Crowdfunding Analysis Shows Demand for STEM Education Continues to Rise
An analysis of 274,000 DonorsChoose projects shows that demand for STEM education continued to rise in classrooms in 2018. Books are still the most-needed classroom resource.

Is It Time to Kill Annual Testing?
For most teachers and students, testing remains the educational equivalent of a root canal. Should we rethink this practice? Read the EdWeek article.

Report of the 2018 National Survey of Science and Math Education
Based on a representative survey of science, mathematics and computers science teachers in the United States, the report addresses teacher backgrounds; beliefs; professional development; courses; instructional objectives, activities and resources; and factors affecting instruction.

Ten Big Insights on Teaching, Learning and STEM Education
Read about the 2018 trends and the anticipated trends in 2019. What resonates with you?

Upcoming Events and Opportunities

DuPage ROE Hosts Mathematics Workshops, February 19, 2019
The workshops focus on skills and strategies for math educators, instructional coaches, and evaluators. Enroll in one or both! Presenters from the National Council of Supervisors of Mathematics will facilitate the sessions.

1. Equity and Social Justice in the Mathematics Classroom (8:00 - 11:00 am). Participants will learn strategies that will ensure high expectations and meaningful learning for all students. Click here.

2. Observation and Evaluation in the Mathematics Classroom (12:00 - 3:00 pm). Math educators and evaluators of math educators will explore and better define what meaningful instruction looks and feels like in the math classroom. Click here.

Model Water Tower Competition - February 23 - Westmont Junior High
Enter your team! Interested schools register for the competition and provide your students with a great experience. Check the website for details and news about the State Competition to be held in April 2019.

Design NSTA's 75th Anniversary T-Shirt
NSTA turns 75 this year. Celebrate by designing a one-of-a-kind shirt and possibly see it displayed at the NSTA conference in St. Louis. Submission deadline is February 8. Click here for details and rules.

Resources

Resources for Black History Month
Start planning your celebration of Black History Month with these resources: National Geographic; PBS; Biography; Interesting Engineering; Famous Black Scientists; Hidden Figures Lesson; Famous Mathematicians; Science Netlinks.

The Teachers Newsletter from Illinois Classrooms in Action
This month’s focus is social science integration across the content areas in grade-banded issues. Math is on page 3 and science is on page 4.

NGSS@NSTA Classroom Resources
Check out these earth and space science resources vetted by NSTA teacher curators. Grades K–2: Telephones; Grades 3-5: Static Cling; Grades 6-8: Your Weight on Other Worlds; Grades 9-12: All Things Being Equal.

Super Bowl Math and Science
Combine hands-on science learning with football and Super Bowl excitement. For ideas, check out catapult science lesson plans; math lessons; fun football science projects; math puzzle.
Tennessee Governor Proposal for STEM Education and K-8 Computer Science Standards
Gov. Bill Lee is prioritizing STEM education in his legislative agenda to boost opportunities for students, including the creation of statewide K-8 computer science standards.

Science Curriculum Reviews Are Out and the Results Aren’t Great
The first independent review to weigh whether new science curriculum series are truly aligned to a set of national standards was issued last week. Mostly, the materials fell well short of expectations.

New Study Shows Latinx and Black Students Leave STEM Majors at Higher Rates
This study reports that minority students, specifically, black and Latinx men and women, have an interest in science and technology fields but switch majors or drop out of college at higher rates than white peers.

Upcoming Events and Opportunities

Tech Savvy - March 23, 2019
Don’t miss this daylong STEM career conference for grade 6-9 girls and parents, mentors and teachers. Online registration is required. Limited to the first 200 registrants! Question? Email info@TechSavvy-IL.org.

Annual Sustainable Design Challenge - April 16, 2019
Challenge your high school students to design a building model with the latest in sustainable features. Students present their project to professionals from environmental design fields and compete for top scores and cash prizes. Read more.

Join the Sensemakers Project
Do you teach high school biology or middle grades science in the Chicagoland area and are looking for high quality NGSS-designed instructional materials and help supporting knowledge building in your classroom? Become a member of this PLC.

ICTM Awards
ICTM sponsors eight awards given at the ICTM Annual Conference in October/November of each year. Review nomination guidelines for nomination and a list of past recipients of each reward. Applications are due by March 31.

Environment and Nature Training Institute for Conservation Education (ENTICE) Educator Workshops
These workshops provide background information, networking opportunities, hands-on lessons, supplemental resources, and the opportunity to work with resource professionals. Workshops are NGSS and Early Learning/ Development aligned.

Resources

Math Resources for Pi Day - March 14
Not sure where to start for your Pi Day lessons? Here are few resources to consider. National Education Association; Illinois Council of Teachers of Mathematics; PBS; Teach Pi; Edutopia.

Emerging Female Scientists (EFS)
This is the first electronic, peer-reviewed, open access scientific journal promoting and publishing articles by female middle and high school students designed to inspire, recognize, train, and equip students to pursue and share their scientific ideas and research.

Science Action Club
Science Action Club makes it easy and fun to lead hands-on STEM in out-of-school time by using games, projects, and exciting investigations. Inspire and encourage youth to explore nature, contribute to authentic citizen science research, and design strategies to protect the planet. Join the growing SAC network today!

March - Women's History Month - STEM-related Resources
Consider one or more of these resources as a starting point: Who Was Emilie du Châtelet and Why Does She Matter?; NASA Women; Women's History Month; Women in STEM; Six Inspiring STEM Women; Women in Science.

Innovation Destination
Support and motivate young, aspiring innovators. This website offers numerous resources for students, parents and educators.

March Madness - An Opportunity to Link It with Classroom Lessons
Check out this collection of bracket-busting resources, including BracketOdds, from the University of Illinois computer science STEM learning laboratory!

DNA Learning Center at University of Notre Dame
The DNA Learning Center offers field trip opportunities that embed hands-on learning approaches for students in grades 5-12. The Center also offers Summer Residential Camps for 8th through 11th graders. Explore here.

Gloria Barron Prize for Young Heroes
Celebrate inspiring young heroes ages eight to 18 who have made a significant, positive difference to people and our environment. Deadline: April 15, 2019.

K-12 Wind Schools Grants
Turn school buildings into hands-on science experiments that help integrate science, math, technology, the environment and other important topics. Grants support the installation of 1-5 kW wind turbines at Illinois institutions serving grades K-12. Online monitoring of real-time electricity generation is included in the grant. Applications due August 27, 2019.
Science Task Screener
The NGSS Task Screener is designed to determine whether classroom assessment tasks are high quality, elicit evidence of three-dimensional performances, support the purpose for which they will be used, and provide a group of reviewers with a common set of features to ground conversations about what it “looks like” for students to demonstrate the kinds of performances expected by three-dimensional standards.

Girls More Likely to be Engaged by Doing Science
A recent study showed that describing science in action terms (e.g., “Let’s do science!”) as opposed to identities (“Let’s be scientists!”) increased persistence in new science games among young girls, aged 4 to 9. Read more.

STEM Students Would Get Free Tuition Under Illinois Bill
Hoping to fill empty factory jobs and reach across the aisle, the Illinois Manufacturers’ Association urges a plan to waive tuition at state universities for students willing to stay to teach science, technology, engineering and math.

American Wins the 2019 “Math's Nobel” Prize
Karen Uhlenbeck has won the 2019 Abel prize, often referred to as “math's Nobel” prize. She is the first woman in history to earn this honor, which was based on her “pioneering achievements in geometric partial differential equations, gauge theory and integrable systems, and for the fundamental impact of her work on analysis, geometry and mathematical physics,” according to Abel's website.

Upcoming Events and Opportunities

English Learners in STEM Subjects: Contemporary Approaches to Classroom Instruction - May 4, 2019
Based on the 2018 National Academies of Sciences, Engineering, and Medicine report, English learners are reported as falling behind in science and mathematics education. EL’s appear to be excluded from challenging disciplinary practices and content. Participate in this virtual conference to learn about how all students to reach their full potential in STEM.

Join the Sensemakers Project
Do you teach high school biology or middle grades science in the Chicagoland area and are looking for high quality NGSS-designed instructional materials and help supporting knowledge building in your classroom? Become a member of this PLC.

STEMCON - April 27, 2019
Get your geek on at STEMCON, a free and interactive fair celebrating STEM at College of DuPage.

Summer STEM Activities
Check stemdupage.com for summer STEM suggestions. More ideas can be found at Kid List and Makermom.

Resources

Helping Middle and High School Students Investigate Climate Change
Understanding Climate Change, a new NSTA book, offers extensive background and directions for using three-dimensional methods to explore this topic. Browse sample pages at the NSTA Science Store.

ICTM Webinars
Webinar speakers are teaching professionals invited to share their expertise in short online sessions. These professional development opportunities encourage communication and collaboration among current and potential ICTM members.

Teach Engineering
This website includes grade-band appropriate engineering lessons that encourage open-ended problem solving to integrate into your curriculum.

Creating Science Learning Experiences that Support Learners Receiving Special Education Services
A new STEM Teaching Tool provides guidance for giving all students multiple opportunities and avenues for engaging in deep and meaningful sense-making about the natural and designed worlds, rather than creating cognitive, physical, behavioral, neurological, developmental, and emotional barriers.

Six Things to Know About Quality K-12 Science Education
The March newsletter includes resources on the NGSS design, task annotation, phenomena, and more.

Science and Engineering for Grades 6-12: Investigation and Design at the Center
Highlights from this recently released report cites evidence-based ways that teaching and learning should shift and provides guidance for stakeholders on how to support students and teachers as they and instruct in this new way.

Earth Day - April 22, 2019
Consider some of the following resources to begin your planning of Earth Day activities.

Earth Day, Grades K-5
Celebrate Earth Day
Earth Day Activities and Ideas
Earth Day Lessons, Grades 6-12

Earth Day Educator Tips
Earth Day Toolkits
Skype in the Classroom
Earth Day Lessons, Grades 6-8

This newsletter is published with the support of the DuPage Regional Office of Education. Dr. Dariene Rusticelli, Regional Superintendent
421 County Farm Road, Wheaton, IL 60187
How Katie Bouman Accidentally Became the Face of the Black Hole Project
The first ever picture of a black hole recently made the news. Katie Bouman, the postdoctoral fellow, was one of many who contributed to the project, and quickly became a STEM hero for women and girls.

The State of American Trade Schools
Postsecondary trade and tech schools are becoming a more important part of the growing economy and a more attractive educational option. Read more here.

2018 National Survey of Science and Math Education
This survey has a new name, NSSME+, to reflect the added emphasis on engineering. The report details the results of a nationally representative survey of 7600 science, mathematics, and computer science teachers in U.S. Schools. Among the topics included were teacher backgrounds and beliefs, professional development, instructional objectives, and instructional resources.

ComEd, Illinois State University, and Downers North Students Partner on Energy Challenge
DGN students worked on the design and development of solar powered innovations to leverage smart grid technology and related services as they addressed community needs. Read the full release.

Upcoming Events and Opportunities

Leading Future Ready Schools - May 21
Future Ready Schools (FRS) is a bold effort to maximize digital learning opportunities and help school districts move quickly toward preparing students for success in college, a career, and citizenship. Learn more.

TeCLabs - June 25-27
The Department of Physics at the UIUC offers this 3-day workshop for middle school science teachers. Participants will collaborate on developing NGSS-aligned lab activities to use in the upcoming school year and learn new technologies. The workshop days run 9 am to 4 pm, with a lunch break. Lunches are provided. Participants receive a stipend of $100 per day, mileage reimbursement, and free lodging at a nearby hotel. Click here for more information and to register.

ChemEd Conference - July 21-25
The conference will take place at North Central College, Naperville and will integrate various strands including K-8.

Resources

K-12 Wind Schools Program
Grants support the installation of 1 to 5 wind turbines, allowing students to see how wind energy is converted into electricity. Eligible applicants are Illinois K-12 schools, educational organizations, and nonprofit organizations. Grants up to $40,000 or 90 percent of the system and installation costs are awarded. Applications due August 27, 2019.

Mazda Foundation
The Mazda Foundation supports 501(c)(3) organizations to promote education and literacy, environmental conservation, cross-cultural understanding, social welfare, and scientific research. Priority is given to organizations located in markets where Mazda has offices, including Chicago, Illinois. Applications are accepted May 1 to July 1, annually.

Illinois Retired Teachers Association (IRTA) Foundation
Grants support public school educators to enable their students to participate in special projects. Download, complete, and submit the application online through June 1, 2019, by visiting www.irtaonline.org, under the IRTA Foundation section.

Toshiba America Foundation
Teachers who are passionate about making science and mathematics more engaging for their students may apply for support of their classroom projects that focus on project-based learning. Awards vary. Applications for requests less than $5,000 are due June 1, September 1 and December 1, 2019. Requests for grants of $5,001 and greater are due May 1 and November 1, 2019.

VISIT THE DUPage ROE STEM WEBSITE AT http://stemdupage.com/
Downers Grove North High School Students Partner with ComEd and Illinois State University
Students from DGN, the only DuPage high school selected to participate in the challenge sponsored by the Illinois Science and Technology Coalition, designed and developed solar powered innovations that leverage smart grid technology and related services to address community needs. Read more about the challenge.

Five Ladies Leading Change in Education and Technology
Five female leaders share their work and passion to create more enriching and equitable opportunities for a variety of learners.

Middle Schoolers Are Doing Better on a Key Tech and Engineering Test - Thanks to the Girls.
American middle schoolers are performing better on a national assessment of technology and engineering, an improvement driven largely by girls. Read more here.

How STEM Invigorates Classrooms
eSchool News recently spoke with Vince Bertram, the chief executive officer of Project Lead The Way (PLTW), about the importance of STEM education. Engaging, hands-on classroom environments empower students to develop the in-demand knowledge and skills they need to thrive.

Why Everyone Can and Should be a Scientist
Citizen and community science (CCS), and the data collected by participants, create a mutual dependence that makes CCS scalable and meaningful through engagement in real science with emotional, motivational, and cognitive consequences.

How Arts-Based Lessons Improve Science Performance
Integrating the arts into science lessons helps the lowest-performing students retain more content and does not require much in terms of funding, according to a recent study published in the Journal Trends in Neuroscience and Education. Read the article in District Administration.

Upcoming Events and Opportunities

ChemEd Conference - July 21-25, 2019
The conference will take place at North Central College (Naperville) and will integrate various strands including K-8.

STEM Read Professional Development - July 24-26, 2019
Learn how to facilitate an action-packed STEM Read event in your school! You will also have access to the materials and resources you need to make your STEM Read event a success. More information here.

Exploration of Other Worlds Using NASA Solar System Treks - Webinar October 8, 2019
Learn about NASA’s Solar System Treks (SST), free resources that enable students to study the surfaces of the Moon, Mars, Vesta, Ceres, Titan, and Icy Moons. The portals provide interactive and innovative ways to inspire, inform, and educate. Participants will hear from specialists from NASA’s Jet Propulsion Laboratory and Ames Research Center and have the opportunity to ask questions about the visualization tools.

Illinois Future City Competition - January 18, 2020
Sixth-eighth graders are invited to participate in this exciting competition to be held at Whitney Young Magnet School (Chicago). Details and the theme will be announced in June. More information here.

Resources

Reaching All Students in Science
Don’t miss the recording of the 30-minute webinar presented by Achieve’s Vanessa Wolbrink. Vanessa dives into four key features of equity in the classroom: relevant and engaging phenomena, asset-based thinking, student agency and identity, and accessibility.

K-12 Wind Schools Program
Grants support the installation of 1 to 5 wind turbines, allowing students to see how wind energy is converted into electricity. Eligible applicants are Illinois K-12 schools, educational organizations, and nonprofit organizations. Grants up to $40,000 or 90 percent of the system and installation costs are awarded. Applications due August 27, 2019.

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A Virtual Storm Teaches Computational Thinking
Weather and weather forecasting offer an ideal medium for the integration of science, mathematics, and computational thinking. This program empowered students to understand and apply weather-related science, mathematics and computational thinking.

Teaching STEM Using Car Crash Safety as the Focus
Update your STEM lessons by integrating car crash safety. More information available from the Insights Institute for Highway Safety. You can also download the Lab Out Loud podcast to learn more.
Career Readiness in Middle School  
School districts are urging career exploration for middle and lower grade students, convinced the preparation necessary for tomorrow’s jobs needs to begin earlier. Read the report.

How to Engage All Students in STEM  
The answer: high-quality project-based learning (PBL), which is already deployed in career and technical education (CTE) programs. The Education Week article also includes free resources.

Encouraging Creativity in STEM Class  
Creativity may be overlooked in STEM but STEM teachers are finding ways to make their lessons and courses innovative and encourage their students to be creative. Read more in NSTA Reports.

Engaging English Learners in the Science and Engineering Practices  
Teachers should know Next Generation Science Standards practices are heavily language-dependent requiring inclusive approaches for multilingual students. Read more in STEM Teaching Tools.

Five Nonprofits Are Driving a Revolution in STEM Education  
Read about these five organizations that are making STEM career path awareness their critical focus.

STEM Strategies Fit into the Elementary Music Classroom  
Read this article to understand how social studies, science, engineering and math can be integrated into a music lesson.

Ten Simple Ways to Empower Girls to Love STEM  
Use these simple methods to help your daughter fall in love with STEM. The bonus is that the methods echo good parenting, in general.

New Drop Anywhere STEM Education Concept  
Smaller, lighter and less expensive than brick-and-mortar or trailer labs, Drop Anywhere Labs offer a blend of career and skills education. Read more about this project supported by Learning Undefeated.

Upcoming Events and Opportunities

STEM into the Future – September 25, 2019  
Explore engineering projects, online coding sites, tech toys and more that will help students become thinkers, investigators, collaborators, creators, and doers. Click here for more information.

2019 ISTA/ICTM Joint Conference - October 18-19, 2019  
Attendees may choose from both science and math sessions. Sessions for teachers of all grade levels. Learn more and register.

Illinois Future City Competition - January 18, 2020  
Sixth-eighth graders are invited to participate in this exciting competition to be held at Whitney Young Magnet School (Chicago). Details and the theme will be announced in June. More information here.

STEM VOICES
Do you use songs to teach? Enter the Virtual Ongoing Interdisciplinary Collaborations on Educating with Sound contest by December 31. Learn more.

Resources

More Community Science Ideas. . .  
Thanks to Laura Riley, instructional coach at Westmont Junior High School. Here are some great links to learn about integrating community science into your STEM courses.

https://www.globe.gov/
https://www.globe.gov/web/mission-mosquito/overview
https://www.globe.gov/web/mission-mosquito/overview/webinars/archived-webinars

Build a Telegraph Tapper  
In this activity, students learn the basics of electricity, patterns, engineering, and coding, while integrating important elements of standards related to communication, literacy, technology, and math.

National Geographic Grants  
These grants help build geographic competency by fostering an explorer mindset and understanding, appreciation and value for the natural and social sciences. Applications are due October 9, 2019.

Local Firefighters Spark Middle School STEM Lessons  
Tap this article to read how students in one district learned about emergency services careers while also getting to light something on fire.

Start a FREE Girls Who Code Club Today!  
Girls Who Code Clubs are FREE programs for 3rd-5th or 6th-12th grade girls. Check the Clubs Overview or join an upcoming webinar. Ready to join the movement? Complete a Clubs application. Have questions? Contact Girls Who Code at clubs@girlswhocode.com.

Quality STEM Resources from NSTA  
These multidisciplinary resources integrate science and engineering practices to help teachers provide quality STEM learning.
Lack of Home Internet Access Poses Educational Hardship

Students without home internet services are at a disadvantage when at home completing assignments, especially in later grades. The issue is significantly more pronounced in high-poverty schools.

New Tool Shows Frequency and Usefulness of Google Apps in K-12

Read how Google helps educators obtain data on how often Google apps are used and for which tasks.

More Learning in Active Learning Classrooms - But Students Don’t Know It!

Evidence shows that active learning techniques that involve students in the learning process are even more effective when students know it. Read about the Harvard study in Science Daily.

National Hispanic Heritage Month - September 15 through October 15

Here is a sampling of resources that serve to promote Latino(a) students in STEM.

Hispanic Heritage Youth Awards honors Latino high school seniors who excel in the classroom and community. Application deadline is October 15, 2019.

Latina Girls Code: Provides technology exposure and resources for Latinas ages 7-17.

Latinas in STEM: Spreads awareness about STEM and encourages middle and high school Latinas to consider pursuing a STEM career.

SHPE Jr. Chapters: Provides high school students with opportunities to participate in STEM activities, receive mentorship, and experience STEM firsthand at a participating university/museum.

TECHNOLoChicas: Raises awareness among young Latinas and their families about opportunities and careers in technology.

Upcoming Events and Opportunities

2019 ISTA/ICTM Joint Conference - October 18-19, 2019

Coming soon – an opportunity you will not want to miss. Sessions for science, math and STEM teachers of all grade levels. Attendees may choose to attend math and/or science offerings. Learn more.

Illinois Future City Competition - January 18, 2020

Sixth-eighth graders are invited to participate in this exciting competition to be held at Whitney Young Magnet School (Chicago). Details and the theme will be announced in June. More information here.

Fermilab Education Program E-Alert

Explore Fermi’s STEM education and outreach programs to engage students and support teachers in meeting the goals of the NGSS. Connect with Fermi today!

2019 NISE Conference - November 18, 2019

Northern Illinois Science Educators will host its sixth annual conference in Naperville. Registration includes food, workshops, and nationally recognized featured speakers. Group discounts available.

Resources

DuPage Ag in the Classroom Resources

- Illinois Ag in The Classroom Grants can be used for projects or books. Due date is October 11, 2019.
- DuPage County Farm Bureau Grants can be used for projects, libraries, and 4-Hers. Due date is November 8, 2019.

Explore the TeachEngineering Curriculum Collection

TeachEngineering is a searchable, web-based digital library collection comprised of standards-based engineering curricula for use by K-12 educators.

LEGO™ Released Audio and Braille Instructions for Visually Impaired Builders

Building-block toys are frequently used in STEM activities for students. The instructions offer additional educational opportunities for students who are visually impaired.

Open Science Educational Resources

OpenSciEd materials are open educational resources (OER), free for anyone to use, share, redistribute, adapt, transform, and build upon. New units, NGSS-aligned and developed with and for educators, will be released every 6 months.

STEM VOICES

Do you use songs to teach? Enter the Virtual Ongoing Interdisciplinary Collaborations on Educating with Sound contest by December 31.

STEM Equity Program Evaluation Rubric

Though intended for STEM Schools, one could use this rubric to help identify critical attributes of STEM programs regarding inclusiveness and access to opportunities among historically underrepresented groups. View a video and access the rubric.

Vector Voyage

Middle school students learn the concept of dead reckoning by using vectors to plot a course based on a time and speed, then correcting their positions with vectors representing winds and currents. Learn more.

STEM Activity Clearinghouse

Librarians, library staff and other educators can find high quality, vetted STEM activities that are appropriate for library use here. Search by audience, content level, and difficulty, among others.
Achieve Publishes Science Cognitive Complexity Framework

Use the framework to identify and communicate the level of complexity of summative assessment items and tasks designed to assess NGSS three-dimensional standards.

Small Institutions Lead the Way in STEM Degree Attainment for Underrepresented Students

Small and mid-sized institutions play significant roles in strengthening the STEM pipeline for under-represented students. Read the article.

What is a STEM Mindset and How Do We Get There?

A STEM mindset is important for scientists and engineers and to help young people see STEM-related careers as possibilities. A STEM mindset applies beyond STEM and STEM Careers. Learn more about the STEM mindset; how to foster this mindset across learning settings, and changing mindsets through educator training.

Raising Entrepreneurs

Entrepreneurial education can be life-changing, particularly for young people struggling with poverty and other oppressive situations. Learn about the benefits and how teachers can implement lessons in their classrooms.

Upcoming Events and Opportunities

Webinar: Developing a Competitive Teacher Award Application - November 6, 2019, 6:30 - 8:30 pm (ET)

Learn how you can win up to $10,000 for your outstanding work as a science educator. The presenter will discuss the application process, share insight into completing your application, and provide tips for strengthening your submission. Register here.

Webinar: Fostering a Positive Classroom Environment - November 14, 2019, 3:30 - 4:30 pm (CST)

Learn strategies that foster a positive classroom environment by building relationships and rapport to support the risk-taking and authentic learning. The presenter is a 4th grade teacher in a diverse school district with 100% of the students receiving free lunch and a 28% chronic absenteeism rate. Register here for the first ever cross-curricular #ILMathCom*, #ILSciCom, #ILSSCom event.

2019 NISE Conference - November 18, 2019

Northern Illinois Science Educators will host its sixth annual conference in Naperville. Registration includes food, workshops, and nationally recognized speakers. Group discounts available.

Great Water Design Challenge - November 20, 2019

IMSA and NOAA are hosting this competition for middle and high school student teams of 4-5 with one teacher or adult chaperone. Students will research a water-related environmental concern; spend the morning with subject matter experts; then innovate a solution or intervention. Breakfast, lunch, snacks, and swag provided; transportation costs not covered. Registration link.

What is Mathematical Modeling? What Does it Matter? April 9, 2020, 3:30 - 4:30 pm (CST)

What is the standards' vision for mathematical modeling? How can you enhance the modeling work for students in grades K-5, 6-8, and 9-12? These questions and more will be explored in this session. Register here.

Presidential STEM Mentoring Awards

Nominations and applications are now open for the 2019-20 cycle of the Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM). Nominations are due December 15 and completed applications are due January 15, 2020. Keep reading for more information.

The 2019-20 Northrop Grumman Foundation Teachers Academy

Applications are now being accepted. Teachers of physical science, engineering, and/or technology located in public school districts in select Northrop Grumman communities across the United States will be considered. Applicants must be US citizens. Access the application portal here.

Resources

Free Resources from Statistics in Schools

Statistics in Schools is a free program that uses census data to create PK-12 classroom materials. New activities highlight the importance of the 2020 Census. Census data drive decisions to allocate more than $675 billion in federal funds to states, communities and school programs/services (Title I, special education, Head Start, and Opportunities). Read the article.

Teach Plate Tectonics

The new Plate Tectonics module for middle/high school students from Concord Consortium’s GEODE (Geological Models for Explorations of Dynamic Earth) project includes student modules, pre/post-tests, teacher’s edition and dashboard, and more.

Explore STEM Careers

Each video introduces the amazing inventors and adventurers who spend their lives solving big problems, uncovering hidden secrets, and finding new questions to answer using science, technology, engineering, and math.

Upcoming STEM Competitions for Middle School Students

Consider one or more of the following to foster STEM interest and workplace skills: Computer Science; MathCounts; and American Rocketry Challenge.

Celebrate Computer Science Education Week with CodeSciGirls!

A new Season of SciGirls premieres December 12 during Computer Science Education Week! Learn about the new season by attending the December 11 webinar, which runs from 11 am to 12 pm, Pacific Time. Register here for the December 11 webinar. Instructions will be emailed after registering for the webinar. Questions? Contact Casi Herrera, cherrera@ngcproject.org.
Diversifying Tech Starts with Ensuring Equitable Computer Science Education
The tech sector plays a major role in the nation’s economy. Yet, opportunities for underrepresented populations remain an issue. Read the full article here.

Study Finds that Girls’ and Boys’ Brains are Similar in Terms of Math Development
The findings seem to negate the previously held notion that boys are innately better in math than girls. Read more.

The 2019 Engineering Gift Guide
Each year, Purdue’s INSPIRE Research Institute lab evaluates toys, games and books that engage girls and boys in engineering thinking and design. Listen to this podcast to learn more.

2019 STEM Talent Index – Illinois’ Computing Talent in Focus
Despite declining total college enrollment since 2013, Illinois produced more STEM degrees in 2018 than ever before and is a leading producer of computer science graduates. Read the report summary.

Upcoming Events and Opportunities

#ILSciCom - 3:30-4:30 p.m. Dec. 11
#ILSciCom events are free, virtual sessions that build a professional learning network of science educators. Angela Box, SIU Carbondale will discuss updates for the 2020 Illinois Science Assessment and plans for the future of the test. Registration information now available.

Last Call for Presidential STEM Mentoring Award Nominations
Nominations and applications are now open for the 2019-20 cycle of the Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM). Nominations are due December 15; applications are due January 15, 2020.

ICTM Teaching Awards
The Illinois Council of Teachers of Mathematics (ICTM) is seeking 2020 nominations for a variety of teaching awards. Visit ICTM’s Awards webpage for nomination information.

Illinois Future City Competition - January 18, 2020
There is still time for sixth-eighth grade teams to register for this competition. The theme is “Clean Water: Tap Into Tomorrow.” Teams will choose a threat to their city’s water supply and design a resilient system to maintain a reliable supply of clean drinking water.

What is Mathematical Modeling? What Does it Matter? April 9, 2020, 3:30-4:30 pm (CST)
What is the standards’ vision for mathematical modeling? How can you enhance the modeling work for students in grades K-5, 6-8, and 9-12? These questions and more will be explored in this session. Register here.

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Learning Technology Center of Illinois Newsletter
Are you still looking for ways to focus on coding? Use the resources in this newsletter. Thanks to Nicole Zumpano, Chicagoland Regional Educational Technology Coordinator, Learning Technology Center of Illinois, for this resource guide as well. These are resources that you will want to keep handy throughout the year.

Applications Accepted for Shell Science Lab Regional Challenge through January 15, 2020
The Challenge offers middle and high school teachers to win a school science lab makeover. Learn more.