baird at: [kaitlin.Baird@bios.edu](mailto:kaitlin.Baird@bios.edu) for more information.

Go here for the program flyer:

<http://www.bios.edu/education/educator-workshops-at-bios/>

***IMS: Integrating CCSS Math into NGSS Science, Year Two***

**Goal:** Improve secondary science and math achievement by providing PD and integrating Common-Core-aligned math into Next-Generation-Science-Standards-aligned science courses

**Audiences:** Secondary (6-12) teachers of life science/biology (includes teachers of general or integrated science courses that include life science), coaches, and curriculum leaders

➤ Important: Participants should not be new to the NGSS – prior PD is recommended

**Benefits Include:**

- New, expert-developed lessons for secondary life science that integrate math and are specifically designed to align with both NGSS and CCSS
- Training on revising and developing NGSS units
- Grant funding, including stipends for participating educators – up to \$1,450 – \$1,850 each

**Sample Program Overview:**

**Summer 2017, Part 1 (July 5–7 @ \$100 per day):**

- Engage in math-rich, NGSS-aligned, project-team-designed model life science lessons; examine NGSS pedagogy and strengthen math abilities; identify how to integrate the model lessons into curriculum units.

**Summer 2017, Part 2 (August 14–17 @ \$100 per day):**

- Develop a new math-infused NGSS curriculum unit using an adaptation of the state's new NGSS Curriculum Unit Development Institute.

**School Year 2017-18 (two release days + one Saturday @ \$150 + three webinars @ \$50 each):**

- Finish developing the new unit (performance tasks and detailed lesson outlines).
- Implement the new units in the classroom. Receive ongoing support from the project team.
- Compile and share data about the unit (videos, student work, surveys, reflection).
  - **An additional \$400 will be allocated to each classroom teacher who completes this.**

**Summer 2018 (three days @ \$150 each):**

- Using a project-team-developed process, analyze and reflect on collected unit data/outcomes and then make unit revisions. Then, share unit materials.

**Contacts:**

Dr. Jean McGivney-Burelle, Associate Dean & Professor, University of Hartford,

[burelle@hartford.edu](mailto:burelle@hartford.edu), 860 768 5291

Dr. Carrie-Anne Sherwood, Professional Development Specialist, Connecticut Science Center, [csherwood@ctsciencecenter.org](mailto:csherwood@ctsciencecenter.org),

860 520 2122

Heather Torpey, Programs Project Coordinator, Connecticut Science Center,

[htorpey@ctsciencecenter.org](mailto:htorpey@ctsciencecenter.org), 860 520 2164

Nick Balisciano, Director of Programs and the Mandell Academy, Connecticut Science Center, [nbalisciano@ctsciencecenter.org](mailto:nbalisciano@ctsciencecenter.org),

860 520 2193

Register at: <https://www.surveymonkey.com/r/8YF6RFZ>



## Hartford Biodiversity Camp & BioQuest Jun 26-30, Two Rivers Magnet Middle School

The 2017 Richard P. Garmany Biodiversity Camp is a *free* program for 22 Hartford area students in grades 6-10.

**Benefits:** The camp will provide students with a special interest in biology the opportunity to work side-by-side with University of Connecticut scientists and other expert biologists. It could be the start of a career. Or just a lot of fun.



**Format:** Each day will include a field trip to meadow, forest, or wetland, where staff will demonstrate collecting techniques (sweep nets, seines, beat-sheets, botanical presses). Samples, photographs, and

notes will be returned to the lab, where we will prepare specimens, process the data, and research the biology of organisms encountered. The last session of each day we will share discoveries, with presentations by students and staff.

### Planned activities:

- Lectures and activities on caterpillar ecology, exotic species, botany;
- Workshops on scientific illustration, floral and insect anatomy;
- An overnight stay mid-week at an awesome (TBD) site with an emphasis on nocturnal wildlife;
- Sam Jaffe's "Caterpillar Lab" will travel from New Hampshire to join us on Friday. Google this. Sam's work and approach are amazing.

### Camp leadership:

Edmund Smith, Exploratory Science, Two Rivers Middle Magnet School

David Cappaert, Resident Scientist, Environmental Sciences Magnet School. (<http://davidcappaert.weebly.com/>)

David Wagner, Professor, UConn

(<http://hydrodictyon.eeb.uconn.edu/people/dwagner/>)

## Student Application

Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_ Grade: \_\_\_\_\_

School: \_\_\_\_\_

Home Address: \_\_\_\_\_

Home/Cell Phone: \_\_\_\_\_

E-Mail: \_\_\_\_\_

We are looking for students who truly have a fascination for natural history and/or biological studies. **Attach an essay to this application:**

*Why would you like to attend the 2017 Biodiversity Camp? (400 words or less) Or, option: Choose a favorite (or detested) CT organism, and explain how it is interesting and important.*

### Parent/Guardian Permission:

I give my permission for \_\_\_\_\_ to apply for participation in the Richard P. Garmany Biodiversity Camp and BioQuest. I understand that this is a five-day outdoor program including one overnight stay.

Signature of Parent/Guardian \_\_\_\_\_

\_\_\_\_\_ Date

Application forms will be reviewed beginning **Thurs, June 1**. Selected applicants will be notified and given camp details the following week

### Send to:

Ed Smith, Two Rivers Magnet Middle School  
337 East River Drive, East Hartford, CT 06108

Further info: [cappd001@hartfordschools.org](mailto:cappd001@hartfordschools.org) (734) 635-7750



## 2017 *eesmarts* Summer Institute



As part of the Energize Connecticut initiative, **eesmarts** is an energy efficiency and clean energy educational program designed to facilitate students' understanding of the science, math and technology related to energy efficiency, clean energy sources and electricity.

The **eesmarts** program offers Professional Development workshops led by the Capitol Region Education Council (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.

The **eesmarts** Summer Institute, held in July, gives educators a chance to attend intensive one or three-day workshops on various energy-related topics. The **eesmarts** Team continues its partnership with Project Learning Tree (PLT) GreenSchools! Investigations and several PLT workshops will be conducted in conjunction with our **eesmarts** Summer Institute.



### Benefits of attending an **eesmarts** Summer Institute Workshop include:

- cc: Receive \$100 stipend (per day)
- dd: Receive free program lessons and materials for your classroom. All **eesmarts** and Project Learning Tree lessons are fully aligned with the Connecticut State Science Framework, Next Generation Science Standards, and Common Core Standards for Math & English Language Arts.
- ee: Gain knowledge, confidence and skills for teaching your students about energy, energy conservation, renewable energy sources and efficient technologies
- ff: Receive a pass to one of the following Energize Connecticut museum partners:
  - Connecticut Science Center (Hartford)
  - Discovery Museum (Bridgeport)
  - Stepping Stones Museum for Children (Norwalk)

### Register for a Workshop!

Visit: [www.eesmarts.com/workshops](http://www.eesmarts.com/workshops)  
or Call: 877-514-2594

## 2017 *eesmarts* Summer Institute Workshop Schedule

All workshops will be conducted from 9:00 am to 3:30 pm. To review each workshop's agenda, topics covered and to

register, please visit: [www.eesmarts.com/workshops](http://www.eesmarts.com/workshops)

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

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>JULY 10</b> Solar Energy Day 1 (GR. 6-12) ENERGIZE CT CENTER <hr/> PLT – Recycling (GR. 4-8) LEARN	<b>JULY 11</b> Solar Energy Day 2 (GR. 6-12) ENERGIZE CT CENTER <hr/> PLT – Water (GR. 4-8) LEARN	<b>JULY 12</b> Solar Energy Day 3 (GR. 6-12) ENERGIZE CT CENTER <hr/> Energy (GR. K-2) CREC CENTRAL	<b>JULY 13</b> Wind Energy (GR. 6-12) ENERGIZE CT CENTER <hr/> Energy (GR. K-2) EASTCONN	JULY 14	<b>JULY 15</b> Energy Transformations (GR. 3-5) ENERGIZE CT CENTER
<b>JULY 17</b> Recycling (GR. 1-5) WHITE MEMORIAL CONSERVATION CENTER	<b>JULY 18</b> Weather (GR. K-2) EASTCONN	<b>JULY 19</b> Energy Transformations (GR. 6-8) CREC CENTRAL	<b>JULY 20</b> Energy Transformations (GR. 3-5) WHITE MEMORIAL CONSERVATION CENTER	JULY 21	<b>JULY 22</b> Weather (GR. K-2) ENERGIZE CT CENTER
<b>JULY 24</b> Solar Energy Day 1 (GR. 6-12) CREC CENTRAL <hr/> Climate Change Intro (GR. 3-8) ENERGIZE CT CENTER	<b>JULY 25</b> Solar Energy Day 2 (GR. 6-12) CREC CENTRAL <hr/> Energy Challenge (GR. 3-5) ENERGIZE CT CENTER	<b>JULY 26</b> Solar Energy Day 3 (GR. 6-12) CREC CENTRAL <hr/> Climate Change Advance (GR. 9-12) ENERGIZE CT CENTER	<b>JULY 27</b> Wind Energy (GR. 6-12) CREC CENTRAL <hr/> PLT – Energy (GR. 4-8) ENERGIZE CT CENTER	JULY 28	<b>JULY 29</b> Energy Transformation (GR. 6-8) DISCOVERY MUSEUM

## LOCATIONS

**Energize Connecticut Center**  
122 Universal Drive North  
North Haven, CT 06473

**CREC Central**  
111 Charter Oak Avenue  
Hartford, CT 06106

**LEARN**  
44 Hatchetts Hill Road  
Old Lyme, CT 06371

**Discovery Museum**  
4450 Park Avenue  
Bridgeport, CT 06604

**EastConn**  
376 Hartford Turnpike  
Hampton, CT 06247

**White Memorial Conservation Center**  
80 Whitehall Rd  
Litchfield, CT 06759



Energize Connecticut – programs funded by a charge on customer energy bills.



C0125 04/17





# Enjoy a Summer Week with...

# STEM

Science Technology Engineering Math



## **“STEM on the Move” Summer Program for Students in Grades 5-9**

**June 26–30, 2017 • 9 a.m.–3 p.m.**  
**EASTCONN Conference Center, Hampton**

During these 5 days, students will experience what it's like to work on a **Mobile STEM lab** while investigating the mysteries of:

- Energy Conservation
- Forensics
- Heredity and Adaptation
- And more

**Fee:** \$175 for the 5-day program, includes lunch

**Register and pay online:**

<http://ae.registereastconn.org/stem-on-the-move.html>

## **Robotics for Students: Summer Program for Students in Grades 5-10**

**July 17–21, 2017 • 9 a.m.–3 p.m.**  
**EASTCONN Conference Center, Hampton**



***Do you know students in grades 5-10 who are interested in robotics?*** During this week, students indulge in the wonderful world of robotics while building and programming their own robots. Students learn Easy C programming and design solutions to real-world problems.

**Fee:** \$175 for the 5-day program, includes lunch

**Register and pay online:**

<http://ae.registereastconn.org/robotics-program.html>

**Questions? Contact: Dr. Stacey Williams-Watson, [swatson@eastconn.org](mailto:swatson@eastconn.org).**





## 2017 Climate Education Academy

*Tri-Agency Climate Education (TrACE) Collaborative and MADE CLEAR*  
***Tuesday, August 8, 2017 - 09:00 to Thursday, August 10, 2017 - 17:00***

[Apply Now](#)

Climate change impacts our natural and engineered environments, our health, and our communities. You hear about it on the news, but are you prepared to teach about the global impacts of climate change and solutions? MADE CLEAR and NOAA invite educators in the Mid-Atlantic to apply for the 2017 Climate Education Academy.

Join us to learn about

The causes and effects of climate change

- How climate change impact your area
- Solutions and stewardship activities

Get up to speed on climate change and Earth System Science with a five-part on-line component before the face to face Academy. In August we will jump into climate change science with three dimensional lessons, interactions with climate science experts, authentic data analysis, and on-line simulations. Share your classroom experiences with others working to bring this important topic to their students.



Develop awareness of additional professional learning opportunities supporting earth systems science education

- [GLOBE Program](#)
- [Data Streme](#)
- and Others

You will receive classroom materials and resources to start your climate focused earth systems science teaching portfolio. You may earn professional certification hours based on participation and submission of a teaching plan. Lodging and meals will be provided.

Includes an on-line component

**Location: Towson University campus, Maryland**

For information visit [www.madeclear.org/academy](http://www.madeclear.org/academy)

To register, please complete this form (linked by the Apply Now button below)

or email [pharcourt@umces.edu](mailto:pharcourt@umces.edu) or [bart.merrick@noaa.gov](mailto:bart.merrick@noaa.gov) for information and questions.



**Climate Science & Education  
Professional Development  
Workshop:**

***Resilience: It's Not Just Surviving  
the Zombie Apocalypse***

**University of Connecticut Avery  
Point Campus, Groton,  
Connecticut**

**Tuesday, July 11 through  
Thursday, July 13, 2017**

**[Click here to register for the  
workshop](https://goo.gl/FIraHz)**  
**[\(https://goo.gl/FIraHz\)](https://goo.gl/FIraHz)**

**NOAA's Climate Stewards  
Education Project (CSEP) and  
Connecticut Sea Grant are  
collaborating with Federal, State  
and NGO partners to convene a  
climate science and education  
workshop for formal and  
informal educators. Participants  
will learn from and interact with  
climate science, education and  
communication experts. The  
workshop will focus on topics of  
climate science and resilience  
strategies for the northeast  
region of the United States, with  
a goal of connecting educators  
and their students and/or  
audiences to the best available  
science-based information and  
pedagogic resources.**

**Registration for the workshop is  
on a first come first serve basis  
and the number of participants is  
very limited! When enrollment  
has reached capacity, online  
registration will be closed.  
Registration is \$40 per person. It  
includes daily lunch, snacks, field  
trips, and a plethora of resources!  
Attendees are responsible for  
arranging their own  
transportation and lodging.**

To register for the workshop you must fully complete the **[online form](#)** and send a check or purchase order to: Connecticut Sea Grant - Climate Workshop, 1080 Shennecossett Rd, Groton, CT 06340.

You will receive an email confirming your participation in the workshop only when your registration fee has been processed. A detailed workshop itinerary, lodging and dining recommendations, and additional information will be sent to all confirmed registrants well in advance of the workshop. All attendees will receive a certificate acknowledging their participation in the workshop as well as the number of professional development hours earned.

For more info re: the overall workshop, contact Diana Payne at:  
**[diana.payne@uconn.edu](mailto:diana.payne@uconn.edu)**. phone: 860.405.9248

Questions re: your registration fee? contact Andrea Kelly at:  
**[andrea.kelly@uconn.edu](mailto:andrea.kelly@uconn.edu)**. phone: 860.405.9128

A professional development workshop for formal and informal educators who wish to:

- Increase their knowledge of climate science, and resilience strategies;
- Learn about climate impacts and adaptations in the northeastern US; and
- Translate climate science and resilience to the classroom and/or informal education settings.

**Times: 8:30am - 5:00pm daily.**

**Place: [Marine Sciences Building, Room 103, The University of Connecticut - Avery Point, 1080 Shennecossett Road, Groton, CT 06340](#)**

**Primary Contacts:**

- Diana Payne **[diana.payne@uconn.edu](mailto:diana.payne@uconn.edu)**
- Molly Harrison **[Molly.Harrison@noaa.gov](mailto:Molly.Harrison@noaa.gov)**
- Bruce Moravchik **[Bruce.Moravchik@noaa.gov](mailto:Bruce.Moravchik@noaa.gov)**
- Peg Steffen **[Peg.Steffen@noaa.gov](mailto:Peg.Steffen@noaa.gov)**

**Featured Activities:**

- Presentations by scientists and educators on climate science and resilience.
- Activities to increase participant climate science knowledge.
- Activities and demonstrations on teaching climate, engaging in resilience activities and related topics.
- Connections to the **[Next Generation Science Standards](#)**.

**Notes on Food & Lodging:**

- Lunch and snacks will be provided during the workshop.
- Participants must make their own travel and overnight arrangements. Lodging and dining recommendations and additional information, will be sent to all confirmed registrants well in advance of the workshop.

## **ARCHAEOLOGY Field School for Kids**

Monday, June 26 through Friday, June 30, 9 am to 12 noon – UConn, Storrs

Advance registration required: \$225 (\$200 for Museum Members and Donors)

**Grades 5 through 10. Teachers, please let your students know about this opportunity!**

Do you like uncovering evidence to solve mysteries? Do you like getting your hands dirty exploring the outdoors? Spend a week with UConn archaeologists exploring the world of field archaeology. You will learn about the science, tools, and methods used by genuine archaeologists and be part of a real archaeological field crew.

Participants will be doing hands-on fieldwork and laboratory research at a professional, ongoing archaeological dig. We have been opening new areas of our on-campus dig site each year, and every session we uncover something new! For registration information please visit

[www.cac.uconn.edu/mnhcurrentcalendar](http://www.cac.uconn.edu/mnhcurrentcalendar) — (860) 486-4460

Find us on [Facebook](#)

## **Professional Learning: Archaeology Field School for Educators**

Dr. Brian Jones, State Archaeologist, CSMNH UConn  
Monday, July 10 through Friday, July 14, 9 am to 3 pm, Windsor, CT Advance registration required: \$45 (\$35 for Museum Members and Donors) Educators will spend a week doing hands-on archaeology at the *Archaeology Field School for*

*Teachers* sponsored by the Connecticut State Museum of Natural History at UConn and Office of State Archaeology. This field school is designed to give educators who teach history or social science in a classroom or museum setting a deeper appreciation of the importance of archaeology as a tool for learning

about Connecticut's fascinating past. The field school will cover the basics of field methods, paperwork, data management, and artifact identification. Learning proper archaeological methods will develop the participant's understanding of the ethical aspects of archaeology and the archaeologist's responsibility to preserve the data they retrieve so that it will remain valuable to future researchers. These lessons provide a first step toward developing the skills needed to undertake your own archaeological investigations with students.

Participants will experience an authentic and significant archaeological investigation, working with primary sources at a historic site in Windsor, Connecticut. They will also learn about the role of the Connecticut Office of State Archaeology and how it can be an important resource in developing archaeological lessons and activities for students. Space is limited. To request a registration form please contact David Colberg at [david.colberg@uconn.edu](mailto:david.colberg@uconn.edu) or 860.486.5690.

## **Professional Development for Teachers and School Administrators by The Maritime Aquarium at Norwalk, Connecticut**

<http://maritimeaquarium.org/fun-learning/teachers-groups/professional-development>

### **How to Use Phenomena to Drive Instruction: An NGSS Transition Workshop**

July 6 & 7, 2017, Application Deadline: June 23, Registration Fee: \$50

Teachers, are you ready for the Next Generation Science Standards? Learn how to structure your current lessons and teaching around anchoring phenomena. This two-day workshop will teach you how to unpack the new standards, discuss how to identify engaging phenomenon and how to structure lessons and units around them. Time to work on transforming current units will be included.

Open to classroom teachers, grades K-5. Participants are encouraged to apply with grade-level peers. Limited to 20 participants. Lunch and a light breakfast are included. Upon completion of the workshop, participants will receive a stipend of \$150. To apply, please complete [application](#) and return it

to: [education@maritimeaquarium.org](mailto:education@maritimeaquarium.org)

Our Reservations Department will contact you upon acceptance.

## **\*OUR CHANGING FORESTS SUMMER INSTITUTE FOR TEACHERS\***

### **\*REAL SCIENCE; REAL SCIENTISTS; REAL ISSUES\***

\*Who: Grades 6-12 Teachers\* from public and private schools throughout the Northeast are invited to join with Harvard Ecologists and Education staff, along with mentor teachers who have led this project at their schools. We are especially interested in engaging more teachers and students from Connecticut to contribute to our network of Mass. and NH schools.

\*What: Learn how to get your students outside to engage in authentic scientific practices and investigation aligned with State and National Frameworks. This 2 Day Summer Institute will prepare teachers to set up field site areas in walking distance for their schools. Teachers will learn how to follow a scientific protocol lead by professional scientists. Training includes all written materials and field supplies needed to get a project up and running at your school. This project is supported by ecologists at Harvard Forest in Ma. and Highstead Foundation in Conn.

\*Project Theme: \* the Our Changing Forests project allows students to investigate how forests are changing over time, and how this impacts carbon dynamics. The primary field activity involves measuring the diameter of each tree in a 10x10 meter area that will be marked as a study plot. A Harvard Forest Project Coach will assist with initial set up of the study plots at each school, and be available for consultation as needed throughout the first study season. Other forest dynamics that will be looked at include tracking the presence of: wildlife sign; invasive species; pests and pathogens; rock or water cover, etc.

\*Day 2: Going Deeper into Understanding Land Use Change: \*Harvard Forest Land Use Scenarios GIS mapper, Joshua Plisinski will provide teachers with a series of land cover change maps created for each specific school site. Staff and teachers will have time to

discuss how to engage students in working with maps to see how the changes that they are observing in their plots relate to the larger landscape context.

**\*Where:** \*Workshop is held at Harvard Forest, located in Central Massachusetts, close to Route 2 in Petersham, MA. Teachers will lead project at their school site during school-year.

**\*When:** August 23 and 24, 2017 **\*from** 9:30am-3:30pm.

**\*Cost and Benefits:** \*One-time fee of \$50 includes 2 day session, teacher notebook, project materials and year-round support thanks to financial support from national and private grants.

Some teachers have continued for up to 12 years with ongoing support. A project coach is provided to visit teachers at school sites to help set up study plots.

**\*To Register:** \*Contact Pamela Snow at: [psnow@fas.harvard.edu](mailto:psnow@fas.harvard.edu) for registration form <HARVARD ECOLOGY PROJECT>

**Invitation to all Connecticut Science teachers to attend the 21st Annual GLOBE Conference here in New Haven. July 30-August 3, 2017**  
**Open to both adults and students**  
**The 21st Annual GLOBE Conference will be hosted here in New Haven by SCSU.**

GLOBE is the single largest, most heavily funded/leveraged and longest running educator/scientist and citizen science initiative (over 117 countries participating). GLOBE is a powerful organization for fostering collaboration among educators and environmental scientists. The annual conference moved internationally and this year we were asked to host it here in CT. Please see the GLOBE.GOV website and the announcement for the conference.

Phone: 2033926604

[https://www.globe.gov/news-events/meetings\\_symposia/annual-meetings/21st-annual-meeting/registration-and-accommodations](https://www.globe.gov/news-events/meetings_symposia/annual-meetings/21st-annual-meeting/registration-and-accommodations)

From: Scott M Graves

Reply-To: [gravess1@southernct.edu](mailto:gravess1@southernct.edu)

## 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.**

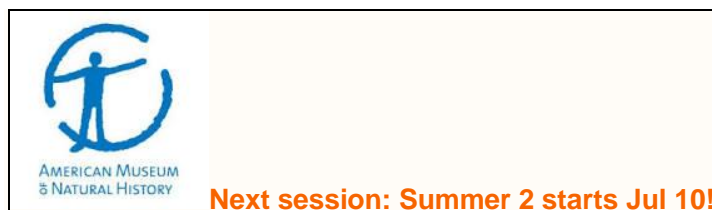
**Weigh in on a variety of topics including teacher needs, best practices, classroom experiences and more.**

**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.



**Register by Jun 12 to save \$50. [Learn more.](#)**

**Six-week online courses based on cutting-edge research and co-taught by world-class museum scientists and experienced educators. Approved for graduate credit, the courses fit into your busy schedule and can be used for professional development, salary advancement, and recertification.**



If you are interested in Modeling Workshops™, please visit our website: <http://tinyurl.com/2017modeling>.

More than 60 summer Modeling Workshops™ in high school physics, chemistry, physical science, biology, and middle school science will be offered, in many states. Most are two or three weeks long.

1. CEUs; optional graduate credit. Stipends at grant-funded sites.
2. Modeling Instruction is research-informed, interactive engagement pedagogy.
3. Ask your school administration to help pay. Mention the research on NGSS readiness: Modelers are better prepared to transition to NGSS than other teachers, research shows.

Website: <http://modelinginstruction.org>



Workshop descriptions:

<http://www.phystec.org/pd/?set=Modeling>

#### ABOUT MODELING INSTRUCTION:

Modeling Instruction is designated as an Exemplary K-12 science program and a Promising Educational Technology program by the U.S. Department of Education.

Modeling Workshops are peer-led. Content is reorganized around basic models to increase its structural coherence. Participants are supplied with a complete set of course materials and work through activities alternately in roles of student or teacher, as they practice techniques of guided inquiry and cooperative learning. Models and theories are the purpose and the outcomes of scientific practices. They are tools for engineering design and problem solving. Thus, modeling guides all other practices. Each MODELING WORKSHOP has these features:

- Aligned with National Science Education Standards
- Focuses on all 8 scientific practices of NRC Framework for K-12 Science Education.
- Addresses multiple learning styles.
- Addresses student naive conceptions.
- Collaboration, creativity, communication, and critical thinking.
- Systems, models, modeling.
- Coherent curriculum framework, but not a curriculum; thus flexible.

- Compatible with Socratic methods, project-based instruction, PBL, etc.
- Science & math literacy.
- Authentic assessments.
- High-tech and low-tech options for labs.

<http://modelinginstruction.org/>

For 2017 Modeling Workshops™ <http://tinyurl.com/2017modeling>

**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.

The Spring issue of the CASE Bulletin is [now available](#).



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SCIENCE AND  
ENGINEERING

[http://www.ctcase.org/bulletin/32\\_1/32\\_1.pdf](http://www.ctcase.org/bulletin/32_1/32_1.pdf)

Take a look!

#### 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>

#### Why use the Blog?

- To share up-to-date information on legal safety standards and better professional practices for a safer working and learning environment and a safer STEM instructional experience;
- To disseminate current information on safety incidents occurring in K–12 classrooms, labs, and maker spaces;
- To provide support and initiate dialogue in efforts to answer safety-related questions from bloggers, either teaching or supervising in K–12 classrooms, labs, and maker spaces.

Anyone can subscribe for free! Just go to the blog address above and scroll down to the bottom of the page. Follow instructions for a complimentary subscription!

#### NEW MATERIALS, PROJECTS NASA

<https://www.nasa.gov/audince/foreducators/index.html>



***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.***