



*Illinois  
Building a  
Presence for  
Science*

# Network News

*APRIL 2017*

Volume 12, Number 3

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**March with NSTA in the March for Science on April 22, 2017**

**Washington D.C**

<http://www.nsta.org/marchforscience>

**March in Illinois:**

<https://www.marchforscience.com/satellite-marches?state=Illinois>

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## **Professional Opportunities**

Science, health, and family and consumer science teachers have an opportunity to provide inquiry-based lessons related to these outbreaks and recalls. Lessons can be found in the curriculum **Science and Our Food Supply** developed jointly by FDA and NSTA. And, in order to prepare teachers to use these lessons, FDA provides a **free multidimensional professional development program that will take place July 16 – 23, 2017** in Washington, DC. Included in the program are transportation to and from Washington and all housing and meal expenses.

During the program, selected teachers will participate in activities such as the following - meet with FDA and USDA scientists to learn about their current research on foodborne diseases and nutrition; work with instructors at the microbiology lab at the University of Maryland to learn proper techniques to use in doing microbiology labs with their own students; and, tour USDA's farm in Beltsville, MD.

Selected teachers are asked to implement the curriculum in their classrooms during the 2017 - 2018 school year and to do a hands-on workshop on the curriculum for other teachers.

**To apply on line – deadline April 18, 2017-** go to: <http://www.teachfoodscience.org/apply.asp>

The Science and Our Food Supply curriculum guides on which the summer program is based are available from this website: <http://www.fda.gov/Food/FoodScienceResearch/ToolsMaterials/ScienceandTheFoodSupply/default.htm>. We strongly suggest you review these guides before applying for the summer workshop.

For more information, contact Mimi Cooper at [mimicooper@verizon.net](mailto:mimicooper@verizon.net).

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On **April 21, 2017** the **WIU PreK-8 Science Update Conference** will be held on the Western Illinois University campus in Macomb. This will be the 30th year for the conference and this year's theme

is *Science and Three-Dimensional Instruction*. Presenters will be sharing ideas and activities which reflect strategies for linking science instruction to the Three Dimensions of NGSS: Scientific & Engineering Practices, Crosscutting Concepts, and Disciplinary Core Ideas. Here is a link to the conference registration form: [2017 Prek-8 General reg.do](http://2017.Prek-8.General.reg.do). New this year is a 50% discount on your registration if you bring an aspiring high school student who wants to be a future elementary or middle school teacher. We feel this would be a good opportunity for this future teacher to learn a little about a career in teaching. More information about the conference can be found at [http://www.wiu.edu/coehs/curriculum\\_and\\_instruction/science\\_center/update.php](http://www.wiu.edu/coehs/curriculum_and_instruction/science_center/update.php).

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**CER (Claim-Evidence-Reasoning) STEMposium:** a free workshop for District leaders and administrators held at DePaul University's Naperville Campus on **April 26th**. CER's are a natural extension of the way we think through problems scientifically. Enhance your classroom and invigorate your knowledge of CER with a workshop that provides insight into Claim- Evidence-Reasoning and focuses on how to increase rigor in the classroom. Learn how to critically evaluate CER and eliminate the issues of subjective evaluations amongst teachers. Please join us for a morning of learning that can effectively be brought back to the classroom and implemented seamlessly using our effective tips and tactics for CER assessments. Here is the link for the registration, the PDF of the schedule and a brief description of the workshop: [http://info.acceleratelearning.com/illinois\\_cer\\_stemposium\\_mb](http://info.acceleratelearning.com/illinois_cer_stemposium_mb)

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Earn graduate credit this summer with [Seminars on Science](#), the American Museum of Natural History's online professional learning program. The 6-week [online courses](#) are co-taught by Museum scientists and classroom educators and are accessible anytime on your schedule. Get access to cutting-edge research, rich content, and powerful classroom resources. [Graduate credit](#) is available from our university partners. The [next session](#) starts May 22. **Save \$50 when you use code SCIENCEMATTERS**. Plus, **register by April 24 to save another \$50** for a total \$100 savings! For more information about the program, check out *Seminars on Science* at [amnh.org/learn](http://amnh.org/learn). If you have any questions, send us an email at [learn@amnh.org](mailto:learn@amnh.org) or call (800) 649-6715.

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Participate in the **2017 ChemEd Conference** in Brookings, South Dakota. Programming includes [a great lineup of speakers](#)—including Andy Brunning, Bassam Shakhshiri, and Lee Marek—plus a variety of learning sessions. AACT will be hosting several professional development workshops, and we hope to see you there! [Early bird registration](#) ends **April 30**.

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Register for an **AACT webinar** before the school year ends! You don't need to be a member. AACT RESOURCES AND WEBSITE OPEN HOUSE: **April 19** | 7PM ET | [Register Now »](#)  
SCIENCE COACHES: **April 26** | 7PM ET | [Register Now »](#)  
MYSTERY OF MATTER RESOURCES FOR THE CHEMISTRY CLASSROOM: **May 4** | 7 PM ET | [Register Now »](#)  
USING THE BEST OF CHEMMATTERS IN THE CHEMISTRY CLASSROOM: **May 17** | 7 PM ET | [Register Now »](#)  
Can't make it to any of these? Join AACT—members have access to all webinar recordings through the [AACT website](#).

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**Bioenergy Institute for Educators, UW-Madison, June 26-30:** Join us for an intensive 5-day program at the Great Lakes Bioenergy Research Center to learn about the latest developments in bioenergy research and high-quality, NGSS-aligned materials to use with students. Includes \$400 stipend. **Accepting applications through May 1.** Learn more: <https://www.glbrc.org/education/educational-programs/bioenergy-institute-educators-bie>

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**Modeling the Molecular World Summer Workshop** is a three-day workshop to be held at Metea Valley High School in Aurora, IL, **June 20-22, 2017**. For more information please see the attached flyer: [mmwFlyerChicago2017\[3\].pdf](#) . **Application deadline: May 1, 2017.**

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**WestEd**, a not-for-profit educational research agency, has funding from the National Science Foundation (NSF) to conduct a research project, **SimScientists Crosscutting Concepts: Progressions in Earth Systems (REAL)**, during the 2017-18 school year. This project aims to use technology to give your students ways to explore and express their science knowledge through computer simulations of science systems. The project uses innovative formative assessments to support the Next Generation Science Standards (NGSS) with your students. We are seeking teachers to participate in this research study.

Participating teachers will receive a live online webinar orientation and training (up to 4 hours), stipends up to \$1,500 for their involvement in the study, as well as access to simulation-based computer formative assessments.

In order to participate, middle grades science teachers must cover Geology (i.e., erosion, weathering, and plate tectonics), Climate & Weather, and Ecosystems topics during the 2017-18 school year. All three units must be covered within the same grade during the school year, though teachers can still participate if they do a substantial review of Ecosystems during the 2017-2018 school year if an Ecosystems unit is had been taught in the previous grade. Additionally, teachers can participate if the Ecosystems content is taught even if it is not called Ecosystems, in classes such as Human Impacts, Biomes, or other similar topics. The research focus of this project is on Crosscutting Concepts. As such teachers must provide ongoing instruction during the school year that incorporates the Scale, Energy and Matter, and Systems crosscutting concepts.

Please see the "SimScientists Earth Science Strand" for more information on these topics: <https://wested.box.com/s/7eckkkqk9kwsnikzdwhgbu2aby4zitps>

For **answers to frequently asked questions** about participating in a SimScientists study, please see our FAQs at: <https://wested.box.com/s/mzlnTgpbqjlxbsen5vgdovcdapc8b70s>

**For technical requirements**, please click

here: <https://wested.box.com/s/88cao026eeyc88xrjxqx4045dp7tj3m8>

\*Note: SimScientists modules are **NOT** supported on iPads, iPhones, or other tablets.

If you are interested in participating in this research opportunity, please complete an online intake survey at <https://www.surveymonkey.com/r/REALPilotIntakeSurvey>

To learn more about this project, please see the FAQs or email Melissa Essinger

at [messing@wested.org](mailto:messing@wested.org). **For the best chance of participating, please complete the survey by**

**\*\*Friday, May 5, 2017\*\***

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**Elementary Academy: Quick Fixes and Long-Term Solutions** will offer elementary educators an introduction to some of the key shifts in implementing the NGSS, including: 3-dimensional instruction, introducing phenomena, using student questions, and leveraging integration. Participants will also enjoy an introduction to storylines as a long-term solution, and an overview of helpful resources to begin the journey. All teachers who attend will receive: materials, a full lunch catered by Sharko's BBQ in Naperville and ISBE PD credits. ISTA members who attend receive a \$10 refund - that makes it half price!

**When:** May 6, 2017, 8:30 AM - 3:30 PM

**Where:** Lyons Township High School South Western Springs, IL

**Register:** <https://ista.wildapricot.org/event-2501207>

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**Life Science Institute** is a one day workshop to be held at Lyons Township High School - South Campus in Western Springs, IL, **Saturday, May 6, 2017**. For more information please see the attached flyer: [Biology Day Flyer Rev 2017.pdf](#)

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**Join the CSforAll movement and teach Computer Science Principles!** --an exciting opportunity to participate in an NSF-funded Computer Science project, Mobile Computer Science Principles ([Mobile CSP](#)), that aims to address equity issues in computer science education. [Watch and learn](#) more about how students and teachers are empowered to build socially useful apps in this engaging course. The Mobile CSP project is offering a 4-week professional development course that can be taken either **online** (starting June 19) or in a **regional hybrid** format (2 weeks online and 2 weeks face-to-face, starting June 26).

More details about this opportunity can be found on the [Mobile CSP](#) website or by contacting us at [info@mobile-csp.org](mailto:info@mobile-csp.org). Please pass along this information to other teachers.

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### **Synthetic Biology – STEM Professional Development Workshop at Northwestern University – Biotechnology Center of Excellence**

You are invited to apply to the **BioBuilder 2017** workshop at Northwestern University in Evanston, IL. This three-day professional development opportunity will prepare educators to bring biological engineering and synthetic biology into their classrooms and laboratories.

**This workshop will be held from August 1 - 3, 2017.**

**The workshop will include:**

- Lectures that connect the science, technology, engineering, and math aspects of these fields.
- Labs and classroom activities taught from the online [www.BioBuilder.org](http://www.BioBuilder.org) resource and the BioBuilder textbook published by O'Reilly.
- Discussion with members of Northwestern University's research community.
- Activities that address human practice questions such as the safety, security, economics and wisdom of engineering novel biological systems.
- Activities that address the nuts and bolts of running a BioBuilder BioDesign Club or an iGEM team.
- Attendees receive all printed workshop classroom materials in ready to use formats, lunch each day, and a certificate of completion including 45 PDPs or 18 CPDUs for attending.

**Who should apply?**

- High school Biology and STEM teachers, including those looking for new ways to teach the AP content or for compelling material to teach college-bound students after the AP exam is completed.
- College-level instructors looking for classroom and lab curricula to include in a biotechnology-style class.

□ Science Club leaders, in particular anyone looking for ways to bring cutting-edge content to students with a variety interests from math to biology to electronics.

#### **FAQs**

- This workshop is free to teachers thanks to sponsorship by Baxter Int'l Inc.
- Application is required for all participants, as space is limited. Teachers will be notified by Northwestern University if they are selected for participation.

**To Apply:** Candidates must apply directly through the [www.bcoe.net](http://www.bcoe.net) website.

**Contact:** Emily Hood Ferrin, PhD, Program Director & Resident Scientist, BCOE

[emily.ferrin@northwestern.edu](mailto:emily.ferrin@northwestern.edu)

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The **Illinois RiverWatch Network** invites you to attend a new volunteer stream monitoring workshop to be equipped to monitor a wade-able stream. Each workshop is on a Saturday from 9 am – 4 pm with professional development hours available. For more information or to register, please visit the [RiverWatch Network website](#).

#### **2017 spring RiverWatch workshop schedule**

- April 22                      Jacksonville
  - April 22                      Grayslake
  - April 29                      Joliet
  - April 29                      Peoria
  - May 20                        Rockford
  - June 3                         Apple River
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Register today at <https://www.enticeworkshops.com> for **ENTICE (Environment and Nature Training Institute for Conservation Education) professional development workshops** for educators sponsored by the IDNR. ENTICE workshops provide background information, networking opportunities, hands-on lessons, supplemental resources on the topic and the opportunity to work with resources professionals on a variety of topics. Professional Development Hours are available. Shown below are upcoming workshops for summer and fall 2017. Workshops will continue to be added to the schedule as arrangements are made so check the Web site often. Experience ENTICE!

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#### **Fermilab: Bringing Science Education to You**

<http://ed.fnal.gov>

#### ***Calendar of Professional Development***

##### **Elementary Teachers**

June 19–21 – [The Prairie – Our Heartland](#)

June 22–23 – [Insects at Work in Our World](#)

July 31–August 4 – [Friendly Physics](#)

##### **Middle Level Teachers**

July 17–21 – [Beauty and Charm](#)

July 24–28 – [Energy and Ecosystems: Prairie, Water and Woods](#) (formerly Particles and Prairies)

##### **High School Teachers – [Summer Secondary Science Institutes](#)**

June 19–23 – Summer Secondary Biology Institute

June 19–23 – Summer Secondary Physics Institute: Modern Physics, Fermilab and NGSS

June 26–30 – Summer Secondary Physics Institute: Waves, Sound, and Optics

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Looking for more **summer professional development opportunities**? Browse the [Teacher Learning section of the AACT website](#) to find a conference, meeting, grant, award, workshop, or other learning opportunity from the chemistry education community.

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## **Grants, Awards, and Contests**

Sponsored by the National Association of Geoscience Teachers, the **Outstanding Earth Science Teacher Awards** are for exceptional contributions to the stimulation of interest in the Earth Sciences at the pre-college level. Any teacher or other k-12 educator who covers a significant amount of earth science content with their students is eligible. Ten national finalists are selected, one from each NAGT regional section. In addition, many state winners are recognized also. Individuals may apply themselves or nominate a colleague for the award. [Click here](#) for more information or to nominate yourself or someone else. For additional information please contact [Susan Wolf](#). **The deadline for the 2017 OEST applications is May 1, 2017.**

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The Intersociety Polymer Education Council (IPEC) supports the **Polymer Ambassadors program** giving two teacher awards and mini grants K-12 teachers. The link for these are: [Grants and awards](#). The K - 8 TAPE award winner receives a check for \$750 for the classroom, \$750 reimbursed for a conference and a plaque. The High School OPEA winner will receive a \$1000 check for the classroom, \$750 reimbursed for a conference and a plaque. The two teaching awards have a **deadline of May 15th** of each year. There are 10 mini grants available (up to \$250 each) which have revolving deadlines.

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## ***Illinois Schoolyard Habitat Action Grant – Two Options Now Available***

Applications will be accepted by the IDNR Division of Education **through November 30, 2017**, for the *Illinois Schoolyard Habitat Action Grant* program. New for the program this year are two application options. Option One will allow you to apply for a standard pollinator garden. With this option, the plant species are predetermined. You and the students must decide how best to use these species in your available space. Other items to be purchased are limited with this option. Option Two allows the applicant to determine what type of wildlife habitat to develop. You can view both options at <https://www.dnr.illinois.gov/education/Pages/GrantsSHAG.aspx>. Please use the supporting video podcasts to assist you in completing the application form. Help wildlife species while taking learning to life!

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## **Student Opportunities**

### **Fermilab: Bringing Science Education to You**

<http://ed.fnal.gov>

### **Science, Technology, Engineering and Mathematics High School [Career Expo](#)**

**April 19 – 5:30 p.m.–8:30 p.m.**

High school students from Kane and DuPage Counties are invited to meet scientists, engineers and technicians from many STEM careers. Ask career questions of the experts. Attend panels to learn more. The program at Fermilab's Wilson Hall (high rise) is FREE with no registration required. Access posters from this site to let your students know about this event at

<http://ed.fnal.gov/programs/careerfair/posterpage.html>.

### **Science Adventures**

<http://ed.fnal.gov/sciadv>

Science Adventures, informal classes for students in grades PreK–10, continue on Saturday throughout the school year. See the home page link for Science Adventures for a listing of current classes. Interested in being a Science Adventures instructor? Contact [Susan Dahl](#).

### **Classroom Presentations – New presentations coming soon!**

[http://ed.fnal.gov/trc\\_new/demos/](http://ed.fnal.gov/trc_new/demos/)

Fermilab volunteers offer interactive presentations to enhance your classroom curriculum. If your school is within reasonable driving distance of the Lab, Fermilab scientists, engineers and technicians bring presentations to your students. Presentations are geared toward students in grades 2 through 12 and are free of charge to classrooms. Select a topic related to your curriculum, a few optional days, and read the "Additional Information" link regarding how many presentations and students can be accommodated. New presentations under development during the Fermilab's 50th anniversary include computing, engineering, and neutrinos.

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### **NIU STEM Summer Residential Programs**

Campers entering grades 5 through 7 can investigate the science and engineering used to make their favorite rides or concoctions at an amusement park in [Engineering Amusement](#), at NIU, DeKalb.

Campers entering grades 7 – 9 have a dozen choices of ways to [Explore STEM](#), either at our Lorado Taft Field Campus in Oregon, IL or our main campus in DeKalb, IL.

Campers entering 10<sup>th</sup> through 12<sup>th</sup> grade can explore one of eight [STEM Career](#) areas each of three weeks the camp is offered this summer at NIU DeKalb.

General questions and camp fees for the above can be found here.

<http://niu.edu/stem/programs/camps/index.shtml>

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Do your students deserve to be recognized? We are preparing next year's [BirdSleuth Investigator](#) and we invite you to submit your students' investigations and artwork. [Send us your submissions](#) by **June 30th** for consideration.

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### **Classroom Resources**

**There are scientists lined up, waiting to Skype with classrooms.** They just need the classrooms that want to connect with them. Sarah McAnulty, a Ph.D. student, started an outreach program where classrooms and scientists are matched for Skype session. She says that she has an overflow of scientists signed up, but is short on classrooms. I thought this community might be interested in this opportunity. If you have an interest in participating, the sign-up form and more information can be found at this link: [Skype a Scientist](#). (The form allows you to specify what subject matter would be most useful to your curriculum.)

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[OVER 70 NEW Earth and Space Sciences Digital Resources, produced by WGBH and available on PBS LearningMedia™](#). Developed through **WGBH's Bringing the Universe to America's**

**Classrooms project**, in collaboration with NASA, these innovative digital media resources leverage satellite images, data visualizations, and videos drawn from NASA, as well as such WGBH signature programs as NOVA and PEEP AND THE BIG WIDE WORLD. Digital media contextualized for K-12 on sunspots, shadows, the sun, climate, minerals, water, climate, and more. The resources in this collection were developed with input from a group of teacher advisors from across the country, and are just the start of work that will continue over the next four years.

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**Create a Sustainable Garden** to feed you, your school, your community. Not sure what environmental sustainability is? Well, environmental sustainability is maintaining the levels in which our renewable and non-renewable resources are being used so they do not disappear! Examine methods of practicing sustainable gardening and learn how to tend a sustainable garden. [Explore More](#)

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### **Great Deals and Latest Links**

The IDNR and its partners in the monarch initiative are collecting information about educational activities related to monarch butterflies. If you conducted any **activities in 2016 or 2017 related to educating people in Illinois about monarch butterflies** or to enhancing or developing monarch habitat in Illinois, please send us a brief description (no more than three sentences) describing each activity. Include the date, a description of the activity, the targeted audience (if an educational activity), the organization or person leading the activity and an email address for someone who can answer questions about the activity. Submit the information to [dnr.teachkids@illinois.gov](mailto:dnr.teachkids@illinois.gov). We will post the information on the IDNR Web site at <https://www.dnr.illinois.gov/education/Pages/monarchgen.aspx>. This Web site is not intended to promote upcoming activities. We want to share information about efforts that have already taken place to help monarchs and their habitat. We will continue to accept information through 2017 and beyond. Please do not send photos. Thank you!

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Achieve has released the [NGSS District Implementation Indicators](#), a document outlining important indicators of successful NGSS implementation at the district level and highlighting examples of measurable action steps that districts can take to clearly define and achieve desired implementation goals. The full resource is available [online](#).

Designed primarily for district leaders, this document outlines thirteen important indicators of successful implementation at the district level and illustrates what a transition to the NGSS looks like in three broad categories. Each indicator is written as a declarative statement that describes a concrete, high-level outcome from one area of science standards implementation. The indicators were developed by Achieve with support from state, district, and local educators, and based upon key recommendations from the National Research Council's [Guide to Implementing the Next Generation Science Standards](#).

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### **WHAT IS SCIENCE MATTERS?**

Science Matters is an initiative of the National Science Teachers Association promoting quality science education, through the sharing of information, resources, and professional development opportunities. Each state has a Science Matters Coordinator whose primary role is to be the point of contact for distribution of science resources and opportunities to the state network.

The Illinois state coordinator is Mary Lou Lipscomb: [mllscience@aol.com](mailto:mllscience@aol.com).