



SCIENCE

ACADEMY



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tcea 2014 convention & exposition

SESSION LISTING:

Keynote Speaker



Kamil A. Jbeily was born in Beirut, Lebanon. Completing a B.S. in Chemistry and Masters of Science in Chemistry and Chemistry Education, Kamil taught in the Lebanese secondary schools. In 1980, he immigrated to the United States to attend The University of Texas at Austin, where he earned his Ph.D. in Science Education in 1986. At UT Austin, Kamil supervised student teachers in the Central Texas area for over five years. After almost ten years with the Texas Education Agency (TEA), first as a science specialist, then as director of science projects, in 1991, Kamil encountered his greatest challenge in this Land of Opportunity — founding the Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching (TRC). Under his leadership, this joint initiative of TEA, UT Austin, and multiple corporations, has grown into a dynamic, statewide network of P-16 partnerships which has improved the knowledge, skills, and performance of over 45,000 teachers of science and mathematics, and benefited the learning of over three million students.

7:15 a.m. – 8 a.m.

Registration

Located Outside of Room 18C

All pre-registered attendees must be checked in by 7:55 a.m. to confirm their participation. Any pre-registered attendees not checked in at 7:55 a.m. will forfeit their pre-registration, and all open seats will be available to onsite registrations on a first come, first served basis until the academy reaches capacity.

8 a.m. – 8:50 a.m.

Opening Session “Advancing Excellence in STEM Education: The Teacher is the Key”

Kamil A. Jbeily, Ph.D., Executive Director, Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching

Room 18C

9 a.m. – 9:50 a.m.

Birds of a Feather (K-5)

Room 18C

Kick off your day by attending this special networking session specifically designed for science teachers of grades K-5. Tips, tricks, ideas, lessons, and more will be shared to support your integration of technology at the K-5 level.

Birds of a Feather (6-8)

Room 18D

Kick off your day by attending this special networking session specifically designed for science teachers of grades 6-8. Tips, tricks, ideas, lessons, and more will

be shared to support your integration of technology at the 6-8 level.

Birds of a Feather (9-12)

Room 19A

Kick off your day by attending this special networking session specifically designed for science teachers of grades 9-12. Tips, tricks, ideas, lessons, and more will be shared to support your integration of technology at the 9-12 level.

10 a.m. – 10:50 a.m.

Tips for New Science Standards

David Thornburg, Norma Thornburg, and Sara Armstrong, Thornburg Center, IL

Room 18C

The new Next Generation Science Standards provide incredible opportunities for using technology as a tool for stimulating Project-Based Learning at all grade levels. This session provides concrete ideas you can use to help all students succeed.

STEM Strategies Using the Wind Turbine

Cory Ort and Kat Mills, CPO Science

Room 18D

In this session, participants will use science, technology, the engineering cycle, and mathematics to see who can build the most efficient wind turbine. Free resources will be provided.

Nspiring Investigations -- STEM

Barbara Ward and Debbie Walker, Montgomery ISD

Room 19A

This hands-on presentation will engage participants in activities covering a variety of topics in physics,

chemistry, biology, Algebra 1, and Algebra 2. Investigations will include simulations using TI-Nspire documents and data collection probes with the Vernier DataQuest app for TI-Nspire. Come explore cross-curricular activities for your class.

Interactive 5-E Science Lessons

Julie K. Jackson, Texas State University

Room 19B

The empirical nature of science supports contextual, multi-sensory learning. Most of the science content included in the elementary Next Generation Science Standards is immediately available through interactive websites. Learn how to design 5-E science lesson plans that utilize free Internet resources. A lesson-planning template will be provided.

11 a.m. - 11:50 a.m.

No Posterboard Required

Sara Reed and Julie Hall, Aledo ISD

Room 18C

Come learn how our campus moved from a traditional science fair to a completely virtual one using science core concepts, Web 2.0 tools, and lots of creativity and imagination.

STEM Strategies with Newton's Laws

Kat Mills, CPO Science

Room 18D

Participants will learn exciting STEM strategies to use in teaching Newton's Laws. Free resources provided.

Skype in the Science Classroom

Cynthia Dyes, Region 9 ESC

Room 19A

Use Skype to connect with guest speakers such as explorers, astronauts, or physicists, inspiring and enriching your science classroom. Connect with teachers from around the U.S. or the world to share data and engage with other students. Skype in the classroom breaks down walls and allows students to be a part of the global experience.

What Does it Look Like? A Model Science Classroom Experience for Today's Students

Brad Fountain, Discovery Education

Room 19B

Participate in a Discovery Education Science Techbook lesson from the perspective of the student. This centers-based lesson shows participants the power of using a variety of resources and technologies that promote full engagement for all students. Rotate with your group through several learning opportunities around the same content. Then, take your "student hat" off and debrief.

11:50 a.m. - 12:50 p.m.

Lunch on Your Own

1 p.m. - 1:50 p.m.

STEM Textbook vs. eBook and Tablets

James Caras, Sapling Learning

Room 18C

Experience life-like science with integrated labs, lessons, videos, and investigations, all contained within a single eBook with assessments, practice problems, and a fully-automated gradebook.

Nspire: One Platform for Math and Science

Patrick Fariss, Texas Instruments

Room 18D

In a technologically-diverse classroom, how do we provide meaningful math and science content on a digital platform? Whether a laptop, iPad, or other handheld device, teachers and students can use the TI-Nspire platform to access and create free digital content.

Awesome Online Resources to Enrich the Science Classroom

Cynthia Dyes, Region 9 ESC

Room 19A

Get inspired as you discover how to enrich learning opportunities for your students using a variety of online resources. Participants will connect to websites with science interactives, engaging science content, lesson plans, PBL resources, and challenges to spark student interest.

Activities that Really Stick with Your Students

Alfonso Ramirez, FOSS/Delta Education

Room 19B

Students explore STEM concepts in investigations using simple materials while having fun at the same time. You will introduce students to the world of magnets. They will construct and test various electromagnets. Students will record, graph, and interpret data and understand relationships among variables. They will visit our website, which provides students the opportunity to use our latest technologies.

2 p.m. - 2:50 p.m.

Writing Your First eBook ... From a First Time Writer

Kris Clements, Caddo Parish School District, LA

Room 18C

I will introduce iBooks Author, planning your book via your lessons, making ShowMe videos for the book, citing pictures, publishing the book, and giving your students access to the book.

Conduct Scientific Field Research

Kimberly West, STEM High School, WA
Room 18D

Using Microsoft technology, students can conduct off-site scientific field research, capture their findings using their phone or tablet's video camera, mini microscope, or probe ware. Combined with OneNote, students can capture their findings, write their observations using digital ink, and even collaborate with others in one location.

Unearth Superb Science Lessons

Jennifer Engels and Lisa Basile, La Porte ISD
Room 19A

Our instructional technology team will assist you in the discovery of new technology integration ideas for your K-5 classroom. We will showcase lessons using Microsoft Office, Kidspiration, Mimio, and Web 2.0 tools.

Equip Your Tablet with SPARKvue: A Full-Featured App for Science

Scott Fields, PASCO Scientific
Room 19B

Come explore PASCO's latest application for iPads and Android tablets: SPARKvue, which offers a full suite of display and analytical tools, all within an integrated learning environment, including reflection prompts, journaling, and more.

3 p.m. - 3:50 p.m.

The New Flipped Classroom

Lee DeWitt, Northeast ISD
Room 18C

Learn about an effectively integrated flipped classroom. The presenter has leveraged Sapling's high school tools in a flipped classroom model to accelerate her students' physics mastery.

Unlock the Universe with WWT

Kimberly West, STEM High School, WA
Room 18D

Keep your students engaged in science by taking 3D tours of the universe from your classroom. With Microsoft's World Wide Telescope, you can explore outer space in detail. This powerful program pulls satellite images from space, provides virtual tours by scientists, and even allows students to create their own tours of the universe.

The Tools for Scientific Process

Lisa Monthie, Independent Consulting
Room 19A

Today's science classroom extends way beyond Bunsen burners and microscopes and combines hands-on investigations, inquiry, and collaboration in ways never before imagined. Come and explore some of my favorite tools and strategies for each component of the scientific method.

FOSStering a Charged Classroom with Electrical Energy

Alfonso Ramirez, FOSS/Delta Education
Room 19B

Students explore STEM concepts in investigations using simple materials while having fun at the same time. You will introduce students to the world of electricity. They will construct and test various electric circuits. Students will record, graph, and interpret data. They will visit our website, which provides students the opportunity to use our latest technologies.

4 p.m. - 5 p.m.

Closing Session - "Using Technology to Engage Students in Problem Solving"

Dr. Cindy Moss, Discovery Education
Room 18C

During this presentation, participants will see specific examples of how technology is transforming science and math teaching and learning. They will be exposed to STEM competitions, ways to use STEM to grow the capacity of teachers and administrators in their buildings, and ways to fund STEM. They will leave with resources to use in their classes, schools, and districts, and will be inspired to implement these strategies with their students.



Cindy Moss is the Director of Global STEM Initiatives for Discovery Education. She is charged with supporting school districts in their work to develop and deploy student initiatives to drive science, technology, engineering, and math achievement nationwide.



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