CONNECTICUT SCIENCE CONNECTION

January 2018

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

HAPPY NEW YEAR!

Professional Development Opportunities! Are you interested in high quality, low cost, Teacher Professional Development opportunities? Visit the CSTA website and click on Opportunities. You will not be disappointed. Contact us if you have questions.

Click on the link to learn more about JPSS! https://scijinks.gov/subscribe/

Green Teacher **Green Teacher has recently launched a YouTube Channel. In time, we hope this will grow into a valuable resource for educators. https://greenteacher.com/check-out-these-videos/**

Next CSSA Professional Development and Dinner Meeting
FEBRUARY 21ST Discovery Center
Join the CSSA

****

Connecticut Science Teachers Association Sponsored Events

more information and registration links at https://www.csta-us.org/events

The MIT Club of Hartford will again be hosting a Science and Engineering Colloquium for Teachers three months from now. **Mark April 17th on your calendar and set aside that date.**

The guest speaker will be Janet C. Johnston, who graduated from and works at MIT. The subject of the colloquium will be "From the Depths to the Heights--An Unusual Career in Geophysic."
This year, the event will occur at Classical Magnet School in Hartford. Teachers are encouraged to also bring a few motivated, interested students. More details will come out next month. If you have questions, contact Avi Ornstein at ornstein@alum.mit.edu.

Affordable NGSS Professional Development Workshops

CSTA is proud to partner with Peter McLaren to provide a series of NGSS professional development.

McLaren was a member of the national writing committee for the Next Generation Science Standards (NGSS). He has also served on a number of committees including the National Academy of Engineering's Guiding Implementation of K-12 Engineering Education committee, and the National Academy of Science's Committee for Developing Assessments for the Next Generation Science Standards (NRC, 2014) and was a contributor to the NRC publication Seeing Students Learn Science (NRC, 2017) (Full bio below)

Peter McLaren - Next Gen Education, LLC

Space is limited to 100 participants. Don't miss this opportunity to be trained by a writer of NGSS. Register at csta-us.org

Workshop 2: ASSESSING 3-D LEARNING: USING FORMATIVE ASSESSMENT TO INFORM STUDENT LEARNING IN A NGSS CLASSROOM **Presenter: Peter McLaren - Next Gen Education, LLC** This full-day workshop is designed to provide educators with an understanding of formative assessment components and prompts that focus on individual practices, core ideas, or crosscutting concepts. The goal of this workshop is to help educators understand how, collectively, these components can support educators as they make inferences about students' three-dimensional science learning. **Date: Saturday, January 20 from 9:00AM-3:00PM Cost: $10 (Light lunch will be provided)**

Location: CREC Academy of Science and Innovation, 600 Slater Road, New Britain
Register

Workshop 3: ASSESSING 3-D LEARNING: USING FORMATIVE ASSESSMENT TO INFORM STUDENT LEARNING IN A NGSS CLASSROOM
Richard Larson – MIT
Peter McLaren - Next Gen Education, LLC_____This half-day workshop will feature the successful MIT BLOSSOMS "Teaching Duet" instructional approach as a model for Teacher Professional Learning (TPL) of the instructional shifts of the NGSS. TPL is designed to engage educators by immersing them in a phenomenon-driven, three-dimensional lesson to support, prepare, reflect upon, and improve upon their instructional practice.
Date: Saturday, February 3 from 9:00AM-12:00PM_____**Cost: $10 (Light snacks will be provided)**
Location: CREC Academy of Science and Innovation, 600 Slater Road, New Britain, CT Register

Workshop 4: THREE-DIMENSIONAL LESSONS: ADAPTING A TRADITIONAL LESSON TO SUPPORT THREE-DIMENSIONAL TEACHING AND LEARNING **Presenter: Peter McLaren - Next Gen Education, LLC**

This full-day workshop will bring educators through a process where they will adapt a traditional lesson to support three-dimensional instruction. Educators will bring along a lesson to which they are familiar and learn how to integrate science and engineering practices, disciplinary core ideas, and crosscutting concepts. Educators will use tools and templates designed to help facilitate the adaptation process.
Date: Saturday, May 5 from 9:00AM-3:00PM **Cost: $10 (Light lunch will be provided)**
Location: CREC Academy of Science and Innovation, 600 Slater Road, New Britain, CT Register

****

Peter McLaren is the Director and Founder of Next Gen Education, LLC and works as a consultant with states and districts in support of the implementation of the state science standards based on the *Framework for K-12 Science Education* (NRC, 2012). In his previous work, Mr. McLaren served in a number of roles in the area of science education policy including Director of the State and District Support for Science at Achieve and Science and Technology Specialist at the Rhode Island Department of Education. He also served as President of the Council of State Science Supervisors (CSSS) from July 2010 until April 2013.

McLaren was a member of the national writing committee for the Next Generation Science Standards (NGSS). He has also served on a number of committees including the National Academy of Engineering's *Guiding Implementation of K-12 Engineering Education* committee, and the National Academy of Science's Committee *for Developing Assessments for the Next Generation Science Standards* (NRC, 2014) and was a contributor to the NRC publication *Seeing Students Learn Science* (NRC, 2017)
An award-winning educator, McLaren was a teacher of science for 13 years at both the high-school and middle-school level. In 2001, he was recognized with the Milken Family Foundation National Educator Award and in 1995 as the Rhode Island Science Teacher of the Year by the MIT-sponsored Network of Educators of Science and Technology. He holds Bachelor of Science and Master of Arts degrees in Science education from the University of Rhode Island.

And even more?
It's CSTA Grant time again....
https://www.csta-us.org/grants

The Montana Learning Center at Canyon Ferry Lake is hiring certified teachers to work as camp instructors and camp counselors during their '2018 Summer Learning Camps for Kids.'
https://goo.gl/forms/DIuUOEdFBa4QB3ne2
We offer competitive pay, room and board at the MLC during camps, a beautiful place to work, and a great staff of highly-qualified educators to work with.
Please direct any questions to MontanaLearningCenter@gmail.com. Apply today!

NSTA has created a new engineering list. This is in addition to the STEM list currently in existence. Here is the vision:
This engineering list can be used for a variety of questions, from elementary teachers looking for and sharing ideas to secondary engineering lab teachers asking about supplies, to science content teachers looking to integrate engineering into their lessons. Fore example, teachers could post an engineering design challenge they were considering or have tried and get feedback on how to improve it. Here are some points:

1. With engineering explicitly included as a fourth discipline in NGSS, and it will be valuable to have a list to which posts can be made focusing on that discipline
2. STEM is (in my mind) more interdisciplinary in nature. Engineering focuses specifically on the E in STEM
3. The iterative nature of engineering through the engineering design process (EDP) can be one major focus (as it is in the NGSS DCI's for engineering

4. Engineers and engineering teachers could provide feedback to elementary teachers including content knowledge to support their EDP challenges
5. Such a list can boost quality engineering activities K-12 through the interactions for which the lists are famous!
6. The list can be actively watched by folks interested in providing support PreK-12 in this field. (And the the lists are famous for having folks actively watch and support the discourse online!)

HOW DO I SIGN UP?

- Make sure you are logged in on the NSTA site. Then go to:
- Membership tab --> Member Services -- > members only Email list server
- Scroll to "Subscribing to/unsubscribing from e-mail lists" and follow directions from there.
- **Or go straight to this link: http://www.nsta.org/membership/listserver_update.aspx**

A quality education in science is fast disappearing as more and more science teachers leave the profession due to inadequate administrative support, isolated working conditions, and lower salaries.

Started by a generous contribution from NSTA's past President, Dr. John Penick, The Next Generation Science Teachers Fund provides support by funding pre-service and new teacher memberships in NSTA and complimentary registrations to NSTA's annual conference on science education. Scholarship awardees get:

- The opportunity to network and speak directly with over 50,000 other science teachers across the country!
- 24/7 immediate access to NSTA's library of printed and electronic materials they can use every day to bring their students the kind of education they need and deserve!
- Attendance to NSTA's national conference that will give them access to years' worth of new teaching ideas and inspiration in one week!

If you're a preservice science teacher or in your first five years of teaching, we encourage you to apply. Our first cohort will be named at the end of January, 2018. APPLY

UConn Environmental Programs for Teens, Adults, & Teachers

UConn's NRCA enables **intergenerational learners** (teens, adults & teachers) to generate real conservation benefits to Connecticut communities by providing the tools and support to carry out **conservation-based service-learning projects** or **curriculum**.

Read on to learn more about our exciting **2018 programming**!

CAP arms teens (**rising 10th-12th graders**) with skills used by professionals to address **current environmental issues**. Students are immersed in real field-based science and focusing on:

WATER QUALITY
GREEN INFRASTRUCTURE
GIS TECHNOLOGY
FISHERIES
WILDLIFE
FORESTRY
SOILS

during an exciting **weeklong summer field experience** at UConn. Then, students design their **own conservation project** to provide real solutions for their communities, and present their work at the **Connecticut Conference on Natural Resources**.

Applications coming soon!

Learn more about CAP

Conservation Training Partnerships (CTP)

CTP partners teens (**rising 9th-12th graders**) and **adult conservation volunteers**, and supports the team in carrying out a conservation-based community project.

The team participates in an **interactive 2-day field workshop** (**find a workshop near you!**), and applies conservation and innovative **mapping and web tools** in

field activities. The team then designs and carries out a **conservation project** of any intensity and implements it in their town. Workshops located **throughout Connecticut** and are **free** to all participants.

Applications coming soon!

Learn more about CTP

Teacher Professional Learning (TPL)

TPL extends the NRCA experience to secondary science teachers. This **3-day professional development workshop** immerses teachers in relevant regional **water resource issues**, and provides teachers with **online mapping tools** to encourage their students to study these issues further.

Each teacher designs 5-7 lessons for a Water and Sustainability Science Unit aligned with specific **Next Generation Science Standards** Performance Expectations.

Workshop located at **UConn Storrs Campus** on Aug. 13-15. Participants receive a **stipend**.

Applications coming soon!

Learn more about TPL

School & Organization Visits

If you are interested in learning more, we are happy to visit **schools & organizations** to give **brief presentations** for students, teachers, and community members about our **NRCA programs**.

Please contact **nrca@uconn.edu** or **860-486-4917** to find out more.

1376 Storrs Rd, Unit 4087, Storrs, CT 06269 860-486-4917
nrca@uconn.edu http://nrca.uconn.edu

Connecticut Invention Convention young inventors need your help!

Once again we invite our friends to come out and judge at CIC Regional events and the 35th Annual 2018 Connecticut Invention Convention.

In order to make this a successful year for our young inventors, we need judges from every background and career path! We need judges to speak with our students, offer feedback, score their inventions, and recommend inventors to advance to other events. No experience necessary, since everyone receives training on the day of the events.

Not familiar with our program: The Connecticut Invention Convention (CIC) is an award winning, non-profit educational organization open to students in all schools across Connecticut. The program is designed to develop, encourage, and enhance critical thinking and creative problem solving skills through invention, innovation, and entrepreneurship. Students come up with an invention and present their work at our Regional and Final events. Check us out at http://www.ctinventionconvention.org.

We need your help to encourage young students to consider careers in science, technology, math, and engineering. Could you invest a few hours at some of our events to support a child's interest in becoming an inventor?

Our Events Schedule

Date	Time	Event	Location
March 18, 2018	8 - 11 AM	CIC Southern Regional	*Hamden Middle School, Hamden*
March 18, 2018	1 - 4 PM	CIC Western Regional	*Hamden Middle School, Hamden*
March 24, 2018	8 - 11 AM	CIC Central Regional	*CT River Academy, East Hartford*
March 24, 2018	1 - 4 PM	CIC Eastern Regional	*CT River Academy, East Hartford*
April 28, 2018	8 - 3 PM	CIC Final	*Gampel Pavilion, UCONN, Storrs*

You can register for individual Regionals or spend the entire day with our young inventors! When you register, you will indicate what events you are available to judge. Please consider registering for more than one event.

To register as a judge click here:

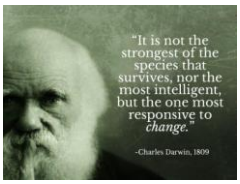
https://www.cicregistration.org/judges/

As the event day approaches, a more definitive schedule will be sent to you.

IF YOU HAVE ALREADY REGISTERED as a judge, simply forward this email to others who also may want to foster creativity in our youth. *Thank you for your support*,

Christine Lawlor-King

Christine@ctinventionconvention.org



Welcome to the Darwin Day Roadshow!

The Darwin Day Roadshow is a way for scientists and educators to share their enthusiasm for evolutionary science with students, teachers and the general public across the United States in the spring each year, to celebrate Charles Darwin's birthday (February 12th). The Darwin Day Roadshow is currently sponsored by the BEACON Center for the Study of Evolution in Action and the Society for the Study of Evolution.

2018 Modeling Workshops: The Modeling Workshops™ are updated as we receive new information and we will share it on a regular base with you all. For details, please go to the AMTAwebsite: https://modelinginstruction.org/professional-development/upcoming-workshops/summer-2018/ . We appreciate it if you want to share the information in your community. The following workshops will be offered nearby (by state)

Massachusetts Biology, Chemistry I, Chemistry II – Contact Teresa Marx tmarx@stemteachersmassbay.org Mechanics –Mechanical Waves – Contact Darren Broder dbroder@siena.edu
Maine Mechanics, Chemistry, Biology, E&M – Contact James Vesenka Jvesenka@gmail.com
New Hampshire Intro to physical science –Contact Michael Koski mkoski@windhamsd.org
New York Intro to Mechanical Waves –Contact Darren Broder dbroder@siena.edu Chemistry I, Mechanics, Waves and Sound, Computational Modeling Physics with Pyret/Bootstrap, Biology –Contact FernandBrunschwig fernand@stemte achersnyc.orgMechanics –contact Dan MacIsaac danmacisaac@gmail.com

DO YOU KNOW A SCIENCE TEACHER DESERVING OF RECOGNITION? CONSIDER NOMINATING A CANDIDATE FOR:

Presidential Awards for Excellence
in Mathematics and Science Teaching
Rewarding & Inspiring Great Teaching Since 1983

Click here to nominate

The 2017 Secondary Science Finalists, whom CSSA honored at their October 11 Professional Development Dinner Meeting are as follows:

Matthew Brodeur - East Hartford High School
Erin Lucia - New Milford High School
Alexa Mitchell - RHAM High School - Region 8
Anja Pennell - Greater Hartford Academy Of The Arts Magnet Middle School
Diane Pintavalle - Glastonbury High School

American Museum of Natural History
Curriculum Collections

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

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

JASON Learning opportunities

Open Access to JASON Programs for Public School Educators & Students in Connecticut Through 2018 JASON Le

JASON Learning Professional Development for 2018 ! Check back at http://www.jason.org/ct for updates on dates and locations.

NEW! Two-part Series: Resources and Tools for an NGSS Curriculum & Problems of Practice (Recommended for middle school) Getting ready to or already designing your NGSS units of instruction? These two-part workshops will help educators build capacity to implement NGSS pedagogy, be introduced to resources, tools, and strategies that can be included in NGSS units of instruction, and pilot lessons and activities with opportunities to ask new questions, share out challenges, successes, and recommendations with a network of peers. Although selected investigations and resources from specific JASON curricula will be used to illustrate strategies and pedagogy, ideas and tools will be transferrable to other resources educators may be working with. During Day 1 of each program, participants will experience selected three-dimensional investigations and will resources, explore key JASON-NGSS teacher tools, and locate additional candidate resources for inclusion in NGSS units of instruction. Educators will take away actual lessons, ideas and strategies to use and pilot with students in the classroom. During Day 2, educators will share their experiences using the resources, successes and challenges, and tips and strategies for integrating them into larger NGSS units. Sessions will also include strategies for connecting lessons and resources to other science disciplines through PE bundles. Participants must attend both dates. Three programs will be offered in 2018. Full descriptions coming soon at www.jason.org/ct.
https://drive.google.com/file/d/0Bz8yoOUPBg9xZFFuaHdyczRwSXM/view

World of Waves is an innovative, career- and practice-focused middle school physical sciences curriculum, designed to build a deep, working understanding of the physics of waves and their importance in our world. Students explore how sound, light and other electromagnetic waves are involved in engaging real-world phenomena, like surfing in the ocean, animal communication, and mobile networks. Through immersive, hands-on learning experiences gain:
· Foundational content knowledge and insights into expert applications of waves · Critical and design thinking skills · Data and modeling skills · Experience with coding and engineering applications.

WANT TO GO TO THE AMAZON? Scholarship & Grant $ for Amazon Rainforest PD Workshop

What: 2018 Educator Academy in the Amazon Professional Development
When: July 1-11, 2018
Grant: $1500 Vernier Software & Technology Grant for a HS/AP Science Educator
Scholarships: $1100 Amazon Workshops Scholarships for K-12 Educators
Application Deadline: February 1, 2018
Get more info: http://amazonworkshops.com/educator-academy/

The July 1-11, 2018 Educator Academy in the Amazon Rainforest of Peru is a cross-curricular professional development workshop for formal and informal science educators. Highlights include:

- **21st Century Instruction:** 5E Lesson Design ~ Inquiry-Based Exploration ~ STEM
- **Inquiry Protocols & Resources:** Vernier Software & Technology ~ Celestron Digital Microscopes
- **Global and Cultural Perspectives:** Service Learning ~ Sustainability ~ Global Education
- NEW! A specialized track for **HS bio and environmental science educators** with a focus on **sustainability, conservation**, and field work with the **Maijuna indigenous community**
- **Work side-by-side with scientists and researchers** on citizen science projects and field studies.
- Explore the ¼ mile long **ACTSPeru Rainforest Canopy Walkway** in one of the world's most biologically diverse environments.
- 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.

Get the details and download a syllabus and scholarship application at:
http://amazonworkshops.com/educator-academy/

Contact program director, Christa Dillabaugh at christa@amazonworkshops.com or 1-800-431-2624 for more information.

For Elementary-Middle levels: Robotics With Ready, allows the user to create software that will program robots, as well as create games without experience. Get this by clicking on: http://goo.gl/NjsCPw

VISIT THE ENGINEER GIRL WEBSITE FOR EXCITING OPPORTUNITIES FOR THE YOUNG WOMEN IN YOUR CLASSES!
https://www.engineergirl.org/

Every year, EngineerGirl sponsors a contest dealing with engineering and its impact on our world. Usually the announcement is posted in the fall with judging and winners announced in the spring. Visit the contest page to see past winners or view the new contest.

I am including the following again in this issue in case you missed it previously. It is a very valuable compendium of available funding.

The great thing about being part of the Science Matters newsletter initiative is the sharing that goes on among the different State Leaders. Nancy Ridenour, one of the New York State Coordinators, compiled this list of links to available grants for teachers and students. It is a long one, and well worth looking at. Thanks, Nancy! You are the best! The following is from Nancy verbatim.

"Greetings from the STANYS conference in Rochester. I am sitting at the Science Matters booth, talking with attendees about joining the network. See attached photo of me at the booth. Come on by if you are here at the conference!

While sitting here, I developed a list of some resources that I hope will be helpful to you with grant writing. Good luck with your endeavors."
+++++++
Science Matters grant information

- https://www.grantwatch.com/cat/30/science-grants.html

https://www.grantwatch.com/resources.php#newyork

- Award to a USAor Canada K-12 Teacher for Outstanding Science Instruction

- http://cityscience.org/index.php/stem-news/ClassroomGrants/
- https://teach.com/what/grants-for-teachers/
- http://www.cesa2.org/programs/stem/STEMgrants.cfm
- http://www.nea.org/home/10476.htm
- http://modeling.asu.edu/modeling/GrantGuide_oldButUseful.pdf(Prepared by the Triangle CoalitionWritten by LaRae White, Arthur Livermore)

- http://eduscapes.com/tap/topic94.htm
- http://teachingcommons.cdl.edu/sec/grants_awards/index.html
- https://www.edutopia.org/grants-and-resources
- http://www.educationworld.com/a_curr/profdev/profdev039.shtml
- http://www.educatoral.com/wordpress/2016/06/06/sample-grant-proposals-reboot/
- http://fundsforwriters.com/grants/
- https://www.pearson.com/us/higher-education/products-services-institutions/educational-grants-help.html
- http://govgrantsusa.org/
- Teacher education grants…https://search.knowzo.com/kzo15/search/web?q=teacher%20education%20grants&utm_source=bing&utm_medium=cpc&utm_campaign=15-KZO-EducationGrants-Bing&utm_term=teacher%20education%20grants&utm_content=Education%20Grants%20-%20DKI
- Grant writing examplesfor teachers-https://www.bing.com/search?q=grant+writing+examples+for+teachers&FORM=QSRE1
- Science grants forelementary teachers-https://www.bing.com/search?q=science+grants+for+elementary+teachers&FORM=QSRE2

- Grant writing tips forteachers- https://www.bing.com/search?q=grant+writing+tips+for+teachers&FORM=QSRE3
- Teaching grant writing- https://www.bing.com/search?q=teaching+grant+writing&FORM=QSRE4
- Grants for science- https://www.bing.com/search?q=grants+for+science&FORM=QSRE5
- Grant writing foreducators- https://www.bing.com/search?q=grant+writing+for+educators&FORM=QSRE6
- Grant wirting foreducators- https://www.bing.com/search?q=grant+writing+for+education&FORM=QSRE8
-

Professional Development Grants For Teachers

NEA Foundation Learning and Leadership Grants External link

Amount: $2,000 to$5,000

Description: The NEA Foundationfor the Improvement of Education External link awards grants that support theprofessional development of public school teachers and faculty in publicinstitutions of higher education. Grants may fund professional developmentexperiences, such as summer institutes or action research, mentoringexperiences or lesson study. Professional development must improve practice,curriculum and student achievement, and recipients must put professionalleadership into practice by sharing what they learn with their colleagues.Grants cannot be used to fund a degree. For specific information, visit the NEAFoundation's application instructions External link page.

Return to the top

Albert Einstein Distinguished Educator FellowshipProgram External link

Amount: $6,000 monthly stipend, $1,000monthly living expenses

Description: This grant is an excellentand unique professional development opportunity for K-12 teachers who have atleast five years of experience teaching in STEM subjects. STEM educatorsparticipate in 10- or 11-month positions in federal agencies or U.S.congressional offices across the country, during which time they are given thechance to have a direct impact on education programming, policy and reformefforts. After the program, teachers return to the classroom with a deeperunderstanding of STEM education and experience that will enrich instruction andbenefit students. You can learn more about the application here External link.

Return to the top

Fund for Teachers External link

Amount: $5,000 to $10,000

Description: Fundfor Teachers External link is unique in that it awards grantsfor professional development based on the principle that the teacher is the onewho knows what they need to grow as an educator. These grants are self designedand allow teachers to create their own professional development opportunitybased on what is most beneficial to their teaching in their own opinions.The application External link encourages educators to think abouttheir objectives, motivations and the impact their particular plan of actionwill have on students.

Return to the top

McCarthey Dressman Teacher Development Grants External link

Amount: up to $10,000 per year for three years

Description: The McCartheyDressman Education Foundation provides Teacher Development Grants forindividual teachers or small teams working in K-12 education. To fosterinsightful and innovative professional training and growth, the grants allowyou to implement new teaching methods and strategies in the classroom. Projectscan take a variety of forms, but each of them must be geared towards having asignificant and lasting impact in the classroom. Winners work closely with thefoundation to implement their ideas and are awarded up to $10,000 for the firstthree years of the project. Returnto the top

Funds For ClassroomEnrichment/student Achievement

DonorsChoose.org External link

Amount: N/A

Discount: While not a traditional grant, DonorsChoose.org is anexcellent way of raising funds for your classroom. Public school teachersessentially propose classroom projects and post their proposals on the website.In these proposals, you will include very specific items that you need, rangingfrom standard tool supplies to microscopes, laboratory equipment and computersoftware. Donors browse the site and have the opportunity to donate money toyour cause.

Return to the top

Elmer's Teacher Tool Kit Grant External link

Amount: $100 to $500

Description: The Kids in NeedFoundation External link , a leading organization aiming toprovide free school supplies to students in need, has partnered with theeducational product company Elmer's External link to create grants specifically forclassroom supplies. The Teacher's Tool Kit Grant lets K-12 teachers inhigh-needs schools fund classroom projects that aim to foster creativity andcritical thinking in students. Grants are awarded based on financial need, adescription of how the project meets the students' needs and the number ofstudents who will be involved. The application is available on the Kidsin Need Foundation's website External link .

Return to the top

Target Field Trip Grants External link

Amount: $700

Description: Since 2007, the TargetCompany has donated more than $16 million in grants to the improvement ofeducation. As part of their efforts, Target seeks to expand the parameters ofthe classroom by providing opportunities for you to fund educational excursionsfor your classes. Each Target store in the United States will award threeTarget Field Trip Grants, enabling one in 25 schools throughout the country tosend a classroom on a field trip. Funds may be used for transportation,registration for events, admission prices and other field trip expenditures.

Return to the top

NEA Foundation Student Achievement Grants External link

Amount: $2,000 to $5,000

Description: The NEAFoundation External link allows practicing public schoolteachers to apply for the funding of programs designed to improve the academicachievement of students. You must create a plan that fosters critical thinkingand problem solving in students and aims to expand their comprehension ofvarious subjects. The grant will fund your efforts for 12 months, and fundingmay be used for resource materials, supplies, equipment, transportation andtechnology — any part of the proposed plan that has a direct impact on thestudents' learning. For specific application information, visit the NEAFoundation's application instructions External link page.

Return to the top

ING Unsung Heroes Program External link

Amount: multiple awards

Description: ING Commercial Banking External link establishedthe Unsung Heroes in 1995 in an effort to recognize teachers implementing newteaching methods and techniques for improving student learning. The awardapplication is centered on a description of previous projects teachers haveworked on or plans they would like to enact in the future to benefit theirclassroom. Applications are judged on innovation, creativity and the potentialto positively influence students. Each year, 100 finalists receive $2,000grants, with at least one grant awarded in each of the 50 states. Of those 100finalists, three winners are selected to receive awards of $25,000, $10,000 and$5,000.

Return to the top

Stem Grants

AIAA Foundation Classroom Grant Program External link

Amount: $200

Description: The AmericanInstitute of Aeronautics and Astronauts is dedicated to the importance of STEMeducation and awards $200 in grants to K-12 teachers who want to incorporatenew ways of teaching science, technology, education and mathematics into theirclassroom. Funds can be used to purchase laboratory equipment, math and sciencesoftware, robotics supplies, and other items that will add depth and dimensionto your lessons.

Return to the top

NWA Sol Hirsch Education Fund Grants External link

Amount: $750

Description: The NationalWeather Association aims to support the importance of meteorology inelementary, middle and high school by awarding grants to teachers whodemonstrate a commitment to improving the quality of meteorology education, ascience subject that is frequently overlooked. Funds may be used for the purchasingof materials or equipment, the establishment of community outreach scienceprograms or professional development. You can apply for the grant here External link . Returnto the top

ACS-Hach High School Chemistry Grant External link

Amount: $1,500

Description: The AmericanChemical Society External link gives innovative chemistryteachers the opportunity to put their ideas into action. The ACS-Hach HighSchool Chemistry Grant was established to promote dynamic and engagingscientific exploration in students. It is awarded to high school teachers whowish to enhance classroom learning and raise students' interest in chemistry.Funds can be used to purchase laboratory equipment, supplies and instructionalmaterials, but also the cost of professional development opportunities, fieldstudies and science outreach events.

Return to the top

Delta Education/Frey-Neo/CPOScience Education Awards for Excellence in Inquiry-Based Science Teaching

Amount: $3,000

Description: This is a grant offered bythe NationalScience Teachers Association External link (NSTA) to recognize theoutstanding efforts of teachers to implement an inquiry-based approach toscience education that stimulates interest and exploration in students. Thegrant covers up to $1,500 in travel expenses to attend the NSTA nationalconference, as well as $1,500 for use in the classroom. You can explore any ofthe other numerous awards offered by NSTA External link .

Return to the top

Emerging Teacher-Leaders in Elementary School MathematicsGrants External link

Amount: up to $6,000

Description: The National Council ofTeachers of Mathematics External link (NTCM) offers this grant for mathteachers in grades PreK through 5 who have demonstrated a commitment tostrengthening their own teaching methods and applying innovative new ides totheir classrooms. Applicants must have the support of their principals and bemembers of NCTM. Funds may be used for professional development, includingcollege coursework, fees associated with attendance at national conferences andmaterial resources. This is one of numerous NTCM grants available to teachers External link .

Return to the top

Lemelson-MIT InvenTeams External link

Amount: up to $10,000

Description: The Lemelson-MITProgram External link at the Massachusetts Institute ofTechnology recognizes the important achievements of inventors and has createdthe InvenTeams External link initiative, a grant program thatfocuses exclusively onSTEM education External link . The InvenTeams program encourageshands-on engagement and the application of science, technology, education andmathematics concepts to the solving of real world problems. Teams of studentsand teachers apply for InvenTeams grant External link byfinding a timely and relevant societal issue, and conceptualizing antechnological invention that can help solve that problem. Up to 15 teams arechosen to receive grants that help fund the actual invention of their idea.

Return to the top

Toyota Tapestry Grants for Science Teachers External link

Amount: up to $10,000

Description: In partnership with the National ScienceTeachers Association External link , leading car manufacturer Toyota hasestablished a grant that helps K-12 teachers fund innovative, community-basedscience projects in environmental science, physical science, and integrating literacyand science. The grants aim to help teachers increase the quality of scienceeducation and promote interest in students. For information on how to apply,visit the Toyota Tapestry Grant Registration External link page.

Return to the top

IRA Regie Routman Teacher Recognition Grant External link

Amount: $2,500

Description: The InternationalReading Association External link awards grants to outstandingpublic school teachers in schools that serve low-income families. You must workwith elementary school students in grades K-6, and 60 percent of the school'sstudents must be eligible for free or reduced-price lunches. Grants are used tosupport you in improving the quality of reading and writing education throughinnovative approaches that combine learning and real world contexts. It is oneof numerous IRA grants External link for efforts to improve literacy.

Return to the top

James Madison Graduate Fellowships External link

Amount: $24,000

Description: This grant is forgraduate students who have already demonstrated a resolute and immediatecommitment to becoming a history teacher at the high school level. The JamesMadison Memorial Fellowship Foundation has established this award withparticular emphasis on American history education and the teaching of theUnited States' Constitution. If you want to help preserve the importance ofAmerican history in America's high schools, consider applying External link.

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.