

CONFERENCE  
PREVIEW

**NATIONAL CONFERENCE**  
*on* **SCIENCE EDUCATION**  
**CHICAGO**  
**MARCH 12-15, 2015**

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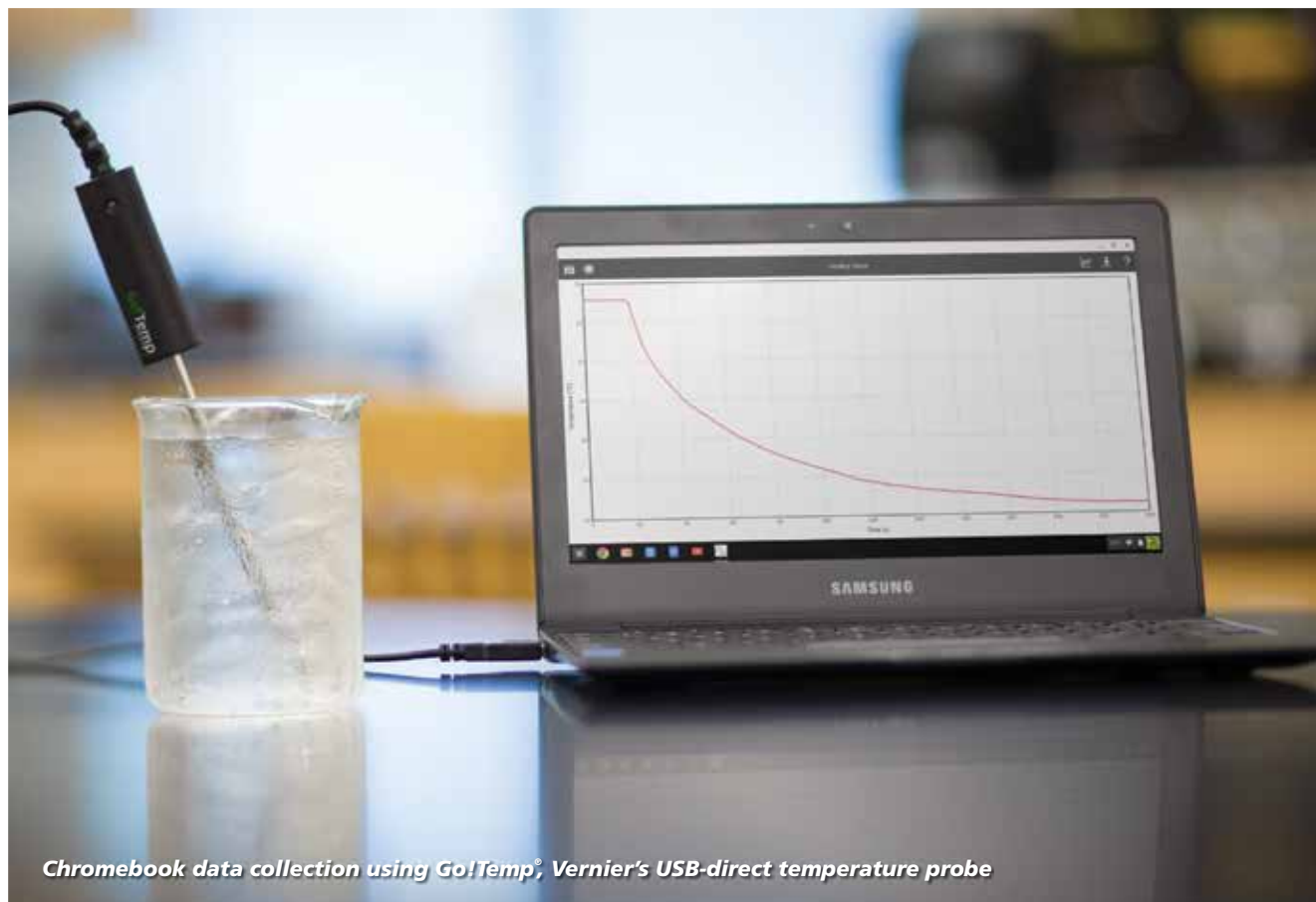


**Great Lakes/Great Ideas**

**#NSTA15**

**NSTA** National  
Science  
Teachers  
Association

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# 10 REASONS TO GO

**PERFORMANCE** You and your students deserve to be excellent in science.

**LEADERSHIP** New skills, knowledge, and activities enable educational leaders to influence others to do extraordinary things.

**DISCOVERY** Looking at the world with a new perspective brings innovation and creativity into the classroom.

**MOTIVATION** Expert speakers, educators, and scientists inspire and stimulate.

**PASSION** Sharing it with your peers, your mentors, and the leaders in science education is contagious.

**EXPERTISE** Educators are best when they are well-versed in their field.

**INSPIRATION** You'll hear stories from renowned authors and presenters that will move you to act.

**GROWTH** Your conference experience will expand your world personally and professionally.

**FREEBIES** Exhibiting companies from across the nation will offer you hundreds of classroom giveaways, new products, and samples.

**CONNECTIONS** You'll meet peers, mentors, leaders, and acquaintances for support and friendship.

## NSTA CONFERENCES ON SCIENCE EDUCATION

### WHY ATTEND?

It's simple. This premier conference brings together science education leaders and experts with educators who are interested in personal and professional growth. Our sessions, presentations, and workshops are designed to provide you with content, concepts, and strategies that you can take back to your classroom, your school, or your district.

This is the forum to start discussions about science education from the broadest perspective of the *Next Generation Science Standards* to the very specifics of skills and techniques that improve performance in the classroom. Teachers from every grade band and discipline—preservice to the most experienced curriculum administrator—are encouraged to attend and let their voices be heard. You can count on compelling and relevant information, techniques, and resources to energize your instruction and invigorate your career.

We invite you to think big and expand your mind. Experience new ideas, network with your peers, gather educational materials, view the newest products, and get inspired by an extraordinary group of science educators. Share your passion as you continue on your journey to becoming the best educator you can be.

### WHO SHOULD ATTEND?

- PreK–12 Science Teachers
- Science Coordinators
- Curriculum Specialists
- Administrators
- Principals
- College Education Methods Professors
- College Science Educators
- Policy Makers
- Industry Advocates
- International Educators
- College Science Education Students



The environment is important to science educators. These programs are recyclable and were printed on recycled paper.

# CHICAGO: GREAT LAKES/GREAT IDEAS

For complete descriptions and biographical information, visit [www.nsta.org/chicagospeakers](http://www.nsta.org/chicagospeakers).

Follow your favorite speaker on Twitter! See our featured speakers' Twitter handles on these pages or search on #NSTA15.

## KEYNOTE SPEAKER



Speaker is sponsored by Howard Hughes Medical Institute.

### Your Inner Fish

#### Neil Shubin @NeilShubin

Robert R. Bensley Professor of Organismal Biology and Anatomy, and Associate Dean for Academic Strategy, University of Chicago; and host of the PBS show *Your Inner Fish*

Neil Shubin's research focuses on the evolution of new organs, especially limbs. Neil has conducted fieldwork in Greenland, China, Canada, and much of North America and Africa and has discovered some of the earliest mammals, crocodiles, dinosaurs, frogs, and salamanders in the fossil record. One of his most significant discoveries, the 375-million-year-old *Tiktaalik roseae* fossil, is considered an important transitional form between fish and land animals.

Join Neil as he tells the story of evolution by tracing the organs of the human body back millions of years, long before the first creatures walked Earth.

## STRAND

### Natural Resources, Natural Partnerships

Sustaining natural resources requires collaborative partnerships among many stakeholders, and science is the key to making smart decisions about resources. Educators and students can engage with environmental groups, agencies, and businesses to build and support a sustainable future. This strand will help teachers identify possibilities and potential partnerships.

## FEATURED PRESENTATION

### Beasts at Bedtime: Revealing the Embedded Environmental Curriculum in Classic Children's Literature



#### Liam Heneghan @DublinSoil

Chair and Professor of Environmental Science and Studies and Co-Director of the Institute for Nature and Culture, DePaul University

As an ecosystem ecologist, Liam Heneghan has studied the impact of acid rain on soil foodwebs in Europe, and inter-biome comparisons of decomposition and nutrient dynamics in the forested ecosystems in North America and the tropics. Currently, his work involves restoration issues in Midwestern ecosystems. He is also co-chair of the Chicago Wilderness Science Team, a regional alliance dedicated to protecting nature and enriching life.

### More sessions on Natural Resources...

- Developing Partnerships: A Model of Outdoor Education
- The Biodiversity Project
- Birds and Buds: Citizen Science in Your School Yard
- Doing Service and Science in Your Local Forest Preserves
- On-the-Ground Stewardship + Great Lakes Science = A Five Star Place-based Education Program
- DataStreame: Earth's Climate System
- No Child Left Inside
- Green Proposals to Meet NGSS and CCSS ELA

Visit the Chicago Session Browser/Personal Scheduler ([www.nsta.org/chicagobrowser](http://www.nsta.org/chicagobrowser)) for a complete list of events.

## STRAND

### Teaching Every Child by Embracing Diversity

All classrooms are diverse. Learners bring a variety of cultures, backgrounds, and experiences to the study of science. Educators must provide opportunities to meet the needs of all students, including English language learners, students with special needs, and those with diverse learning styles and abilities. Successful instructional approaches must address methods, materials, facilities, and partnerships. These sessions will confirm the belief that every student can excel in science.

### FEATURED PRESENTATION

#### Next Generation Science Standards and English Language Learners: The Development of Deep and Generative Practices



#### Aída Walqui

Director, Teacher Professional Development, WestEd

As director of the Teacher Professional Development Program at WestEd, Aída Walqui is responsible for The Strategic Literacy Initiative and the Quality Teaching for English Learners. A native of Perú, Aída received her *Licenciatura in Literature from the Universidad Nacional Mayor de San Marcos* in Lima. She holds a master's degree in socio-linguistics from Georgetown University, and a PhD in language, literacy, and culture from Stanford University.

#### More sessions on Embracing Diversity...

- Girls Engaged in Math and Science (GEMS): Using Culturally Responsive Engineering Design Challenges to Promote STEM
- Science for BI(all)ck Children: Making Meaning Through Language and Culture
- They May Learn Differently, But They Can Learn, Can't They?
- *Aprendamos Juntos!* (Let's Learn Together): Embracing Native Languages in Non-bilingual Classrooms to Build Intermediate Science Literacy in English
- Using Universal Design for Learning (UDL) Principles to Enhance Science Learning Experiences for Students with Special Needs
- A New Movement: Thinking on Your Feet

## STRAND

### The Science of Design: Structure and Function

Architecture and engineering provide the infrastructure for human-made systems. Designing for the future requires imagination and a commitment to sustainability. It also involves the crosscutting concepts of structure and function and the practices of science and engineering. Communities like Chicago provide examples of great design and great science.

### FEATURED PRESENTATION

#### The Power of Play



—Courtesy of @Marc Hauser

#### Peter Exley @funarchitect

Director of Architecture and Co-founder, Architecture is Fun, Inc.

An architect, designer, and advocate for interactive public environments, Peter Exley is committed to construction of new paradigms in pedagogy, play, and participatory experience. In 1994, he founded Architecture is Fun, a firm devoted to designing substantive play environments for adults and children. His portfolio includes the DuPage Children's Museum and the Children's Museum of Fond du Lac. He is also an adjunct professor of Architecture and Interior Architecture at the School of the Art Institute of Chicago.

#### More sessions on the Science of Design...

- "Buddy Up" to NGSS Through Companion Lessons
- Facilitating Interdisciplinary STEM Learning Through Biomechanics
- The Maker Movement
- Engineering Design Inspired by Nature
- Color Your World: Learn How LEDs Can Mix and Match Colors, and Use Them to Design a Scene
- Think Tank to Shark Tank: Engineering to Entrepreneurship
- Discovery Box Engineers: Growing a STEM Classroom



# STRAND

## Student Learning—How Do We Know What They Know?

The goal of every teacher is to maximize student learning. Monitoring learning is the responsibility of both the teacher and the student. To successfully monitor learning requires authentic assessment, including formative and summative strategies. The progressions embedded in the NGSS provide opportunities for students to engage in the practices of science and engineering; these should be assessed through a variety of modalities.

## FEATURED PRESENTATION

### Measuring What Matters: Challenges and Opportunities in Assessing Science Proficiency



#### James Pellegrino

Liberal Arts & Sciences Distinguished Professor, Distinguished Professor of Education, and Co-Director of the Learning Sciences Research Institute, University of Illinois at Chicago

James Pellegrino has led several National Academy of Science/National Research Council study committees, including the Committee on the Foundations of Assessment, which issued the report *Knowing What Students Know: The Science and Design of Educational Assessment*. He will consider the implications of NGSS for assessment design and use as well as illustrate principled ways to build the assessment tools needed to support teaching and to monitor progress in attaining the standards.

### More sessions on How We Know What They Know...

- What Do Students Think They Know? Improving Assessment Through Student Choice and Self-Reflection
- Power Learning: Success Strategies for Meaningful Understanding in the Middle School Science Classroom
- Astronomical Assessments
- Immediate Student Feedback Without Those Expensive Clicker\$
- Authentic Assessment and the NGSS
- Classroom-ready Inquiry Labs for Biology and Chemistry
- Interactive Science Notebooks as Integrative Assessment Tools

## MORE FEATURED SPEAKERS

### MARY C. McCURDY LECTURE

**The Next Generation Science Standards:  
All Standards, All Students**



#### Okhee Lee

Professor, Steinhardt School of Culture, Education, and Human Development, New York University

Okhee Lee was a member of the writing team to develop the *Next Generation Science Standards (NGSS)* and leader for the NGSS Diversity and Equity Team through Achieve, Inc. She is also a member of the Steering Committee for the Understanding Language Initiative at Stanford University. Her current research involves the scale-up of a model of a curricular and teacher professional development intervention to promote science learning and language development of English language learners.

### ROBERT H. CARLETON LECTURE

**Building Capacity in Best Practices for STEM Teaching and Learning**



#### Jack Rhoton

Professor Emeritus and Executive Director, Center of Excellence in Mathematics and Science Education, East Tennessee State University

Jack Rhoton's commitment to science education spans nearly five decades. He joined ETSU as professor of science education in 1987 where he served as executive director of the Center of Excellence in Mathematics and Science Education. His special interest has focused on teacher professional development and restructuring of science education as it relates to improving teaching practices. Widely published, Jack has edited and written numerous books, including the NSTA Press® book, *Science Education Leadership: Best Practices for the New Century*. He has received \$10 million in grant funding to support math and science education in Northeast Tennessee.

## MORE FEATURED SPEAKERS

### FEATURED PRESENTATION

**Connected Learning: Emerging Contexts for Deeper Engagement**



**Samuel E. Dyson**  
**@samueledyson**

Director, Hive Chicago Learning Network

A 2007 recipient of the Golden Apple award for excellence in teaching, Samuel Dyson has 10 years of physics teaching experience within the Chicago Public Schools. Currently, he is director of the Hive Chicago Learning Network, a MacArthur-supported initiative to enact connected learning among teens and educators through a community of youth-serving organizations. His work explores the power of networks to solve complex challenges inherent in the work of teaching and learning. He holds a bachelor's degree in physics from Yale University and a master's degree from the Harvard Graduate School of Education.

### NGSS FEATURED PRESENTATION

**The Key to Implementing the NGSS? Teachers!**



**Stephen L. Pruitt**  
**@DrSPruitt**

Senior Vice President for Content, Research and Development, Achieve, Inc.

Join Stephen as he talks about the critical leadership role teachers need to play to support quality science education for all students. He will also introduce educators to new tools to support them as they implement the NGSS. For the past four years, Stephen has been leading the development of the NGSS. Between 2003 and 2010, he held various roles at the Georgia Department of Education, culminating with him being named chief of staff to the state school superintendent. He also served on the National Academies of Science's Committee on Conceptual Framework for New Science Education Standards, which developed the *Framework*.

## ELEMENTARY EXTRAVAGANZA

**Friday, March 13, 2015**

**8:00-10:00 AM • Skyline W375c  
McCormick Place**

- Hands-on activities
- Preview science trade books
- Learn about award and grant programs
- Walk away full of ideas and arms filled with materials
- Door prizes and refreshments—Win an iPad!
- 100+ presenters

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Organizations participating in the Elementary Extravaganza include the Association of Presidential Awardees in Science Teaching, the Council for Elementary Science International, the NSTA Committee on Preschool-Elementary Science Teaching, *Science & Children* authors and reviewers, and the Society of Elementary Presidential Awardees.



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## MORE FEATURED SPEAKERS

### PAUL F-BRANDWEIN LECTURE

Teaching Tomorrow's Conservation Leaders:  
Lessons from Aldo Leopold



#### Curt Meine

Senior Fellow, The Aldo Leopold Foundation

As a senior fellow at The Aldo Leopold Foundation, Curt Meine is dedicated to promoting the global legacy of Aldo Leopold, considered by many as the father of wildlife management and of the United States' wilderness system. Curt has authored several books, including the biography *Aldo Leopold: His Life and Work* and *Correction Lines: Essays on Land, Leopold, and Conservation* (2004). Curt will share the timelessness of Leopold's work and how it may be used to cultivate environmental leadership for students of the 21st century as we build a land ethic in this new century.

*Speaker is sponsored by Paul F-Brandwein Institute, Inc.*

### AMERICAN GEOPHYSICAL UNION (AGU) LECTURE

Abrupt Climate Change—Past, Present, and Future



#### Jim White

Director, Institute of Arctic and Alpine Research, University of Colorado Boulder

Author of more than 150 peer-reviewed publications, Jim White wears many hats—he is the director of the Institute of Arctic and Alpine Research, a professor in the Department of Geological Sciences, and he is also instrumental in the Environmental Studies Program at the University of Colorado (CU). His research interests are broad, but all revolve around human impacts on the environment. Specific areas of research include studying the global carbon cycle and reconstructing past environmental conditions using ice cores. He is working now on new deep ice cores in Greenland as well as Antarctica.

*Speaker is sponsored by the American Geophysical Union.*

### NSTA/ASE HONORS LECTURE

Exploring Classroom Assessment in Science—From  
Research to Classroom Practice



#### Chris Harrison

Senior Lecturer in Science Education,  
Dept. of Education & Professional  
Studies,  
King's College London

Chris Harrison worked as a science teacher in London schools for 13 years before joining King's College London in 1993 to oversee their Initial Teacher Training course and begin a research career looking at both thinking skills and assessment. Recently, Chris has led two large European Union projects looking at inquiry-based learning in science, mathematics, and technology classrooms. These two projects have enabled Chris to return to her passion—science teaching—and early findings from these projects have helped teachers in the U.K. rethink how they might do assessment in science classrooms.

*Speaker is sponsored by The Association for Science Education.*



—Courtesy of Michael Weiss



# The Best Place to Explore the Next Generation Science Standards

Take a deep dive into the NGSS with a special one-day event free to all conference attendees!

**Friday, March 13, 2015 • 8:00 AM–5:00 PM**  
**W183 a/b, McCormick Place**

**NGSS@NSTA**  
**STEM STARTS HERE**



Participate in one or more presentations:

8:00–9:00 AM—Implementing the Vision of the *Framework* and *Next Generation Science Standards*

(Presenter: Michael Lach)

9:30–10:30 AM—Helping Students Make Sense of the World with Next Generation Science and Engineering Practices

(Presenter: Brian Reiser)

11:00 AM–12 Noon—Developing and Evaluating Three-Dimensional Curriculum Materials (Presenter: Joe Krajcik)

12:30–1:30 PM—Assessing NGSS in the Classroom

(Presenters: Christopher Harris, Angela DeBarger, and Bill Penuel)

2:00–3:00 PM—Curriculum Planning the NGSS Way

(Presenter: Stephen Pruitt)

3:30–5:00 PM—Implementing NGSS: Stories from the Front Lines (Panel Discussion)

## CALLING ALL MIDDLE SCHOOL EDUCATORS

**Friday, March 13, 2015 | 10:00 AM–4:00 PM | McCormick Place**

**\*Must be registered for the conference to attend\***

Join us for a special **“Meet Me in the Middle Day,”** designed just for middle school educators, at **NSTA’s 2015 National Conference in Chicago!**

The day’s events will include a networking session, more than a dozen presentations specifically for middle school educators, and an afternoon share-a-thon featuring more than 100 presenters. You’ll walk away with ideas you can put to use in your classroom tomorrow! Presenters include Ken Roy, Dick Moyer, Page Keeley, Dinah Zike, Michael Bowen, Christine Royce, Nicholas Nicastro, and many others!

*Organized by the National Middle Level Science Teachers Association (NMLSTA)*



Attend for a chance to win an iPad mini  
and other door prizes!

**[www.nsta.org/chicago](http://www.nsta.org/chicago)**

*Sponsored by It’s About Time*



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# PROFESSIONAL DEVELOPMENT INSTITUTES

Come learn how the NGSS will impact your teaching at our PDIs, which are scheduled on Wednesday, March 11, 9:00 AM to 4:00 PM. PDI-1 through PDI-3 are each followed by one or two days of pathway sessions that offer further exploration of the topics covered. For complete descriptions and to purchase tickets, visit [www.nsta.org/chicagobrowser](http://www.nsta.org/chicagobrowser). (Tickets Required)

## **Moving Standards into Practice: Five Tools and Processes for Translating the NGSS into Instructional Sequences and Classroom Assessments (PDI-1)**

**Audience:** K-12 Teachers, Curriculum Supervisors, Science Supervisors, Administrators, and Professional Development Providers

**Ticket Price:** \$150; by preregistration only

This PDI will share a set of tools and processes that can help deepen your knowledge and enable you to translate the NGSS into instructional sequences that can engage students in using science and engineering practices and that highlight the crosscutting concepts. Focused on adapting existing curriculum and assessments rather than curriculum development, the set of tools and processes can help you translate the NGSS into instructional units that include performance tasks and opportunities for formative assessment.

## **Designing Effective STEM Lessons Incorporating NGSS: What Does it Look Like? (PDI-2)**

**Audience:** Grades 3-12 Teachers, Curriculum Supervisors, Science Supervisors, Administrators, and Professional Learning Providers

**Ticket Price:** \$150; by preregistration only

In this workshop participants will work with key strategies for planning STEM/NGSS lessons; explore effective strategies that develop student understanding; promote a positive learning environment and address NGSS; review sample STEM lessons to recognize which types of lessons are most appropriate for different STEM models; and survey a variety of community-based STEM programs (Citizen Science) to identify ongoing science research that can make learning relevant for your students.

## **Leadership for the Next Generation Science Standards' Practices of Science (PDI-3)**

**Audience:** K-12 Teacher Leaders, Curriculum Supervisors, Science Supervisors, Administrators, and Professional Development Providers

**Ticket Price:** \$150; by preregistration only

How well do educators with whom you work understand the NGSS? How well are they able to support student learning at the nexus of the three dimensions of the NGSS? Participants will engage in a short science-based learning experience to launch conversations and the study of the NGSS, consider supports needed by teachers and their students to learn at the intersection of the three dimensions of the NGSS, and explore professional development strategies that support teacher learning. We will analyze video of both classroom practice and the practice of PD leaders.

## **PDI One-Day Work Sessions**

### **Developing Next Generation Science Assessments (PDI-4)**

**Audience:** K-12 Teachers, Curriculum Supervisors, Science Supervisors, Administrators, and Professional Development Providers

**Ticket Price:** \$150; by preregistration only

Participants will be introduced to a design process for creating summative and formative assessments aligned to the NGSS. Participants will learn how to interpret the NGSS performance expectations (PEs) with a focus on using PEs to design classroom-based assessments. Through group work, discussion, and video, participants will learn formative assessment strategies to apply when engaging students actively in using disciplinary core ideas through argumentation, modeling, and constructing explanations. Participants will also learn strategies that recognize and draw on the diverse cultural and linguistic resources that students bring to the science classroom.

### **Promoting Equity and Alignment to the NGSS in Curriculum and with Teaching Using the EQUIP and the EQUALS Rubrics (PDI-5)**

**Audience:** K-12 Teachers, Curriculum Supervisors, Science Supervisors, Administrators, and Professional Development Providers

**Ticket Price:** \$150; by preregistration only

The *Framework* and NGSS lead the charge in promoting equity in STEM learning and equal access to STEM colleges and careers for all learners. The *Framework* and NGSS have major implications for curriculum materials, because curriculum can enable students to navigate the shifts in the NGSS and meet the three-dimensional learning goals when paired with instruction. The EQUIP Rubric provides criteria for measuring the alignment and overall quality of lessons and units with respect to the NGSS. The Equals Rubric is designed to break down key criteria for equal access and ownership of learning that should be present in science lessons to assist reflective teaching. This in-depth workshop will arm you with the expertise needed to use these tools to evaluate, design, develop, and modify curriculum and teaching for three-dimensional learning, and meet the needs of all students to support achieving the NGSS.

### **Building STEM Capacity with NGSS: Addressing Science and Engineering in the Next Generation Science Standards (PDI-6)**

**Audience:** K-12 Teachers, Curriculum Supervisors, Science Supervisors, Administrators, and Professional Development Providers

**Ticket Price:** \$150; by preregistration only

Engineering in the *Next Generation Science Standards* has two different but complementary meanings—as a practice and as a core idea. This PDI will help educators in states, districts, and schools develop a systematic way of thinking about how best to incorporate the core ideas of engineering in science curricula. The goal of this effort is for students to develop an explicit understanding of the core ideas of engineering, while they also become more skillful in using engineering practices. At the end of the PDI, participants will be able to plan an integrated unit.

# CONFERENCE SCHEDULE

Make your own conference schedule using the Chicago Session Browser/ Personal Scheduler ([www.nsta.org/chicagobrowser](http://www.nsta.org/chicagobrowser)). Browse events by day, format, subject, grade level, conference strand, sponsor, or keyword.

		Life Science	Physical Science	Earth / Space Science	Engineering and Technology	General Science Education	Informal Science Education	PRESENTATION	WORKSHOP
Elementary	Thurs., 8:00–9:00 AM—Using NASA to Explore Your Universe from Inner to Outer Space			•				•	
	Thurs., 3:30–4:30 PM—Connect Students of Poverty to Their Community				•			•	
	Fri., 8:00–9:00 AM—Teach Astronomy to Third-Graders? Our Solar System: A Collaborative Project			•				•	
	Fri., 9:30–10:30 AM—Let's Get Physical—From Force and Friction to Water and Weather		•						•
	Fri., 12:30–1:30 PM—Nature, One Game at a Time: Eco Stewardship via Augmented Reality Games						•	•	
	Sat., 8:00–9:00 AM—Going Beyond Data Collection: Sharing in a Science Classroom					•		•	
	Sat., 12:30–1:30 PM—Assessing Three-Dimensional Learning in the Next Generation Science Standards	•							•
	Sun., 8:00–9:00 AM—Your Kids Can, Too! Scientific Argumentation for All Students	•							•
	Sun., 9:30–10:30 AM—Discovery Box Engineers: Growing a STEM Classroom				•			•	
Middle Level	Thurs., 8:00–9:00 AM—RIPD 3-D: Rigorous Inquiry-based Professional Development				•			•	
	Thurs., 12:30–1:30 PM—Design Challenges for Middle School				•			•	
	Fri., 8:00–9:00 AM—Cosmetic Chemistry: A Hands-On Unit to Engage Students		•					•	
	Fri., 11:00 AM–12 Noon—TQuantifying Earth Systems for Strengthening Mathematics Skills			•				•	
	Fri., 12:30–1:30 PM—Using Authentic Performance Assessment to Structure Physics First Curriculum		•					•	
	Fri., 3:30–4:30 PM—Incorporating the Practice of Argumentation into High School Biology	•						•	
	Sat., 8:00–9:00 AM—Using an Intertextual Approach for Teaching Disciplinary Core Ideas in Science					•		•	
	Sat., 9:30–10:30 AM—They've Inquired: How Do I Know What They Know?					•		•	
	Sat., 2:30–3:00 PM—Climate Change MADE CLEAR						•	•	
	Sat., 3:30–4:30 PM—Why Does the Earth Quake in the Central U.S.?			•				•	
	Sun., 9:30–10:30 AM—Partnerships for World Class STEM Education: Using the Resources Outside Our Doors						•	•	
	Sun., 11:00 AM–12 Noon—Disease Detectives: Meningitis	•							•
High School–College	Thurs., 8:00–9:00 AM—Teaching Statistical Analysis Using Spreadsheets Simulation Models and Resampling in AP Biology	•							•
	Thurs., 12:30–1:30 PM—Assessing the NGSS in the High School Biology Classroom	•						•	
	Thurs., 3:30–4:30 PM—Teacher Education and Informal Science: A Living Partnership						•	•	
	Thurs., 5:00–6:00 PM—Using Modeling Activities in the High School Chemistry Class		•						•
	Fri., 10:00–10:30 AM—High School Archaeology and STEM-based Earth Science			•				•	
	Fri., 4:00–4:30 PM—Hook Your Chemistry Students		•					•	
	Sat., 9:30–10:30 AM—From the News to the Classroom					•		•	
	Sat., 3:30–4:30 PM—Incorporating Engineering Design Principles into High School Science Experiments				•				•
	Sat., 5:00–6:00 PM—They May Learn Differently, But They Can Learn, Can't They?			•					•
	Sun., 8:00–9:00 AM—Crosscutting Educators: Exploring Effective Collaboration Between Formal and Informal Science Sectors						•	•	



# SOCIAL FUNCTIONS

## 10th Annual NSTA Global Conversations in Science Education Conference (in collaboration with ICASE and CESI) (M-1)

**Wednesday, March 11, 1:00-5:30 PM**

**Ticket: \$10; by preregistration only**

NSTA in collaboration with the International Council of Associations for Science Education (ICASE) and the Council for Elementary Science International (CESI) have planned a day dedicated to science education from an international perspective. The theme of this mini-conference is Sharing International Classroom Perspectives of Science: PreK-16. The day begins and ends with plenary talks by distinguished international scholars and also includes a series of interactive panels consisting of teachers, researchers, and policy makers on special topics, and a poster session with a full complement of papers.



## High School Breakfast (M-2) Friday, March 13, 7:30-9:00 AM Ticket: \$45 advance; \$50 on-site

As a biology teacher for 22 years at Rocky River High School, Ann Brokaw extends her passion for working with students to providing professional development for teachers. Ann

is the recipient of the 2013 Kim Foglia AP Biology Service Award from NABT. Join Ann as she shares how "We Must Never Cease to Learn."



## NSTA Teacher Awards Gala (M-3)

**Friday, March 13, 6:00-8:45 PM**

**Ticket: \$75 advance; \$80 on-site**

Come enjoy a fabulous evening celebrating with this year's teacher award recipients! ALL of the teacher awards will be presented in one grand evening. Evening attire is requested to honor our teacher award recipients.



## NSTA/SCST College Luncheon (M-4)

**Saturday, March 14, 12 Noon-1:30 PM**

**Ticket: \$60 advance; \$65 on-site**

Join us for this luncheon with Marcy Towns, the recipient of this year's SCST Outstanding Undergraduate Science Teacher Award.

She is a professor of Chemistry, Associate Department head, and director of General Chemistry at Purdue University. In 2013, Marcy received Purdue's most prestigious honor for teaching, the Murphy Award, as well as the chemistry department's the Arthur B. Kelly Award.



## CESI/NSTA Elementary Science Luncheon (M-5)

**Saturday, March 14, 12 Noon-2:00 PM**

**Ticket: \$60 advance; \$65 on-site**

Join us for a luncheon with curriculum experts from the Learning Design Group at the Lawrence Hall of Science. Traci Wierman (pictured at right) is leading the curriculum implementation efforts for the many projects that comprise the Learning Design Group portfolio, including AfterSchool KidzScience™, GEMS®, Seeds of Science/Roots of Reading® and the new Amplify Science program. Rebecca Abbott (at left) taught in elementary schools in the San Francisco Bay Area for 12 years and was an ELL and literacy instructional coach for five years before joining the team at the Lawrence Hall of Science.



## SOCIAL FUNCTIONS



### **Pi Day Celebration for Preservice/New Teachers and First-Time Conference Attendees (M-6)**

**Saturday, March 14, 4:00–6:00 PM**

**Ticket: \$15 advance; \$20 on-site**

President Juliana Texley is extending a special invitation to Preservice/New Teachers and/or First-Time Conference attendees to join her and other members of NSTA in a special pizza pie and beverage reception in honor of Pi Day.

Dancing later! (See ad below).



### **NSELA/ASTE Luncheon**

**Friday, March 13, 12 Noon–2:00 PM**

**Tickets available through NSELA  
website**

Jeanne Century, director of Outlier Research & Evaluation at the University of Chicago's Center for Elementary Mathematics and

Science Education (CEMSE), will address what it will take to bring lasting change to STEM education. For details and to purchase tickets, visit [www.nsela.net/nsela-aste-luncheon](http://www.nsela.net/nsela-aste-luncheon).



## *Celebrate Einstein's Birthday ... with a Salute to the Blues Brothers!*

**Saturday, March 14, 8:00–10:00 PM**

**Regency Ballroom, Hyatt Regency McCormick Place**

President Juliana Texley is inviting you to join her for an evening of dancing and celebration on Saturday, March 14, from 8:00 to 10:00 PM.

Professor Einstein will be joining us in celebration of his birthday. Additional evening entertainment will include a salute to the Blues Brothers!

*Cash bar. No registration or cost required.*

[www.nsta.org/chicago](http://www.nsta.org/chicago)





## EDUCATIONAL TRIPS

Discover what Chicago has to offer on one of our ticketed educational trips. For complete descriptions and to purchase tickets, visit [www.nsta.org/chicagobrowser](http://www.nsta.org/chicagobrowser). (Tickets Required)

### **Global Conversations, Welcome to My Classroom (W-1)**

**Date:** Wednesday, March 11, 6:30 AM-12:10 PM  
**Ticket Price:** \$33 advance; by preregistration only

Welcome to My Classroom is a program sponsored by the International Advisory Board intended primarily for our international participants to view a science classroom. This year's program is cosponsored by Stevenson High School and Daniel Wright Middle School, both recipients of the National Blue Ribbon Award. The morning will start at the Rivershore Nature Center where a light breakfast will be provided. The morning activities will be introduced by the two school district's leadership followed by a short program on ecology classes at the Nature Center. Then participants will be divided into two groups to observe a classroom at one of the schools.

### **World-Class Neutrino Science on the Prairie (T-1)**

**Date:** Thursday, March 12, 11:30 AM-6:00 PM  
**Ticket Price:** \$46 advance; \$52 on-site

Join us for this visit to Fermilab, America's world-class neutrino laboratory. Hear from scientists and engineers about what they do. The field trip also includes a choice of one of two hands-on programs: the prairie program (appropriate for grades K-8 teachers) and the physics program (appropriate for grades 6-12 teachers). You will learn about the extensive STEM instructional resources at the Teacher Resource Center. Lunch is not included, however, a small snack will be provided for the trip back to Chicago. Travel time is 1.5 hours each way. For more information, visit [ed.fnal.gov](http://ed.fnal.gov).

### **A Guided Tour of the History and Features of Burnham Park, Chicago (T-2)**

**Date:** Thursday, March 12, 1:00-5:15 PM  
**Ticket Price:** \$8 advance; \$14 on-site

Join the Illinois State Geological Survey and the Chicago Park District as we explore the park and the natural beach processes of Lake Michigan at Burnham Park. Participants will be bused through the park and features of the park will be explored on foot as weather permits. While visiting the Northerly Island Visitor Center, participants will see how the Chicago Park District inspires families to get outdoors and appreciate nature. Learn about fossils and mineral resources of Illinois as well as listen as historians and an archaeologist describe historic park events, such as the 1933 World's Fair. This field trip is funded, in part, by an Illinois Department of Natural Resources, Coastal Management Grant with funds from NOAA.

*Note:* Remember to dress for the weather.

### **Modern Skyscrapers (1950s to Present) (T-3)**

**Date:** Thursday, March 12, 1:15-4:15 PM  
**Ticket Price:** \$44; by preregistration only

Home to the second tallest building in the Western Hemisphere and where the world's first skyscraper was built, Chicago is internationally renowned for its historic and modern architecture. We will examine many of the buildings that helped earn Chicago this reputation, from the elegant minimalism of Mies van der Rohe's Federal Center to the brawny expressiveness of the Richard J. Daley Center.

*Note:* Remember to dress for the weather and wear comfortable shoes. Must be able to walk long distances.

### **Shedd Science: The Greatness of the Great Lakes (F-1)**

**Date:** Friday, March 13, 8:30 AM-1:00 PM  
**Ticket Price:** \$48; by preregistration only

Connect with Shedd Aquarium scientists and learning experts for one-on-one conversations with Shedd scientists studying





the Great Lakes and its biodiversity. Learn about citizen science opportunities for you and your students and other stewardship activities to help make your classroom green. Outdoor activities included, weather permitting. Meals are not included; there will be an opportunity to purchase a meal at the aquarium at the conclusion of the field trip.

*Note:* Remember to wear comfortable shoes and dress for the weather.

### **A Day of Learning and Fun at Brookfield Zoo (F-2)**

**Date:** Friday, March 13, 8:45 AM-4:15 PM

**Ticket Price:** \$89; by preregistration only

Come enjoy the magic and beauty of Brookfield Zoo. Get up-close and personal with the animals in a behind-the-scenes tour. Choose one of 16 behind-the-scenes tours and then the zoo is yours to enjoy during the day. Go to [www.nsta.org/docs/2015NationalBrookfieldZoo.pdf](http://www.nsta.org/docs/2015NationalBrookfieldZoo.pdf) for complete descriptions of each of the tours. Each behind-the-scenes tour is limited to 8 to 16 people. Once you preregister for the field trip, a zoo representative will contact you about your tour selection prior to the conference. The day also includes a box lunch and tickets to the 2:30 PM Dolphins in Action presentation. This is a rare opportunity to explore a zoo area/animal that has always interested you.

*Note:* Remember to dress for the weather and wear comfortable walking shoes. Each participant must sign a medical waiver/guest agreement. No photography is allowed for the behind-the-scenes tours.

### **Learning Through Collections 101: Using Objects in Your Classroom (F-3)**

**Date:** Friday, March 13, 11:45 AM-3:15 PM

**Ticket Price:** \$43 advance; preregistration only

TheFieldMuseumishometoacollectionofmorethan24million specimens, with scientists adding to and accessing that collection daily. Learn how researchers use collections to advance

science and how you can use these same skills with your students. Learn simple techniques to challenge your students to move from basic observations to deeper questioning, carrying out investigations, and drawing conclusions. Lunch not included. For more information, visit [fieldmuseum.org](http://fieldmuseum.org).

### **Argonne National Laboratory Tour (S-1)**

**Date:** Saturday, March 14, 8:00 AM-1:00 PM

**Ticket Price:** \$31 advance; preregistration only

The nation's first national laboratory, Argonne conducts leading-edge basic and applied scientific research in virtually every scientific discipline. Participants will tour the Advanced Photon Source, the Argonne Tandem Linac Accelerator System (ATLAS), the world's first ion accelerator using superconducting devices for the energy gain, and the Nuclear Energy Exhibit, showcasing Argonne's rich heritage in the development of nuclear reactors and its current role in the development of next-generation reactors and fuel cycle technologies. Travel time is an hour each way.

### **Butterfly Biology (S-2)**

**Date:** Saturday, March 14, 8:00 AM-1:00 PM

**Ticket Price:** \$58 advance; \$64 on-site

Join us at the Peggy Notebaert Nature Museum for content and hands-on activities focused on butterfly biology and conservation. Learn about butterfly bodies, behaviors, and life cycles and how to use real butterflies to add depth to your teaching. Attendees will also learn how to pin a butterfly and practice with a real specimen from the museum's Judy Istock Butterfly Haven. Leave with your own beautiful butterfly specimen and the ability to make authentic butterfly specimens to use in your classroom. After the workshop, there will be an hour to explore the museum on your own.

*Photo credit: Images on page 14 are courtesy of Jim Schulz/Chicago Zoological Society and on page 15, courtesy of ©Jean Lachat/The Field Museum.*

# SHORT COURSES

All short courses are filled on a first-come, first-served basis, so act now! For complete descriptions and to purchase tickets, visit [www.nsta.org/chicagobrowser](http://www.nsta.org/chicagobrowser). (Tickets Required)

## Using Manipulatives to Teach Science in the Special Education and Inclusion Classrooms (SC-1)

**Date:** Thursday, March 12, 1:00-5:00 PM

**Ticket Price:** \$37 advance; \$42 on-site

This short course will focus on using manipulatives to teach science concepts to high school students with a range of learning disabilities from mild/moderate disabilities in an inclusion setting to moderate/severe disabilities in a substantially separate classroom. In groups, engage in several activities using manipulatives to teach content in the areas of biology, chemistry, and physics. Then, develop your own manipulatives and consider how to implement their use in your individual classrooms. Take home electronic handouts and templates for all developed activities.

## Engineering a Story: Integrating Literacy with Engineering Practices (SC-2)

**Date:** Thursday, March 12, 1:00-5:00 PM

**Strand:** The Science of Design: Structure and Function

**Ticket Price:** \$40 advance; \$45 on-site

This short course provides preK–8 teachers with practical methods for integrating engineering practices with literacy. Participants unpack the engineering design process (EDP) by creating an EDP visual that they could share with their students and then follow the process to solve problems found in a children's book. Working in small groups, participants identify problems, develop solutions, prototype, test/evaluate, and share their solutions. *Note:* Participants should bring a book/text that they use in their classrooms (additional preK–8 books will be provided by the presenter for those participants who did not bring a book).

## Ocean Plastic Pollution: Issues and Solutions (SC-3)

**Date:** Thursday, March 12, 1:30-4:30 PM

**Strand:** Natural Resources, Natural Partnerships

**Ticket Price:** \$38 advance; \$43 on-site

Enrich your classroom with NGSS-based activities surrounding plastic pollution issues and solutions. Activities will highlight plastic's physical and chemical properties including density and buoyancy. Emphasis will be not just looking at the impacts of prolific plastic use but also exploring solutions to plastic pollution, alternatives to single-use plastics, and empowering students to tackle environmental problems without experiencing ecofatigue. This short course will include strategies to encourage critical thinking about environmental issues and methods to help students gain awareness and examination of everyday resources and uses. Empower your students to become part of the plastic pollution solution! Door prizes and resources!

## Making Sense of Student Work: A Protocol for Teacher Collaboration (SC-4)

**Date:** Friday, March 13, 8:00-11:00 AM

**Ticket Price:** \$57 advance; \$62 on-site

Participants will take home a copy of WestEd's new book *Making Sense of Student Work* and have the opportunity to experience this research-based approach designed to support groups of teachers looking together at student work in a way that models collaborative inquiry, maintains a focus on evidence, and encourages reflective instructional practices. Explore the five modules in this protocol: Mental Models, Learning Gaps, Next Steps, Analyzing Tasks, and Modifying Tasks. After exploring the topic of matter from the lens of student learners, you will reflect on how this protocol and sequence of five modules





# SHORT COURSES

*Photo credit: Image on the far left on page 16 is courtesy of Joanna Snyder and on the far right page 17, courtesy of Dean Martin.*

can be used in your own school, district, or other professional learning community. For more information, visit [we-mss.weebly.com/making-sense-of-student-work-protocol.html](http://we-mss.weebly.com/making-sense-of-student-work-protocol.html).

## **Supporting K-12 Students in Argumentation Across Reading, Writing, and Talking (SC-5)**

**Date: Friday, March 13, 8:00-11:00 AM**

**Ticket Price: \$22 advance; \$27 on-site**

The NGSS and the CCSS, ELA stress the importance of having students engage in argumentation using evidence. In this short course, we will focus on how to support students in this important scientific practice in K-12 classrooms. We have worked with teachers successfully using a framework that consists of four components: claim, evidence, reasoning, and rebuttal. We will also engage in an investigation using the framework to make sense of phenomenon in both talking and writing and analyze an argumentation reading in terms of the quality of the claim and scientific evidence provided.

## **Engineering Understanding: Applying Science Concepts and Building Academic Language (SC-6)**

**Date: Friday, March 13, 8:00-11:00 AM**

**Strand: The Science of Design: Structure and Function**

**Ticket Price: \$30 advance; \$35 on-site**

Come problem-solve and design with us as we explore lessons and strategies that provide authentic engineering challenges that further science content learning for all students. Join us as we delve into the NGSS core components of engineering design: defining and delimiting engineering problems, designing solutions to engineering problems, and optimizing the design solution.

We will model strategies and scaffolds for promoting academic discussions that include argumentation.

## **Classroom Redesign: Putting the NGSS into Practice in Elementary, Middle School, and High School (SC-7)**

**Date: Friday, March 13, 8:00-11:00 AM**

**Ticket Price: \$22 advance; \$27 on-site**

In this short course, join members of the NGSS writing team as they guide participants through the 5 E's (Engage, Explore, Explain, Elaborate, and Evaluate) to develop lessons that put the NGSS into practice. Participants should bring copies of units/lessons they currently use in their classrooms to be remodeled and redesigned in NGSS fashion. Rubrics produced by Achieve and NSTA will be used to assist in developing these lessons.

## **"All Standards, All Students" Appendix D and Case Studies (SC-8)**

**Date: Friday, March 13, 1:00-5:00 PM**

**Strand: Teaching Every Child by Embracing Diversity**

**Ticket Price: \$22 advance; \$27 on-site**

Join members of the NGSS Diversity and Equity writing team as they present Appendix D and case studies. This short course is designed to help prepare teachers to make the instructional shifts that enable all students to be college and career ready. The seven case studies that will be shared illustrate how teachers provide access to the NGSS through blending of the three dimensions, connecting to the CCSS for English language arts and mathematics, and employing research-based strategies.



# SHORT COURSES CONTINUED

## **Integrating STEM and Art with Pretty Astronomy Pictures (SC-9)**

**Date:** Friday, March 13, 1:00–5:00 PM

**Strand:** Student Learning—How Do We Know What They Know?

**Ticket Price:** \$112 advance; \$117 on-site

Create beautiful astronomical images using technology, core concepts in science, and art applications. This short course involves real data-set images and robotic telescope access—a great way to use authentic science. Receive lesson material that encourages students to learn through the natural integration that exists between STEM and art involving astronomy, chemistry, biology, and physics concepts. Join us and experience a hands-on approach that supports the NGSS and can be modified for middle grades on up to undergraduate level courses. Bring your laptop if possible. For more information, visit [www.smartpd.org](http://www.smartpd.org).

## **STEM for All: Practices and Methods that Promote Equal Access to STEM (SC-10)**

**Date:** Saturday, March 14, 8:00 AM–12 Noon

**Strand:** Teaching Every Child by Embracing Diversity

**Ticket Price:** \$37 advance; \$42 on-site

This interactive short course begins by addressing bias, stereotypes, and other societal factors that prevent certain student groups from pursuing STEM majors and careers. Then we will discuss research-based methods and classroom practices that make STEM accessible for all students, including girls, students with learning or physical disabilities, students who live in poverty, and students from non-English speaking families. Shared resources for educators include NGSS case studies and Universal Design for Learning.

## **Authentic Performance Assessments: Creating a Common Lab Report Rubric (SC-11)**

**Date:** Saturday, March 14, 8:00 AM–12 Noon

**Ticket Price:** \$37 advance; \$42 on-site

For many students, the lab report is a tedious and confusing assignment coupled with vague expectations. For teachers, the lab report fails to truly capture students' demonstration of scientific practices or support the progressive development of scientific skills. In this short course, we will alleviate these frustrations as we share our experiences and guide teachers through the development of a common, standards-based summative lab report rubric. In groups, participants will work together to analyze and relate NGSS science practices to their formal lab reports. For more information, visit [www.tinyurl.com/performassess](http://www.tinyurl.com/performassess).

## **Explore Local Biodiversity with Encyclopedia of Life and OBIS (SC-12)**

**Date:** Saturday, March 14, 8:00 AM–12 Noon

**Strand:** Natural Resources, Natural Partnerships

**Ticket Price:** \$22 advance; \$27 on-site

Encyclopedia of Life (EOL) and Outdoor Biology Instructional Strategies (OBIS) have teamed up to help educators explore local biodiversity through hands-on STEM learning opportunities. While OBIS offers educators activities and strategies to guide exploration of ecological concepts in the local environment, EOL offers extensive information about biodiversity and tools, such as EOL Collections and customizable field guides, built upon the interactive iNaturalist observation platform. *Note:* Participants should bring a notebook and be dressed to go outdoors. For more information, visit [www.outdoorbiology.com](http://www.outdoorbiology.com) and [education.eol.org](http://education.eol.org).

## **Modeling Key Mechanisms of Evolution and Population Biology (SC-13)**

**Date:** Saturday, March 14, 8:00 AM–5:00 PM

**Ticket Price:** \$89 advance; \$94 on-site

Receive a hands-on introduction to free research-based curriculum using NetLogo, developed at Northwestern University and currently being implemented in more than 100 biology classrooms in the Chicagoland area. NetLogo is a free and open-source agent-based modeling language and simulation environment. The activities involve creating, exploring, and modifying simulated ecosystems. Participants will need to bring a laptop with Chrome or Firefox web browser and latest version of Java installed. A boxed lunch is included. For more information, visit [modelsim.tech.northwestern.edu/info](http://modelsim.tech.northwestern.edu/info).

## **Using Science Phenomena to Assess Student Understanding of NGSS Performance Expectations (SC-14)**

**Date:** Saturday, March 14, 1:30–4:30 PM

**Strand:** Student Learning—How Do We Know What They Know?

**Ticket Price:** \$57 advance; \$62 on-site

We will use a framework to assess students' ability to make sense of novel phenomena and engage in hands-on science performances to model classroom instruction and assessment. The performances occur at the intersection of the NGSS three dimensions. The framework will be further illustrated through video of teachers assessing students' ability to make sense of novel phenomena as a formative assessment tool. Take home a copy of the book *A Vision and Plan for Science Education*. Participants are encouraged to bring a tablet/laptop.



# VISIT NSTA'S SCIENCE STORE



The image shows the NSTA Science Store booth at a conference. Several staff members are visible behind the counter. Promotional posters for NSTA Press books are displayed on the wall, including 'Yet More Everyday Science Mysteries', 'Mastery Learning in the Science Classroom', 'Uncovering Student Ideas in Life Science', and 'Success for Every Student'. The NSTA logo is prominently displayed on the lower part of the booth wall.

Wednesday	5:00-7:00 PM
Thursday	7:00 AM-6:00 PM
Friday	7:00 AM-5:00 PM
Saturday	7:00 AM-5:00 PM
Sunday	7:30 AM-12 Noon

- ◆ Award-winning books filled with best practices, science content, teaching tips, and lesson plans.
- ◆ T-shirts, totes, and other science gifts to take back to your classroom.
- ◆ All attendees get member pricing—20% off all NSTA Press® products.

## NSTA PRESS SESSIONS

NSTA Press® offers new classroom ideas and standards-based strategies, from Earth science to nanoscience and from preK to college. Join NSTA Press authors for these sessions linked to the topics of their books. Visit us online at [www.nsta.org/chicagopress](http://www.nsta.org/chicagopress) for details.



# NSTA EXHIBITORS

[www.nsta.org/chicagoexhibitors](http://www.nsta.org/chicagoexhibitors)

The NSTA Exhibit Hall is a must-see! NSTA brings you the leading science education companies and organizations to showcase products, services, curricula, and much more. You'll discover something new and exciting in the world of science teaching.



## EXHIBIT LOCATION

The exhibits are located in Exhibit Hall F2 of McCormick Place West.

## EXHIBIT HOURS

Thu., March 12 11:00 AM–6:00 PM  
Fri., March 13 9:00 AM–5:00 PM  
Sat., March 14 9:00 AM–3:00 PM  
Sun., March 15 No Exhibits

## VIRTUAL EXHIBITOR SHOW

Preview and create your own list of Chicago exhibitors before the conference using the Chicago Virtual Show. It's available, day or night, at [www.nsta.org/chicagovirtualshow](http://www.nsta.org/chicagovirtualshow).

## EXHIBITORS

2015 NSTA Kansas City Area Conference  
2015 NSTA Philadelphia Area Conference  
2015 NSTA Reno Area Conference  
2015 STEM Forum Minneapolis  
2016 NSTA Nashville National Conference  
3B Scientific  
3D Molecular Designs  
A+ Mobile Solutions  
AAAS Science NetLinks  
Accelerate Learning  
ACIS Educational Tours  
ACT  
Activate Learning  
Adam Equipment  
Adler Planetarium  
Aldon Corp.  
American Association for Laboratory Animal Science Foundation  
American Association of Physics Teachers  
American Geosciences Institute  
American Lab Design  
American Meteorological Society  
American Museum of Natural History  
American Nuclear Society  
American Physical Society  
American Society for Clinical Pathology (ASCP)  
American Society of Plant Biologists  
Amplify  
ANATOMY IN CLAY® Learning System  
Animalearn  
AquaPhoenix Education (Kemtec)

Arbor Scientific  
Astronomy To Go  
Battle Creek Area Mathematics Center  
Bedford, Freeman, & Worth (BFW) Publishers  
Benchmark Education  
Bio Corp.  
Bio-Rad Laboratories  
BIOZONE International, Ltd.  
Britannica Digital Learning  
By Kids For Kids Co.  
Camp Invention  
Capstone Classroom  
Carolina Biological Supply  
Cedar Fair Entertainment  
Celestron  
Cell Zone®, LLC  
Claire Lynn Designs  
Clemson University  
COSI Center of Science and Industry  
CPO Science/School Specialty Science  
Delta Education/School Specialty Science  
Digital World Biology  
Digitalis Education Solutions, Inc.  
Dinah-Might Adventures  
Discovery Education  
Disney Youth Programs  
The DuPont Challenge  
Dynalon Labware  
eCYBERMISSION  
EdTechLens  
Educational Innovations

Elmer's Products, Inc.  
Engineering is Elementary®  
Enovative Technologies  
Environmental Systems Research Institute, Inc.  
EPA National Service Center for Environmental Publications  
ePlanetarium  
Ergopedia, Inc.  
Estes-Cox Corp.  
ETA hand2mind  
ETHOS Science Center  
ExploreLearning  
Fairhope Graphics  
FDA Food Safety & Nutrition Education Program  
Firefly Book  
Fisher Science Education  
Flinn Scientific  
Follett  
FOTODYNE Inc.  
Fourier  
Frey Scientific/School Specialty Science  
G-Biosciences  
GEICO  
Goodheart-Willcox Publishers  
Grand Classroom  
Great Lakes Bioenergy Research Center  
Hampden Engineering  
HANNA® Instruments, Inc.  
Hayden-McNeil Publishing  
Holbrook Global Field Expeditions

**This is a partial list of exhibitors.**



# NSTA EXHIBITORS

Howard Hughes Medical Institute  
i2 Learning  
iBIO Institute EDUCATE Center  
iFLY Indoor Skydiving  
IPG (Independent Publishers Group)  
It's About Time  
Johns Hopkins University: Center for Talented Youth  
Kaleidoscope Adventures  
Ken-A-Vision Mfg. Co.  
Kendall Hunt Publishing Co.  
The Knopf Doubleday Publishing Group  
Koi Computers  
LAB-AIDS, Inc.  
Lakeshore Learning Materials  
LaMotte Co.  
Learning A-Z  
LEGO® Education  
Lone Star Learning  
MA: Science Education Online @ WMU  
Macmillan  
MakerBot  
The Markerboard People  
Math for America  
Measured Progress  
Mentis Sciences, Inc.  
Miami University/Project Dragonfly  
Mimio  
miniPCR  
Molymod™ Models, Spiring Enterprises Ltd.  
MSOE Center for BioMolecular Modeling  
MSU Teachers in Geosciences  
NanoandMore USA, Inc.  
NAEYC  
NARIKA Corp.  
NASA SOFIA EPO  
Nasco  
The National Academies Press  
National Assessment of Educational Progress  
National Center for Science Education  
National Ecological Observatory Network  
National Energy Education Development Project  
National Geographic  
National Geographic Learning  
National Institute of Neurological Disorders and Stroke

National Math + Science Initiative  
NatureBridge  
NewPath Learning  
NGSS@NSTA  
Nomad Press  
NOVA Education  
NSTA Awards  
NSTA Membership  
NSTA Nominations  
NSTA Professional Learning Opportunities  
NSTA Science Matters  
Nutrients for Life Foundation  
Ocean Classrooms  
OHAUS Corp.  
On the Avenue Marketing  
Orkin  
Otto Trading  
PASCO scientific  
PBS Educational Media  
PBS LearningMedia  
Pearson  
Penguin Group  
Penn State World Campus  
Pepco, Inc.  
Perimeter Institute  
The Pet Care Trust  
PhET Interactive Simulations  
Pitsco Education  
Plot.ly Inc.  
Population Connection  
Powerful Plants  
Presidential Awards for Excellence in Mathematics and Science Teaching  
Project Lead The Way  
Publisher Spotlight  
Qinghua Science & Education Equipment Co.  
Random House  
Renaissance Learning  
Royal Society of Chemistry  
Safari Club International Foundation  
Sally Ride Science, Inc.  
Save the Rainforest  
Scholastic Classroom Magazines  
Scholastic Library Publishing  
School Specialty Science  
School Technology Resources  
School Tours of America

Science/AAAS  
Science First®/STARLAB®  
Sciencescope, Inc.  
The Shape of Life  
ShareMyLesson  
Sheldon Laboratory Systems  
Shell Science Lab Challenge  
Simulation Curriculum  
Skulls Unlimited International, Inc.  
Society for Neuroscience  
Society of Petroleum Engineers: Energy4me  
Soil Science Society of America  
SparkFun Electronics  
SPIE: the international society for optics and photonics  
Stokes Publishing Co.  
Stratasys  
Studies Weekly  
Supertek Scientific  
Swift Optical Instruments, Inc.  
TCI  
Team America Rocketry Challenge  
Texas Instruments, Inc.  
Toshiba/NSTA ExploraVision  
University of California Davis—STEM Classroom Tools  
University College, Washington University in St. Louis  
University of Northern Iowa Overseas Placement Service for Educators  
U.S. EPA Sunwise Program  
U.S. Fish and Wildlife Service  
UTeach/The University of Texas at Austin  
Vernier Software & Technology  
VEX Robotics, Inc.  
W.H. Freeman  
Ward's Science  
WeatherBug  
WeatherHawk  
WestEd  
WhiteBox Learning  
Wildlife Acoustics, Inc.  
Wildlife Conservation Society  
Wiley  
Wisconsin Fast Plants Program  
WorldStrides  
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## GRADUATE CREDIT/TRANSCRIPTS

### GRADUATE CREDIT

We are currently finalizing details on graduate credit for this conference. Please visit [www.nsta.org/graduatecredit](http://www.nsta.org/graduatecredit) in mid to late January for details.

### TRANSCRIPTS

Our session evaluation system is now easier than ever! Between March 11 and 26, 2015, attendees can complete session evaluations online, while the session is fresh in your mind! Visit [www.nsta.org/chicagobrowser](http://www.nsta.org/chicagobrowser) to complete a short online session evaluation for each session you attend. Concurrent session presenters may also complete an evaluation for their own sessions in order to track professional development credit.

Immediately after the last day of the conference, you can view your transcript at the NSTA Learning Center ([learningcenter.nsta.org](http://learningcenter.nsta.org)) by clicking on “My PD Record and Certificates.” Visit [www.nsta.org/conferencetranscripts](http://www.nsta.org/conferencetranscripts) for complete information on the transcript process.



—Courtesy of Michael Weiss

# REGISTRATION & TRAVEL ARRANGEMENTS

1

## REGISTER



The fastest way to register 24 hours a day—register online at [www.nsta.org/chicago](http://www.nsta.org/chicago) with a credit card.



Fax your registration form (available as a PDF at [www.nsta.org/chicago](http://www.nsta.org/chicago)) with purchase order information to 703-243-3924.



Mail your registration form (available as a PDF at [www.nsta.org/chicago](http://www.nsta.org/chicago)) and payment to:

**NSTA  
Conference Department  
PO Box 90214**

**Washington, DC 20090-0214**

Please note that payment by credit card must be done online ([www.nsta.org/chicago](http://www.nsta.org/chicago)).

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Visit our website for a description of the categories listed to the left.

**[www.nsta.org/chicagoregistration](http://www.nsta.org/chicagoregistration)**

## PRICE LIST

### FULL REGISTRATION

	EARLYBIRD (JAN. 23)	ADVANCE (FEB. 13)	FULL RATE (After FEB. 13)
NSTA Member	\$255	\$285	\$310
Affiliate members*	\$255	\$285	\$310
Nonmember	\$345	\$375	\$400
Retired NSTA Member	\$150	\$165	\$190
Full-time Student	\$100	\$115	\$140

### ONE DAY ONLY (THU, FRI, OR SAT)

Nonstudent (member or nonmember)	\$180	\$200	\$220
Full-time Student	\$70	\$75	\$90

### LAST DAY ONLY (SUN)

Nonstudent (member or nonmember)	\$100	\$105	\$115
Full-time Student	\$50	\$55	\$65

<b>NONTEACHING SPOUSE/GUEST</b>	<b>\$95</b>	<b>\$115</b>	<b>\$135</b>
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*\*Affiliate members for Chicago include members of the Illinois Science Teachers Association (ISTA) and Wisconsin Society of Science Teachers (WSST).*

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## HOUSING

### Housing Deadline: February 9, 2015

Make your hotel reservations now and save! NSTA has negotiated special discounted room rates with nine hotels near the McCormick Place West. For complete details, visit [www.nsta.org/chicagohousing](http://www.nsta.org/chicagohousing). Housing reservations can be made in one of the following ways:



Visit [www.nsta.org/chicagohousing](http://www.nsta.org/chicagohousing) and have your credit card and arrival/departure information ready.



Call 877-352-6710 (toll free) or 801-505-4611 (international) between 7:00 AM and 6:00 PM Mountain Time, Monday–Friday. Be prepared to provide all the information on the housing form (available at [www.nsta.org/chicagohousing](http://www.nsta.org/chicagohousing) as a PDF).



Mail CHECKS ONLY—one form per room request to:

**Orchid Event Solutions  
NSTA/Chicago  
175 South West Temple, Suite 30  
Salt Lake City, UT 84101**

Housing forms are available online at [www.nsta.org/chicagohousing](http://www.nsta.org/chicagohousing) as a PDF.

**Do not mail to NSTA**

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## TRAVEL



NSTA has made arrangements with several major airlines to offer discounted fares to NSTA conference attendees. For complete details on these discounts as well as the best way to get around town, visit [www.nsta.org/chicagotravel](http://www.nsta.org/chicagotravel).

### COMPLIMENTARY HOTEL SHUTTLE

NSTA is providing complimentary shuttle service between McCormick Place West and the majority of the NSTA contracted hotels with the exception of The Hyatt Regency McCormick Place (*Co-Headquarters*), which is within walking distance of McCormick Place.

Visit [www.nsta.org/chicago](http://www.nsta.org/chicago) for a preliminary shuttle bus schedule.

**FOR COMPLETE TRAVEL INFORMATION, VISIT  
[WWW.NSTA.ORG/CHICAGOTRAVEL](http://WWW.NSTA.ORG/CHICAGOTRAVEL)**

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