Join us for a sneak preview of a brand new giant screen film

Amazon ADVENTURE 3D

Presented by hhmi | BioInteractive

Thursday, March 30 at 6 p.m.
Regal L.A. LIVE
1000 W. Olympic Blvd.

Seating for this free event is limited
Register at www.hhmi.org/movie
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Join us for our 2017 national conference:

Los Angeles, CA, March 30–April 2

Join the conversation on Twitter and share your #onlyatNSTA moments with us. @nsta

www.nsta.org/membership
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The environment is important to science educators. These programs are recyclable and were printed on recycled paper.
Bill Nye @BillNye
Chief Executive Officer, The Planetary Society, Pasadena, Calif.

Scientist, comedian, teacher, and author, Bill became a household name with his innovative, fast-paced television series, *Bill Nye the Science Guy*. His mission for many years is to turn on the general public, and kids in particular, to the “way cool” wonders of science. After earning a degree in mechanical engineering at Cornell University, Bill spent several years working as an engineer until he combined this dual love of science and comedy to create the Emmy award–winning *Science Guy*.

Bill is currently CEO of The Planetary Society. As a student at Cornell University, Bill was introduced to the wonders of astronomy in a class taught by Carl Sagan himself, one of the original founders of The Planetary Society. So for Bill it was like coming full circle.

He has also authored several books for kids, including *Bill Nye the Science Guy’s Great Big Book of Tiny Germs*. His most recent publications, the *New York Times* bestselling *Undeniable: The Science of Creation*, and the forthcoming *Unstoppable: Harnessing Science to Change the World*, are Bill’s effort to continue his mission of changing the world through science education.

**The Martian: The Story Behind the Story**

Andy Weir @andyweirauthor
Author of *The Martian*, Mountain Valley, Calif.

Andy is author of the *New York Times* bestseller *The Martian* and a lifelong space nerd and devoted hobbyist of subjects like relativistic physics, orbital mechanics, and the history of manned spaceflight. He will share how he went from computer programmer to bestselling author. *Spoiler:* He did it mostly by mistake. Andy first began his career as a programmer for a national laboratory at age 15 and has been working as a software engineer ever since.

**THE PLANETARY SOCIETY LECTURE**

*Everything All at Once*

Bill Nye @BillNye
Chief Executive Officer, The Planetary Society, Pasadena, Calif.

How nerds solve problems…is the crux of Bill Nye’s talk.

Scientist, comedian, teacher, and author, Bill became a household name with his innovative, fast-paced television series, *Bill Nye the Science Guy*. His mission for many years is to turn on the general public, and kids in particular, to the “way cool” wonders of science. After earning a degree in mechanical engineering at Cornell University, Bill spent several years working as an engineer until he combined this dual love of science and comedy to create the Emmy award–winning *Science Guy*.
Laura Henriques
Professor of Science Education, California State University, Long Beach

My state adopted NGSS. Now what I am supposed to do? Does this sound familiar? Laura will help you understand how to move forward as you modify your instructional decisions and practices to begin implementing NGSS in your classroom. Prior to joining the faculty at CSULB, she taught middle school and high school physics/physical science and served as a Lead Teacher for the Woodrow Wilson National Fellowship Foundation. Laura has been heavily involved in California’s adoption, transition, and implementation efforts around NGSS.

STRAND 2017: A STEM Odyssey (featured speaker to be announced)

Students’ science learning has changed dramatically from learning in the past. In a STEM environment, students’ understanding of the world around them is facilitated through the intentional connections between the four disciplines of science, technology, engineering, and mathematics. A STEM curriculum provides research-based instructional strategies that engage diverse learners and highlight career pathways in STEM-related fields. More importantly, STEM provides opportunities for all students to place themselves in a 21st-century world. In this strand, participants will connect and collaborate to increase their understanding and ability to teach STEM-based lessons and instructional sequences.

FEATURED PRESENTATION

NGSS...Now What?

Laura Henriques
Professor of Science Education, California State University, Long Beach

My state adopted NGSS. Now what I am supposed to do? Does this sound familiar? Laura will help you understand how to move forward as you modify your instructional decisions and practices to begin implementing NGSS in your classroom. Prior to joining the faculty at CSULB, she taught middle school and high school physics/physical science and served as a Lead Teacher for the Woodrow Wilson National Fellowship Foundation. Laura has been heavily involved in California’s adoption, transition, and implementation efforts around NGSS.

STRAND NGSS: The Next Generation of Science Teaching

Celebrate the vision of 3D teaching and learning in the NRC Framework and Next Generation Science Standards. This strand provides engaging and collaborative examination of the NGSS architecture to allow teachers to implement the changes necessary to construct a coherent program, including classroom practice and instructional sequence, as well as to build student skills. This strand will focus on providing opportunities for students to collaborate as they develop and use science and engineering practices, communicate evidence of core scientific understanding, and apply real-world contexts.
FEATURED PRESENTATION

A New Era: Beyond Science and Literacy Integration

Jacqueline Barber  @jqbarber
Associate Director, The Lawrence Hall of Science, and Director of the Hall’s Learning Design Group, University of California, Berkeley

We used to call it integration of science and literacy. Now we recognize that reading science text, engaging in science talk, and constructing written and oral scientific arguments is simply part and parcel of science. Jacqueline will discuss this pivotal moment in science education, why it promises to transform how we think about teaching and learning science, and why that’s a good thing! Her research interests include science and literacy integration and argumentation in the science classroom. She has co-designed the curriculum programs: Seeds of Science/Roots of Reading and Amplify Science, a new literacy-rich curriculum program addressing the NGSS.

STRAND  Science & Literacy Reloaded

With the continued emphasis on mathematics and language arts, elementary teachers have not been encouraged or given opportunities to teach science. This strand will support these teachers in seeing the connections between science and literacy. Elementary science will be reenvisioned as an opportunity for authentic language learning and not just one more thing to squeeze into the curriculum. As students investigate natural phenomena, they collect data to then make claims from their evidence and explain their reasoning, arguing from their evidence. Teachers can then support their students’ language and literacy through science notebooks, technical writing, interactive journals, and e-portfolios.

FEATURED PRESENTATION

Reenvisioning STEM Education: Transcending Boundaries to Realize the Vision of Inclusion, Diversity, and Equity in STEM Fields

Roni Ellington
Founder, Transforming STEM Network, and Associate Professor, Mathematics Education, and Coordinator, Graduate Programs in Mathematics and Science Education, Morgan State University, Baltimore, Md.

Join Roni as she presents a framework for STEM education that will transform the ways in which we conceptualize the aims and goals of STEM education with implications for curriculum, instruction, and pedagogy across all STEM disciplines. She will provide an alternative view of STEM education and transformative instructional strategies that can support and realize true equity, inclusion, and diversity in STEM.

STRAND  Mission Possible: Equity for Universal Access

Access to science education is not a privilege; it is a right for students of all abilities, genders, languages, socioeconomic status, and geographic locations. A quality science education is essential in closing the skills gap in our current workforce. Science learning must start in early childhood and be sustained through postsecondary education to keep our nation as a leader in innovation. Current challenges provide opportunities for equitable access to science education.
FEATURED PANEL
Enhancing Teachers’ Voices and Roles in Education Policy Making

Panelists:
- Jay Labov, Senior Advisor for Education and Communication, The National Academies of Sciences, Engineering, and Medicine, Washington, D.C.
- Donna Migdol (@dmigdol123), Elementary STEM Teacher, Oceanside (N.Y.) School District
- Mary (Margo) Murphy (@marymargmurphy), Science Teacher, Camden Hills Regional High School, Rockport, Maine
- K. Renae Pullen (@krenaep), Science Teacher, Caddo Parish Public Schools, Shreveport, La.
- Jose Rivas, Physics and Engineering Teacher, Lennox Academy, Inglewood, Calif.
- Bruce Wellman (@BruceWellmanKS), Engineering Teacher, Olathe Northwest High School, Olathe, Kans.

Classroom teachers are used to having educational “innovations” thrust upon them, but rarely are they given opportunities to bring their wisdom of practice to inform decision-making about these changes, especially outside of their own classrooms or schools. However, given the current importance of STEM education, these kinds of opportunities may be possible. For example, a focus of reform is the Next Generation Science Standards, which set forth an ambitious model of three-dimensional learning and include a significant engineering component. Because the role of engineering in K–12 education is still unsettled, teachers of STEM may have unparalleled opportunities to have a voice in its development and implementation along with the education policies that will support such efforts. For this featured panel, teacher leaders will discuss the challenges and rewards associated with being an effective leader outside the classroom, including at the district, state, and national levels. Also, staff from the National Academies of Sciences, Engineering, and Medicine will report on efforts at the Academies to bring attention to the value of teacher involvement in STEM education leadership and policy.

Check out more than 1,200 sessions and other events with the Los Angeles Session Browser/Personal Scheduler (www.nsta.org/LAbrowser).
LaMoine Motz

Join LaMoine as he discusses how the best science facilities can transform ways of teaching and learning. Without active, effective, and safe science labs, our students become “science soldiers without arms.” Learn about top-of-the-line science classrooms and labs that can transform mediocre student work into outstanding outcomes! Lead author of NSTA’s Guide to Planning School Science Facilities, he has served NSTA for over 40 years, notably as its president and as chair or team member of numerous committees, advisory boards, and task forces. Concern about the state of safe and efficient science facilities—and how to use them to strengthen science teaching and learning—prompted LaMoine, a former science teacher, to form The Motz Consulting Group.

ROBERT H. CARLETON LECTURE
STEM-ing from the Box: Planning, Designing, and Constructing Safe, Sustainable Science Facilities Through STEM-Based Teaching and Learning

ELEME NTAR Y EXTRAVAGANZ A

Friday, March 31, 2017
8:00–10:00 AM • West Hall B-1
Los Angeles Convention Center

- 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

Sponsored by:

A recent study that showed more UK students could recognize Pokémon species than a sparrow provoked widespread horror, but don’t forget that sparrows are the ultimate urban bird. Hear from Emma on how nearby nature and overlooked wild corners in urban and suburban spaces can be used to connect students to nature. Weedy patches can be hot spots of diversity and overgrown fields are rich with data about how nature will adapt to a changing climate and the pervasive influence of humankind. Emma has written for many magazines and newspapers, including National Geographic, Discover, the New York Times, and Slate. She holds a master’s degree in Science Writing from Johns Hopkins University and worked for many years as a reporter for the journal Nature. In 2011, she published her first book, Rambunctious Garden: Saving Nature in a Post-Wild World. In 2016, she gave a TED Talk about seeing the hidden nature that surrounds us.

Elementary teachers are key to keeping the joy of discovery and learning open and available to each and every student. Celebrate your role in facilitating their education! Kathy DiRanna has helped shape California’s science reform efforts for the past 30 years and she continues to be an advocate for the reform efforts actively serving on state committees for the implementation of NGSS and through the California Mathematics and Science Partnership Program. Nationally, she has also served as the mentor coordinator for the National Academy of Science and Mathematics Education, as well as on a variety of advisory boards. Currently, Kathy is the statewide director of WestEd’s K–12 Alliance, a professional development organization focused on improving science education in grades K–12 through content, instructional strategies, assessment, and leadership. She is director of the CA NGSS K–8 Early Implementation Initiative and has co-authored several publications, including Assessment-Centered Teaching: A Reflective Practice and A Data Coaches Field Guide: Unleashing the Power of Collaborative Inquiry.
The NGSS are leading to major changes in classroom instruction. A new report from the National Academies of Sciences, Engineering, and Medicine’s Board on Science Education provides guidance to teachers and professional development providers about how formative and summative classroom assessments will also need to change. Join Heidi as she highlights the key ideas in the report and explores ways that it can be used in professional development with K–12 teachers. Heidi is the director of the Board on Science Education at the National Research Council (NRC). She has been involved in many of the major projects of the board since it was formed in 2004. She co-directed the study that resulted in the report *A Framework for K–12 Science Education*. In addition, Heidi has co-authored two books that translate findings from the NRC reports for a broader audience: *Ready, Set, Science!* *Putting Research to Work in K–8 Science Classrooms* and *Surrounded by Science*. She holds a PhD in psychology (developmental) and anthropology, and a certificate in culture and cognition from the University of Michigan.

Known globally as an expert in earthquakes and resilience, Lucy Jones has dedicated her life to helping communities and leaders prepare for the inevitable. She retired from federal service in March 2016 after serving as a seismologist with the U.S. Geological Survey since 1983. She continues as a Visiting Research Associate at the Seismological Laboratory of Caltech and is developing programs to connect policy makers with scientists while supporting the use of science in community decision-making. In 2014, she led a partnership between the USGS and the City of Los Angeles to create solutions to four of the most significant seismic vulnerabilities in the city.

Author of over 100 papers on research seismology, Lucy’s primary interest is in earthquake statistics and integrated disaster scenarios, especially in southern California. She holds a PhD in geophysics from the Massachusetts Institute of Technology.
Chris Colclough
2016–2017 Chairperson, The Association for Science Education, Hatfield, Herts. UK

Chris’ mission over the coming year as ASE Chairperson is to promote the right of all science teachers to subject-specific professional development. The ASE provides many opportunities for members to engage with current issues that affect them professionally. She will outline key features in which ASE has been active in supporting the development of guidance on effective practical work and its assessment. Prior to her role at ASE, Chris was the director of Science and Applied Learning from 2009 in Sunderland and in 2014 she retired from the schools as assistant principal. She has taught in four Secondary schools (equivalent to U.S. grades 6–12) in the City of Sunderland in North East England before becoming head of biology and then head of science in 1997. In 2008, Chris achieved Chartered Science Teacher (CSciTeach) status, which recognizes her excellence in science teaching and learning. She holds degrees in microbiology and biochemistry from the University of Dundee, Scotland.

The Climate for Science Practical Work in UK Schools

NSTA/ASE HONORS LECTURE

CALLING ALL MIDDLE SCHOOL EDUCATORS

Friday, March 31, 2017 | 10:15 AM–4:30 PM
Diamond Ballroom Salons 4 & 5, JW Marriott

*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 2017 National Conference in LA!

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 next week!

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

Sponsored by

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

#NSTA17
www.nsta.org/LA
Science in the Community Events

The Science in the Community Forums build awareness of the abundance of existing high-quality out-of-school (informal) science education methods, resources, and opportunities available to enhance science teaching and learning. Both out-of-school and in-school science educators meet and interact to share best practices in informal science, learn about exciting collaborations happening among informal and formal science organizations, network with colleagues, and dialogue around ideas and innovations. Informal organizations participating in the Science in the Community Forums include zoos, museums, media, after-school programs, universities outreach, and others that provide or support out-of-school science education.

Thursday, 3:30–5:30 PM  Creativity Forum: A Serious and Fun Aspect of Science
Friday, 8:00–10:00 AM  Models of Intersections That Connect Informal Institutions with Schools, Students, and Teachers to Support STEM
Friday, 2:00–4:00 PM  Science in the Community Share-a-Thon
Saturday, 12:30–2:30 PM  Using Informal Science Experiences to Explore Environmental Issues

Science in the Community Featured Presentation (Panel)

The Development of a Positive STEM Identity

Angela Calabrese Barton  @calabresebarton
Professor, Dept. of Teacher Education, Michigan State University, East Lansing

Jeff Davis (@ca_afterschool), Executive Director, California After-School Network, Sacramento
Wendy Ward Hoffer (@wendywardhoffer), Senior Director of Education, PEBC, Denver, Colo.
Yeni Violeta Garcia (@DrVioletaGarcia), STEM Initiatives Consultant and Program Designer, STEM Learning By Design, Denver, Colo.

Informal science experiences are especially important for developing a positive STEM identity. Angela Calabrese Barton will moderate a panel discussion on the development of a positive STEM identity. A leader in the areas of equity and social justice in science education, Angela has authored *Teaching Science for Social Justice*, and her 2012 book, *Empowering Science and Math Education in Urban Schools*, co-authored with Edna Tan, won the AERA Division B Outstanding Book of the Year award. Her most recent project involves working with teachers to design teacher tools and materials to teach engineering for sustainable communities at the middle grade levels. In addition, she co-edited the *Journal of Research in Science Teaching* from 2011 to 2015.
Louie Lopez  @LouieRLopez: @USAEOP

Louie will share AEOP’s collaborative, cohesive portfolio of Army-sponsored STEM programs that effectively engage, inspire, and attract the next generation of STEM talent through K–16 summer enrichment activities, competitions, and research apprenticeships. A former Marine, Louie currently serves as the chief of STEM and Education Outreach for the U.S. Army Research Development and Engineering Command’s programs and Engineering Office at Aberdeen Proving Ground. His responsibilities include the technical and fiscal oversight of the Army Educational Outreach Program (AEOP) cooperative agreement award on behalf of the Office of the Deputy Assistant Secretary of the Army for Research and Technology and coordination of the Army’s national STEM efforts across the Army science and technology community and its academic partners. He earned his master’s degree in Educational Technology from National University in San Diego, California.
The Best Place to Explore Three-Dimensional Teaching and Learning

Take a deep dive into the Next Generation Science Standards (NGSS) with two special events that are free to all conference attendees!

NGSS@NSTA Forum
Three-Dimensional Assessment

Friday, March 31
151, Convention Center

Come learn how new standards are changing the way students are assessed, both during instruction and with end-of-year exams. Attend just one session or stay for the whole day.

Sessions include:
• Designing and Using Classroom Assessments to Support Meaningful NGSS Investigations
• The Next Generation Science Assessments (NGSA) Project
• How Do You Know if an Assessment Is Measuring Three-Dimensional Reasoning?
• Grading in a Three-Dimensional Classroom
• The Next Generation of Statewide Assessments

NGSS@NSTA Share-a-Thon

Saturday, April 1 • 9:30–11:00 AM
151, Convention Center

Get tips and tools to implement three-dimensional standards from NSTA’s NGSS Curators, NGSS writers, and other education experts. Leave with plenty of handouts and ideas you can use in your classroom right away!
Professional Learning Institutes

Professional Learning Institutes (PLIs) are focused, content-based programs that explore key topics in science/STEM education in depth. Presented by experts in science/STEM education, professional learning, standards implementation, assessment, curriculum, and resources/materials development, PLIs are scheduled on Wednesday, March 29, 9:00 AM to 4:00 PM. PLI-4 and PLI-5 are each followed by one day of pathway sessions that offer further exploration of the topics covered. For complete descriptions and to purchase tickets, visit www.nsta.org/LAbrowser. (Tickets Required)

Disciplinary Core Ideas: Reshaping Teaching and Learning (PLI-1)

Ticket Price: $150, by preregistration only

Like all enthusiastic teachers, you want your students to see the connections between important sciences concepts so they can grasp how the world works now—and maybe even make it work better in the future. But how exactly do you help them learn and apply these core ideas? Attendees will explore ways to reshape their approach to teaching and their students’ way of learning. Building on the foundation provided by A Framework for K–12 Science Education, which informed the development of the Next Generation Science Standards, we will discuss the cores ideas across the four disciplines of NGSS through the exploration of diverse phenomena.

Helping Students Make Sense of the World Using Next Generation Science and Engineering Practices (PLI-2)

Ticket Price: $150, by preregistration only

This session focuses on the role of science and engineering practices in the key shifts that underlie NGSS, transforming classrooms from places in which students “learn about” science ideas to ones where students “figure out” how phenomena work in order to build science knowledge. We will work with three-dimensional NGSS activities and experience science and engineering practices as learners. Then we will analyze examples of student work and video cases of teachers and students engaged in these same activities to see the practices in action in classrooms. Attendees will explore how storylines can be structured to elicit student questions about phenomena that elicit science and engineering practices in sensemaking, and how teachers support students’ practices through classroom discourse by examining multiple examples drawn from elementary, middle school, and high school NGSS classrooms.

Uncovering Students’ and Teachers’ Ideas with Three-Dimensional Formative Assessment Probes and Techniques (PLI-3)

Ticket Price: $150, by preregistration only

Using K–12 examples from life, physical, Earth, and space sciences, learn how to use formative assessment to support three-dimensional learning in the classroom or professional learning setting. This session will take participants through a process using the Uncovering Student Ideas in Science formative assessment probes and formative assessment classroom techniques (FACTs) to elicit students’ (and teachers’) ideas and use science practices and crosscutting concepts to support their thinking. Participants will also develop their own probe using a feedback cycle.
Argument-Driven Inquiry: Transforming Laboratory Experiences so Students Can Use Core Ideas, Crosscutting Concepts, and Science Practices to Make Sense of Natural Phenomena (PLI-4)

Ticket Price: $150, by preregistration only

This PLI is an introduction to a new approach to lab instruction called Argument-Driven Inquiry (ADI). ADI is an innovative instructional model that is based on current research about how people learn science and is designed to foster the development of science proficiency. ADI gives students an opportunity to learn how to use the core ideas, science practices, and crosscutting concepts of science to make sense of natural phenomena.

Moving Standards into Practice: Five Tools and Processes for Translating the NGSS into Instruction and Classroom Assessment (PLI-5)

Ticket Price: $150, by preregistration only

The Next Generation Science Standards (NGSS) challenge teachers to think deeply about learning and teaching with the goal of developing a clear vision of science education that is coherent, focused, and rigorous. This PLI will share a set of tools and processes that can help deepen teachers’ knowledge and enable them to translate the NGSS into instructional sequences that engage students in using science and engineering practices and that highlight the crosscutting concepts. The Five Tools and Processes are designed to help professional development leaders’ work with science teachers on curriculum, instruction, and assessment as they achieve this vision.

District-Level Administrators: You Are Not Alone in the NGSS Universe! (PLI-6)

Ticket Price: $150, by preregistration only

When facing paradigm shifts in STEM education policy, district-level administrators often face challenges in providing professional development, aligning curriculum, and implementing new science standards. NSTA empathizes with your needs and has developed this PLI especially for you. Come share solutions with your peers while walking away with tangible resources, tools, and ideas from leading NSTA authors and experts.

Equity in Science Education (PLI-7)

Ticket Price: $150, by preregistration only

This PLI will address key principles of equity and diversity in STEM education, including Appendix D of the NGSS: “All Standards, All Students: Making the Next Generation Science Standards Accessible to All Students.” Participants will learn about many of the assumptions, values, and practices that hinder the learning of students of color, and use proven strategies to enhance their own cultural competency, diversity awareness, and perspectives on racism and prejudice. Be prepared to share, learn, and meet other “equity-minded” colleagues as we develop supportive alliances and tools to assist us in providing a more equitable—and effective—STEM educational system.

Integrating Science and Literacy with Picture Books (PLI-8)

Ticket Price: $150, by preregistration only

Authors and former elementary teachers Karen Ansberry and Emily Morgan know you’re short on time...so they’ve integrated science and reading in a natural way to help you teach both subjects at once. In this interactive workshop, you’ll take part in several model lessons, learn the benefits and cautions of using children’s picture books in science, become familiar with the BSCS 5E learning model, and learn how to incorporate the Common Core State Standards, ELA into standards-based science lessons. A copy of the NSTA Press® book Picture-Perfect Science will be provided to each attendee.
Networking Events
Join your colleagues at one of these networking events. For complete descriptions and to purchase tickets, visit www.nsta.org/LAbrowser. (Tickets Required)

12th Annual NSTA Global Conversations in Science Education Conference (M-1)
Enhancing Global Workforce Skills Through Literacy, STEM, and Equity
Date: Wednesday, March 29, 12 Noon–5:30 PM
Registration Fee: $10, by preregistration only

NSTA has planned an afternoon dedicated to sharing science education from an international perspective. This mini-conference begins and ends with plenary talks by distinguished international scholars and includes roundtable discussions on specific topics relevant to the international science educator community and poster presentations providing opportunities for networking and idea exchange.

For more information, please visit www.nsta.org/international.

NSTA Teacher Awards Gala (M-2)
Date: Friday, March 31, 6:00–8:45 PM
Registration Fee: $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. Join your colleagues in recognition of this year’s winners. Evening attire is requested to honor our teacher award recipients. A limited number of tickets are available for this social event.
This dynamic event brings together educators and organizations who are actively implementing STEM programs in their schools or districts.

Come prepared to learn tactics that work, build your professional learning network, connect with effective outreach programs and partnerships, discover new resources, and build a strong curriculum.

For information and to register, visit www.nsta.org/stemforum
Graduate Credit Opportunity

Graduate Credit Sponsored by Dominican University of California

Earn one (1) or two (2) graduate-level credit/s in professional development through Dominican University of California. To obtain credit/s, you must be registered for the NSTA Los Angeles National Conference, complete the required assignments, and pay a fee of $95 for one credit or $175 for two credits. An NSTA transcript is also required. Grade method: A–F. Deadline is April 17, 2017.

Full details will be available at bit.ly/2hEBP12 in late January.

Committee Leaders

Tim Williamson
Conference Chairperson
Instructor and Science Credential Coordinator
California State University, Long Beach
1250 Bellflower Blvd.
Long Beach, CA 90840

Therese Shanahan
Program Coordinator
Lecturer, School of Education
University of California, Irvine
137 Bison Modular
Irvine, CA 92697-5506

Susan Gomez Zwiep
Local Arrangements Coordinator
Professor
California State University, Long Beach
1250 Bellflower Blvd.
Long Beach, CA 90840
Sample Conference Schedule

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

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<td>Elementary</td>
<td>Life Science</td>
<td>The “How Tos” of an X-STREAM Family Night</td>
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<tr>
<td>Thu., 12:30–1:30 PM</td>
<td>Elementary</td>
<td>Physical Science</td>
<td>The Power of Picture Books to Engage Girls in STEM</td>
</tr>
<tr>
<td>Thu., 2:00–3:00 PM</td>
<td>Elementary</td>
<td>Earth and Space Science</td>
<td>Future Worlds: Storm Survival Shelters STEM Challenge</td>
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<td>Thu., 3:30–4:30 PM</td>
<td>Elementary</td>
<td>General Science Education</td>
<td>Batology: An Integrated STEAM Unit on Bat Structure, Diversity, and Their Vital Role in the Ecosystem</td>
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<td>Fri., 8:00–9:00 AM</td>
<td>Elementary</td>
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<td>Fri., 12:30–1:30 PM</td>
<td>Elementary</td>
<td>Hands-On Workshop</td>
<td>Science Learning at Your Window!</td>
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<td>Fri., 3:30–4:30 PM</td>
<td>Elementary</td>
<td>Informal Science Education</td>
<td>Middle School Chemistry and Engineering Design in the NGSS</td>
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<td>Sat., 8:00–9:00 AM</td>
<td>Elementary</td>
<td>Life Science</td>
<td>Exploring STEM Across the Curriculum</td>
</tr>
<tr>
<td>Sat., 9:30–10:00 AM</td>
<td>Elementary</td>
<td>Engineering Technology</td>
<td>Literacy and the Engineering Design Process</td>
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<tr>
<td>Sat., 11:00 AM–12 Noon</td>
<td>Elementary</td>
<td>General Science Education</td>
<td>Promoting Elementary Science Literacy in Three Dimensions with the 2017 U.S. Total Solar Eclipse</td>
</tr>
<tr>
<td>Sun., 9:30–10:30 AM</td>
<td>Elementary</td>
<td>Preservation</td>
<td>Tides Around the World</td>
</tr>
<tr>
<td>Thu., 8:00–9:00 AM</td>
<td>Middle Level</td>
<td>Life Science</td>
<td>Blue Marble Matches</td>
</tr>
<tr>
<td>Thu., 12:30–1:30 PM</td>
<td>Middle Level</td>
<td>Physical Science</td>
<td>Ecology Unit: Restructuring for NGSS 3D Learning</td>
</tr>
<tr>
<td>Thu., 3:30–4:30 PM</td>
<td>Middle Level</td>
<td>Earth and Space Science</td>
<td>STEM Engagement at a STARBASE Near You!</td>
</tr>
<tr>
<td>Fri., 8:00–9:00 AM</td>
<td>Middle Level</td>
<td>General Science Education</td>
<td>Bioengineering Challenges and Middle School Life Science</td>
</tr>
<tr>
<td>Fri., 11:00–11:30 AM</td>
<td>Middle Level</td>
<td>Engineering Technology</td>
<td>Using Simulations to Engage Middle School Learners in Physical Science</td>
</tr>
<tr>
<td>Fri., 2:00–3:00 PM</td>
<td>Middle Level</td>
<td>Informal Science Education</td>
<td>Middle School Chemistry and Engineering Design in the NGSS</td>
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<tr>
<td>Sat., 8:30–9:00 AM</td>
<td>Middle Level</td>
<td>Preservation</td>
<td>Robotics: A Pathway to Get Ready for the Real World</td>
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<tr>
<td>Sat., 12:30–1:00 PM</td>
<td>Middle Level</td>
<td>Engineering Technology</td>
<td>Integrating Science and Engineering Using the 5E Instructional Model</td>
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<tr>
<td>Sat., 2:00–3:00 PM</td>
<td>Middle Level</td>
<td>Informal Science Education</td>
<td>STEM Road Map, 6–8: Integrated STEM Teaching in Middle School</td>
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<tr>
<td>Thu., 12:30–1:30 PM</td>
<td>High School/College</td>
<td>Life Science</td>
<td>Bridge DATA Activity: Examining Juvenile Oyster Disease</td>
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<tr>
<td>Thu., 2:00–3:00 PM</td>
<td>High School/College</td>
<td>Earth and Space Science</td>
<td>Using the Case Studies as a Cumulative Review</td>
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<tr>
<td>Thu., 3:30–4:30 PM</td>
<td>High School/College</td>
<td>General Science Education</td>
<td>Connect Chemistry to Your World with ChemClub</td>
</tr>
<tr>
<td>Fri., 8:00–9:00 AM</td>
<td>High School/College</td>
<td>Engineering Technology</td>
<td>Supporting Student Independence and Metacognition in Problem-Solving</td>
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<tr>
<td>Fri., 5:30–6:00 PM</td>
<td>High School/College</td>
<td>Informal Science Education</td>
<td>Space Explorers: 25 Years of Inner-City Students Out-of-School-Time Explorations</td>
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<td>Sat., 8:00–9:00 AM</td>
<td>High School/College</td>
<td>Preservation</td>
<td>Supporting Leadership Development in Science Educators</td>
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<td>Sat., 9:30–10:30 AM</td>
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<td>Informal Science Education</td>
<td>Pitt-Bridge: Empowering Students Through STEM Research and Advocacy in Community Health</td>
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<td>Life Science</td>
<td>Earthquakes: From Paper to ArcGIS</td>
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<td>Sun., 8:00–9:00 AM</td>
<td>High School/College</td>
<td>Physical Science</td>
<td>Underwater Robotics in the Classroom and Beyond</td>
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<td>Sun., 10:00–10:30 AM</td>
<td>High School/College</td>
<td>Earth and Space Science</td>
<td>STEM for ALL: Dream IT, Design IT, Develop IT</td>
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<tr>
<td>Sun., 11:00 AM–12 Noon</td>
<td>High School/College</td>
<td>General Science Education</td>
<td>Building, Evaluating, and Using Systems Models</td>
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</table>
Educational Trips

Discover what Los Angeles has to offer on one of our ticketed educational trips. For complete descriptions and to purchase tickets, visit www.nsta.org/LAbrowser. (Tickets Required)

NASA’S JET PROPULSION LABORATORY MORNING TOUR (T-1)
Date: Thursday, March 30, 8:30 AM–12:45 PM
Ticket Price: $35 advance, preregistration only

NASA’S JET PROPULSION LABORATORY AFTERNOON TOUR (T-3)
Date: Thursday, March 30, 12 Noon–4:15 PM
Ticket Price: $35 advance, preregistration only

The Jet Propulsion Laboratory is a place where science, technology, and engineering intermix in unique ways: to produce iconic robotic space explorers sent to every corner of the solar system, to peer deep into the Milky Way galaxy and beyond, and to keep a watchful eye on our home planet. Tour participants will receive an overview of the Laboratory’s activities and accomplishments by watching Journey to the Planets and Beyond. There will also be opportunities to visit the von Karman Visitor Center, the Space Flight Operations Facility, and the Spacecraft Assembly Facility. See how scientists at JPL conduct research and help develop instruments and missions to characterize and understand the atmosphere, land, and oceans on our home planet to make better predictions of future changes. **Note:** The tour involves a considerable amount of walking so wear comfortable shoes. Wheelchair access can be accommodated with advance notice.

**Special Note:** JPL requires that all U.S. citizens, 18 years of age or older, present official government-issued photo identification (driver’s license or passport) before being allowed entry. All non-U.S. Citizens 18 years of age or older must present a passport or resident visa (green card) before being allowed entry.

—Photo courtesy of NASA's Jet Propulsion Laboratory
LA’s Teaching Aquarium: Cabrillo Marine Aquarium (T-2)
Date: Thursday, March 30, 11:30 AM–6:15 PM
Ticket Price: $35 advance; $40 on-site

Come tour one of the most requested school field trips in the Los Angeles area. Located just steps from the ocean, Cabrillo Marine Aquarium (CMA) is part of the City of Los Angeles Recreation and Parks Department. Join CMA staff educators as they share “LA’s Teaching Aquarium’s” most popular programs for schools and see why CMA is a trusted resource that inspires exploration, respect, and conservation of southern California marine life. Our tour includes the Exploration Center, Aquatic Nursery and Research Lab, and Cabrillo Beach tide pools. Be sure to dress casual and in layers (could be cool at the beach!) and bring sunscreen and a hat for our tour of the Cabrillo Coastal Park ocean habitats within easy walking distance. Wear pants and closed-toed shoes appropriate for tide pooling. Don’t forget to bring your camera. Note: This trip is for adults only.

More Than Just a Fish Tank—Aquarium of the Pacific (T-4)
Date: Thursday, March 30, 12:15–5:00 PM
Ticket Price: $28 advance; $33 on-site

The Aquarium of the Pacific is a think tank! This guided tour includes behind-the-scenes access, conversations about data and Earth systems science, as well as opportunities to explore the Aquarium on your own. We will check out the Aquarium’s Ocean Science Center and NOAA’s Science On a Sphere®, a six-foot spherical display presenting images about Earth in a unique and captivating way. From sea surface temperature, satellite tracks, ocean currents, primary productivity, and more, the Science on a Sphere data sets connect Aquarium guests to larger systems beyond the animal collection. Through a facilitated discussion, participants will consider how we know what we know about the planet, and how to connect an animal collection to big stories about our world. Aquarium staff will guide participants through a behind-the-scenes tour of our facility to share how habitats are maintained, how food is prepared, and how 12,000 animals live in the Aquarium of the Pacific.
Get Hands On at Discovery Cube Los Angeles (T-5)

Date: Thursday, March 30, 1:45–4:45 PM  
Ticket Price: $28 advance; $33 on-site

Discovery Cube’s mission is to inspire and educate young minds through engaging science-based programs and exhibits to create a meaningful impact on the communities we serve. Plan for hands-on experiences at the unique, innovative, and award-winning exhibits developed by and on display at Discovery Cube LA. Explore the multimedia role-playing exhibits, such as the Discovery Market, which uses computers, scanning guns, animated characters, and self-selected shopping lists to learn about nutrition and eco-friendly behaviors. Investigate the 1,000 square-foot house using electronic tablets, a GPS system, and mechanical devices to learn how to save water and power. Become a member of the LA Kings hockey team while learning the physics and math behind this incredibly fast sport…and much more! Other amenities include Bean Sprouts restaurant and a gift shop. Be sure to wear comfortable shoes. For more information, visit www.discoverycube.org/la.

Griffith Observatory: Gateway to the Cosmos (T-6)

Date: Thursday, March 30, 6:00–10:45 PM  
Ticket Price: $35 advance; $40 on-site

When Griffith Observatory opened in 1935, it was one of the first institutions in the U.S. dedicated to public science and possessed the third planetarium in the U.S. Today, visitors can look through telescopes, explore exhibits, see live shows in the Samuel Oschin Planetarium, and enjoy spectacular views of Los Angeles and the Hollywood Sign. The observatory is split up into six sections: The Wilder Hall of the Eye, the Ahmanson Hall of the Sky, the W.M. Keck Foundation Central Rotunda, the Cosmic Connection, the Gunther Depths of Space Hall, and the Edge of Space Mezzanine. In addition, a complimentary 24-minute film narrated by Leonard Nimoy typically runs at the beginning of every hour. There is also a gift shop open daily until 9:00 PM.

On our trip, we will explore the Observatory, star gaze, as well as watch the 8:30 PM Centered in the Universe show (which is included in the ticket price). While the Observatory does have a café, it will not be able to accommodate the volume of people participating on the trip. It is recommended that you eat before departing on the trip. You may not bring food and drinks to the Observatory as they are not allowed in the building.

—Photo courtesy of Discovery Cube LA
Science and Endeavour Up Close at California Science Center (F-1)

Date: Friday, March 31, 9:00 AM–1:15 PM  
Ticket Price: $29 advance; $34 on-site

Experience the excitement of the California Science Center, the most attended museum in the nation outside of New York and Washington, D.C. From the moving tranquility of our 188,000-gallon kelp forest exhibit to the wonder inspired by the travels of the Space Shuttle Endeavour, our world-class exhibits are helping educators inspire the next generation of scientists, innovators, and explorers. Come enjoy a guided tour by Science Center education staff and then have free time to explore the exhibits.

The Columbia Memorial Space Center: Exploring 21st-Century STEM at a Historic NASA Site (F-2)

Date: Friday, March 31, 9:30 AM–1:30 PM  
Ticket Price: $31 advance; $36 on-site

Experience STEM learning at a site where NASA sent humans to the moon! The Columbia Memorial Space Center’s mission is to ignite a community of creative and critical thinkers. We are located on the site where NASA designed and developed the Apollo missions to the moon and all of the space shuttles. Our space-age facility houses Southern California’s only Challenger Learning Center and LA’s only public Robotics Lab. This educational trip will walk you through the history of the site and give you hands-on experience in how the Space Center is transforming its history as a springboard into 21st-century STEM learning for all ages.
The NSTA Exhibit Hall, with more than 350 of the leading science education companies and organizations in the world, has the newest products to show and share with educators.
EXHIBIT HOURS
Thu., Mar. 30 11:00 AM–6:00 PM*
Fri., Mar. 31 9:00 AM–5:00 PM
Sat., Apr. 1 9:00 AM–3:00 PM

EXHIBIT LOCATION
The exhibits are located in Hall H/J of the Los Angeles Convention Center.

www.nsta.org/LAvirtualshow
Preview and create your own list of Los Angeles exhibitors before the conference using this link.

*Exclusive Exhibit Hall and Exhibitor Workshop Hours • Thu., 11:00 AM–12:30 PM

National Center for Science Education
National Coalition for Aviation and Space Education
National Energy Education Development Project
National Geographic
National Geographic Learning/Cengage Learning
National Institute of Neurological Disorders and Stroke
National Inventors Hall of Fame/Camp Invention
National Nanotechnology Initiative
NatureBridge
NewPath Learning
North American Association for Environmental Education
Northrop Grumman Foundation
Novagrade
Nutrients for Life Foundation
oddWires
OHAUS Corp.
Olympus Corp.
OpenEd
Origami Organelles
Orkin
Ozobot
PASCO scientific
PBS Educational Media/WGBH
PBS LearningMedia
Pearson Education
PhET Interactive Simulations
Pitsco Education
PlayMada Games
PocketLab by Myriad Sensors
Population Connection
Project Lead The Way, Inc.
Project Learning Tree
Project WET Foundation
Publisher Spotlight
SAE International
Safari Club International Foundation
Savannah College of Art and Design
Scholastic Library Publishing
Scholastic Magazine
Science, Naturally!
ScienceWiz
SE3D
Sensavis – The 3D Co.
Shape of Life
Sheldon Laboratory Systems
Shell Science Lab Challenge
Simulation Curriculum Corp.
Skulls Unlimited International, Inc.
Smithsonian Science Education Center
Society for Neuroscience
Society for Science & the Public
Soil Science Society of America
Sonic Supply
South Dakota State University
Southern Science Supply
Spectrum Chemical Manufacturing Corp.

St. George’s University, Grenada, West Indies
STEMscopes
Studica, Inc.
Studies Weekly
Swift Optical Instruments
Teachers Curriculum Institute
Team America Rocketry Challenge
Texas Instruments Inc.
Through My Window
Toshiba/NSTA ExploraVision
Toyota Motor Sales, USA, Inc. c/o MC2
TPS Publishing Inc.
Trees for Little People
U.S. Geological Survey
U.S. National Library of Medicine
UO Real Solutions
Vaccine Education Center at Children’s Hospital of Philadelphia
Vernier Software & Technology, LLC
Virginia Tech College of Science
W.W. Norton & Co., Inc.
WeatherHawk
WestEd
Western Governors University
WhiteBox Learning
Wikki Stix Co.
Wiley
Wisconsin Fast Plants® Program
WorldStrides
xUmp.com
The Instructional Leader’s Guide to NGSS (SC-1)
Date: Thursday, March 30, 1:30–4:30 PM
Ticket Price: $27 advance; $32 on-site
The NGSS are changing how science is taught. Instructional leaders (whether department chairs, content coaches, principals, or curriculum coordinators) are essential to the success of teachers as they make this important shift. Join in for the fundamentals of three-dimensional instruction and a view of what an NGSS-based classroom looks like. Participants will also receive a copy of NSTA’s Quick-Reference Guide to the NGSS, K–12. With these tools in hand, instructional leaders will be able to guide their teachers on a path toward successful implementation of the new standards.

Lessons Learned: The California NGSS K–8 Early Implementation Initiative (SC-2)
Date: Thursday, March 30, 3:00–6:00 PM
Ticket Price: $26 advance; $31 on-site
Strand: NGSS: The Next Generation of Science Teaching
The California NGSS K–8 Early Implementation Initiative is a K–12 Alliance/WestEd project working with eight districts and two charter organizations to implement NGSS district/charterwide in grades K–8. Administrators and teachers leaders from the Initiative will tell their story of their journey toward full implementation districtwide.

A Short Course on Analyzing and Adapting Three-Dimensional Assessment Tasks (SC-3)
Date: Thursday, March 30, 3:00–6:00 PM
Ticket Price: $28 advance; $33 on-site
Strand: NGSS: The Next Generation of Science Teaching
Common assessment tasks will be adapted to assess a bundle of performance expectations, such as defining what you will assess, brainstorming scenarios to elicit student understanding, using task formats to develop multicomponent tasks, and imagining a range of possible student responses to develop rubrics. While not required, a laptop/tablet is recommended. Note: No Wi-Fi provided.

A PEEC into Evaluating NGSS Instructional Materials Programs (SC-4)
Date: Friday, March 31, 8:00–11:00 AM
Ticket Price: $23 advance; $28 on-site
If you’re looking for materials designed for the NGSS, the Primary Evaluation of Essential Criteria (PEEC) is the tool for you. Lots of materials make claims about the degree to which they are “aligned” to NGSS, but the new version of PEEC uses the criteria of the EQuIP Rubric to dig deep into evaluating whether or not materials are really designed for the NGSS. Please bring a laptop/tablet with PEEC and NGSS appendices downloaded. Visit bit.ly/2gSNljf for links to documents.

Ocean Plastic Pollution: Issues and Solutions (SC-5)
Date: Friday, March 31, 8:00–11:00 AM
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 properties including density and buoyancy.
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. Door prizes and resources!

**Writing in Science: A Research-Based Approach That Enhances Learning in Both Domains (SC-6)**

**Date:** Friday, March 31, 8:00–11:00 AM  
**Ticket Price:** $27 advance; $32 on-site  
**Strand:** Science & Literacy Reloaded

Explore research-based strategies for using scaffolding to increase diverse elementary students’ achievement in science and writing, as described in NGSS and CCSS ELA. Learn how to use word banks, graphic organizers, and writing frames so that students learn how to think, talk, and write as scientists do. Handout with blackline masters and annotated student notebook entries for grades K–6 students included.

**Stretch Your Legs for Science: An Outdoor STEM Adventure (SC-7)**

**Date:** Friday, March 31, 9:45 AM–5:45 PM  
**Ticket Price:** $103 advance; $108 on-site  
**Strand:** 2017: A STEM Odyssey

This off-site short course at Madrona Marsh Preserve will include basic information and hands-on activities to help build bird identification skills through the eBird global citizen science project. We will take a 60- to 90- minute bird walk within Madrona Marsh and submit and explore eBird data. Take home materials (a BirdSleuth “Most Wanted Birds” kit, a pair of high-quality binoculars, bird feeder, and several apps). *Note:* Be sure to dress for the weather. Lunch included.

**NSTA Press® Short Course: Phenomenon-Based Learning: Fun, Hands-On, Cooperative Learning of Both Science and Language Arts (SC-8)**

**Date:** Friday, March 31, 10:30 AM–4:00 PM  
**Ticket Price:** $95 advance; $100 on-site  
**Strand:** Science & Literacy Reloaded

Experience the kind of learning that propelled Finland to international leadership in education. With Phenomenon-Based Learning, you teach broader concepts and useful thinking and performance skills (as with the NGSS and CCSS) rather than asking students to simply memorize facts and formulas. Participants will engage in hands-on activities and leave with a copy of one of the NSTA Press PBL books along with one or two of the fascinating gizmos that go with the book.

**NGSS: Three Dimensions in Action in a California Early Implementer Classroom (SC-9)**

**Date:** Friday, March 31, 3:00–6:00 PM  
**Ticket Price:** $50 advance; $55 on-site  
**Strand:** NGSS: The Next Generation of Science Teaching

In this short course, experience a hands-on upper elementary “learning sequence’” that bundles performance expectations in a conceptual flow designed to provide a framework for linking science and CCSS ELA. The integrations are being practiced by California Early Implementer NGSS teachers. This sample conceptual flow uses bundled performance expectations to provide a model for how an upper elementary teacher (grades 3–5) can build the learning sequence for three-dimensional science and use the science as a context for reading, writing, listening, and speaking.
Short Courses

Reaching Extremes! Blending Climate Science and Mathematics to Reach All Learners (SC-10)

Date: Friday, March 31, 3:00–6:00 PM
Ticket Price: $93 advance; $98 on-site
Strand: Mission Possible: Equity for Universal Access

Come explore the connections between climate science and mathematics! In this short course, participants will engage in STEM projects using coding, microcontrollers, sensor technology, and more to engage all students. Get practical tools for meeting the needs of SPED, ELL, gifted, and economically or culturally diverse learners. No previous coding experience required. Bring a laptop/tablet to connect to the internet.

Fostering a Science-Driven Language and Literacy Learning Environment (SC-11)

Date: Saturday, April 1, 8:00–11:00 AM
Ticket Price: $26 advance; $31 on-site
Strand: Science & Literacy Reloaded

Learn to strategically include integrated and designated language acquisition instruction into three-dimensional science lessons. Engage in a hands-on science and language learning experience, and receive a toolkit for developing science/language acquisition lessons that meet the rigors of NGSS, the National Framework for English Language Proficiency Standards, and the California ELD standards.

Hands-On/Minds-On STEM: An Integrated Engineering Design Challenge (SC-12)

Date: Saturday, April 1, 8:00–11:00 AM
Ticket Price: $50 advance; $55 on-site
Strand: 2017: A STEM Odyssey

This is an introductory short course for those educators interested in moving toward an integrative STEM approach to learning. Experience an engaging and academic hands-on engineering design challenge, effortlessly applying the 5 C’s (creativity, critical thinking, communication, collaboration, and citizenship), as well as understanding how hands-on engineering design challenges address the CCSS and NGSS. Bring your laptop/tablet to connect to the internet.

Elementary Curriculum Development for the NGSS: How to Integrate the Three Dimensions of Learning into an Elementary Classroom (SC-13)

Date: Saturday, April 1, 8:00–11:00 AM
Ticket Price: $53 advance; $58 on-site
Strand: NGSS: The Next Generation of Science Teaching

We will explore the Understanding by Design model as an approach to curriculum development for elementary classrooms by using the performance expectations to inform assessment development. Then we will organize lessons that support those assessments, using a unit organization plan. Not required but recommended that you bring a copy of the NGSS, the K–12 Framework, and a laptop/tablet connected to the internet.
NGSS Meets the Outdoors: Teaching Elementary Science Outside (SC-14)

Date: Saturday, April 1, 8:00–11:00 AM
Ticket Price: $8 advance; $13 on-site

Participants will practice inquiry-based learning in a local urban park exploring the Heads-On, Hands-On, Hearts-On framework in instruction. Discussions will explore applications, challenges, and ideas for school yard improvements in the school setting. Note: Be sure to wear good walking shoes as we will be walking to a nearby park (nearly a mile each way). It is helpful, but not required, that you bring a smartphone/tablet and binoculars.

Kids Love Rocks and So Will You: Introducing Physical Science BIG IDEAS (SC-15)

Date: Saturday, April 1, 3:00–6:00 PM
Ticket Price: $53 advance; $58 on-site
Strand: 2017: A STEM Odyssey

Rocks and other natural objects are wonderful resources to teach children observation, sorting, measuring, and communication skills in the context of Science BIG IDEAS. Three of those BIG IDEAS—properties of matter, properties of Earth materials, and characteristics of organisms—are the major science topics addressed in this short course. This short course is designed for those who work with young preK–K learners. Take home materials, including sorting sets, books, and equipment appropriate for teaching the lessons.

Hands-On Mathematics in Science Education (SC-16)

Date: Saturday, April 1, 3:00–6:00 PM
Ticket Price: $25 advance; $30 on-site
Strand: Mission Possible: Equity for Universal Access

This short course focuses on four modules that showcase an integrated STEM process in which mathematics takes central stage. The modules follow a similar frame and rhythm and fully meet the NGSS and CCSS Mathematics. The mathematics is necessary to construct a design decision and check how well the proposed solutions meet criteria and constraints. Collaborative aspects between math and science are discussed and participants will leave with a pathway to incorporate mathematics into other STEM units.
# Registration & Travel

## Register

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

Fax your registration form* with purchase order information to 703-243-3924.

Mail your registration form* and payment to:
NSTA Conference Department
PO Box 90214
Washington, DC 20090-0214

* Registration forms are available as PDFs at [www.nsta.org/confreg](http://www.nsta.org/confreg).

## Price List

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<th>EARLYBIRD</th>
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<td><strong>FULL REGISTRATION (TWO TO FOUR DAYS)</strong></td>
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<tr>
<td>NSTA Member</td>
<td>$275</td>
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<td>Nonmember</td>
<td>$365</td>
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<td>Retired NSTA Member</td>
<td>$170</td>
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<td>Full-time Student</td>
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<td><strong>ONE DAY ONLY (THU, FRI, OR SAT)</strong></td>
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<td><strong>NONTEACHING SPOUSE/GUEST</strong></td>
<td>$100</td>
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</table>

Save $90 on your registration when you become an NSTA member!
TRAVEL

NSTA has made arrangements with several airlines and Amtrak 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/LAtravel

HOUSING

LA Housing Deadline: February 27, 2016

Make your hotel reservations now and save! NSTA has negotiated special discounted room rates with 17 hotels near the Los Angeles Convention Center.

Visit: www.nsta.org/LAhousing 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**.

Mail CHECKS ONLY—Download housing form** and mail with check (one form per room request) to:

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

Do not mail to NSTA.

**Housing form is available as a PDF at www.nsta.org/LAhousing.

REGISTRATION CATEGORIES

The Member rate applies to the following:

- Current NSTA members
- Nonmembers who submit an NSTA membership application and membership fee along with the registration form
- CSTA members (California Science Teachers Association)—CSTA members receive the NSTA member rate for the 2017 LA National Conference only

NSTA members who are fully retired and have been an NSTA member for at least five years may register at the Retired rate.

Full-time students 18 years of age or older may register at the Student rate if the registration form is accompanied by a copy of a current university ID or a letter from the university indicating full-time enrollment.

Your nonteaching spouse/guest and children must be registered in order to visit the Exhibit Hall but do not need to submit separate registration forms. Please provide their names on your own registration form. Children of high school age and younger can be registered for free. A fee is required for your spouse/guest. College students and teaching spouses must submit separate registration forms and payment.
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