

**South Carolina Science
Council**

**38th Annual Conference
SCHEDULE**

Gearing Up

**for the 2014 SOUTH
CAROLINA ACADEMIC
STANDARDS
AND PERFORMANCE
INDICATORS
FOR SCIENCE**

**November 4 - 6, 2015
Columbia Metropolitan
Convention Center**

FIELD TRIPS

Thursday, 8:30 – 11:30.

Field Trip TT1

Challenger Learning Center Experience

Price: \$12

Description: The Challenger Learning Center is an exciting and hands-on aeronautics and space-themed educational program designed to provide interactive learning experiences, integrating science and math curricula with information and technology. Come experience a simulated space mission... be an engineer in Mission Control and an astronaut on the Space Station! Find out why students say we are the best field trip ever! Participants will also get an overview of other programs offered at Challenger: aerospace/aviation education, robotics, rocketry, and our ePlanetarium.

Transportation: The (SC)² Shuttle will depart the Conference Center at 8:30AM and return at 11:30am.

Participant Limit: Min/Max: 12/24

Thursday, 8:45 – 12:30

Field Trip TT2

Congaree National Park: Land of Constant Change

Price: \$12

Description: Join the Congaree National Park Ranger as you learn about the astonishing biodiversity, natural and cultural history of the largest remaining section of bottomland forest in the southeastern United States. Enjoy a 2.4 mile hike along the boardwalk as you go through the floodplain, learning about how the Congaree River has shaped the landscape to be what it is today, how people have used the land, and why it has been protected as a national park.

Transportation: The (SC)² Shuttle will depart the Conference Center at 8:45AM and return at 12:30am.

Participant Limit: Min/Max: 12/30

Thursday, 10:00 – 11:30

Field Trip TT3

South Carolina State House Tour

Description: Tour South Carolina's most recognizable Historic Structure, and learn firsthand the history of our state through this magnificent building's architecture, history and legislative process. You will gain not only a respect for the past but a sense of responsibility for the future. Inside and out, from foundation to dome, the State House, as a result of the 1995-98 renovation, is in better shape than ever before. The work balanced the need to meet modern code requirements and improved efficiency against a respect for historic form and appearance.

Most visitors will never see the structural improvements, the sophisticated electrical wiring, alarm systems, or the state-of-the-art earthquake isolators that were installed. However, everyone will notice the renewal of the House and Senate chambers, the 19th century treatment of the lobby, the vaulted brickwork in the hallways of the lower floor, the restored marble floors and refurbished interior of the dome.

Price: FREE but Ticket Required

Transportation: NOTE: Because of the proximity of the SC State House there will not be a shuttle service provided. Participants will meet at the Field Trip Check-In at 10:00am and walk the 2 blocks to the State House.

Participant Limit: Min/Max: 5/20

Thursday, 11:45 – 3:30

Field Trip TT4

Riverbanks Zoo and Gardens – Behind the Scenes African Adventure Tour

Price: \$27

Description: No need for a plane ticket. You can explore the signs and sounds of Africa at Riverbanks Zoo and Garden. Experience the Wild Side as you get an inside look at some out-of-sight places. Encounter animals up close, explore behind the scenes and meet experienced keepers. Participants will wander through the elephant barn while our elephant girls are out for the day. You will see what is required behind-scenes to keep the elephants happy and healthy. Participants will learn about the unique challenges of exotic animal care and the amazing efforts that go into creating and sustaining a world-class zoo. The tour also includes other animal areas and plenty of photo opportunities. Also enjoy some individual exploration of the Zoo and Gardens.

Transportation: The (SC)² Shuttle will depart the conference center at 11:45AM and return at 3:30pm.

Participant Limit: Min/Max: 12/25

Thursday, 12:30 – 2:30

Field Trip FT4

Palmetto Outdoor Center – Interdisciplinary Walking Tour

Price: FREE – Ticket Required

Description: Palmetto Outdoor Center offers an interactive riverwalk tour that will excite and engage. The tour highlights and interprets the educationally-rich areas of Columbia and details how the Three Rivers region has shaped Columbia, SC. By combining specific aspects of the riverwalk, the tour covers a variety of topics relating to geography, ecology and, historical events that pertain to the area. By the end of the tour you will be surprised at all the discoveries along the way.

Transportation: The Palmetto Outdoor Center shuttle will depart the Conference Center at 12:30pm and return at 2:30pm.

Participant Limit: Min/Max: 5/15

Thursday, 1:00 – 5:00

Field Trip TT5

Congaree River Kayak Adventure

Price: \$35

Description: Join Bill Stangler the Congaree Riverkeeper and other Adventure Carolina guides on this three mile guided kayak trip down the beautiful Congaree River. Come explore the scenic landscape of the Congaree waterways

This is an excellent trip for a beginner or experienced paddler. Bring your camera, binoculars, and dress for the weather. Hats, sunscreen, and bottled water are recommended.

Transportation: The Adventure Carolina shuttle will depart the Conference Center at 1:00pm and return at 5:00pm.

Participant Limit: Min/Max: 6/30

Thursday, 1:00 – 3:45

Field Trip TT7

Saluda Shoals Wetland Habitats

Price: \$12

Description: Join the Saluda Shoals' Lead Interpretive Park Ranger as you explore the wetland habitats around Saluda Shoals Park. Saluda Shoals Park is a premier, natural, environmentally sensitive riverfront park that invites visitors to experience the treasures of the Saluda River through exceptional educational, recreational and cultural opportunities. Located along the banks of the beautiful Saluda River.

Transportation: The (SC)² Shuttle will depart the conference center at 1:00pm and return at 3:45pm.

Participant Limit: Min/Max: 12/22

Thursday, 3:15 – 5:30

Field Trip TT8

EdVenture's Engineering 101

Price: FREE – Ticket Required

Description: Join EdVenture's educators as they have participants engage in a series of activities designed to inspire young engineers. Teachers will participate in several engineering challenges that they can take back to their classrooms, as well as explore the museum to learn about our programs and opportunities.

Transportation: Because of the proximity of EdVenture there will not be a shuttle service provided. EdVenture is .08 miles from the Convention Center. Participants should meet in the lobby of EdVenture at 3:15pm

Participant Limit: Min/Max: 5/20

Friday, 1:00 – 4:00

Field Trip TT9

New Learning Opportunities at the South Carolina State Museum

Price: \$5

Description: Explore all the new education opportunities at the State Museum, including the Clue Cross Blue Shield of South Carolina Planetarium, Boeing Observatory, 4D Theater and Julius Caesar Blockbuster exhibit. Your trip will include a brief introduction by one of the State Museum staff to museum educational offerings and time to chat with Boeing Observatory educators about our on-site and distance learning activities. Of course you'll have time to explore the familiar and new exhibit while there.

Transportation: Because of the proximity of the State Museum, there will not be a shuttle service provided. The museum is .08 miles from the Convention Center. Participants should meet in the lobby of the State Museum at 1:00.

Participant Limit: Min/Max: 20/120

Friday, 8:30 – 11:30

Field Trip FT1

Challenger Learning Center Experience

Price: \$12

Description: The Challenger Learning Center is an exciting and hands-on aeronautics and space-themed educational program designed to provide interactive learning experiences, integrating science and math curricula with information and technology. Come experience a simulated space mission... be an engineer in Mission Control and an astronaut on the Space Station! Find out why students say we are the best field trip ever!

Participants will also get an overview of other programs offered at Challenger: aerospace/aviation education, robotics, rocketry, and our ePlanetarium.

Transportation: The (SC)² Shuttle will depart the Conference Center at 8:30AM and return at 11:30am.

Participant Limit: Min/Max: 12/24

Friday, 10:00 – 12:30

Field Trip FT2

USC McKissick Museum Tour and Lunch at McCutcheon House

Price: \$10 *Gratuuity is not included in the price of the field trip. Please tip your wait staff accordingly.

Description: The McKissick Museum is located at the heart of the historic Horseshoe on the Columbia campus of the University of South Carolina. It was established in 1976 by the University Board of Trustees to bring together under one roof the many object collections housed in various departments and colleges across campus. These collections date to 1801 and provide insight into the long and illustrious history of the University. Special focus will be made on the Natural History collection.

Following the tour we will be treated to a gourmet lunch dining experience at the McCutchen House. One of the original buildings erected on the university's Horseshoe, the McCutchen House was built in 1813 as the second faculty residence on the South Carolina College campus. The students of the School of Hotel, Restaurant and Tourism Management will prepare and serve a four course luncheon. Meals feature their famous tomato pie, soup, salad, plated entrée and dessert bar.

Transportation: Because of the proximity of the McKissick and McCutchen, there will not be a shuttle service provided. The McKissick and McCutchen are .08 miles from the Convention Center. Participants should meet in the lobby of the McKissick Museum at 10am and are encouraged to car pool if driving.

Participant Limit: Min/Max: 5/22

Friday, 11:30 – 3:15

Field Trip FT3

Riverbanks Zoo and Gardens – The A List: Conservation Challenge Tour

Price: \$17

Description: Some celebrities make the “A” list; some animals make the “E” list. Making the list is great for celebrities, but not for animals. Tour the Zoo to see animals that have made the list and animals that have made it off the list. Find out what Riverbanks is doing to get animals off the list and to help prevent animals from making the list in the future. Also enjoy some individual exploration of the Zoo and Gardens. Shuttle will depart conference center at 11:30am and return at 3:15pm.

Transportation: The (SC)² Shuttle will depart the conference center at 11:30am and return at 3:15pm.

Participant Limit: Min/Max: 12/22

Friday, 12:30 – 2:30

Field Trip FT4

Palmetto Outdoor Center – Interdisciplinary Walking Tour

Price: FREE – Ticket Required

Description: Palmetto Outdoor Center offers an interactive riverwalk tour that will excite and engage. The tour highlights and interprets the educationally-rich areas of Columbia and details how the Three Rivers region has shaped Columbia, SC. By combining specific aspects of the riverwalk, the tour covers a variety of topics relating to geography, ecology and, historical events that pertain to the area. By the end of the tour you will be surprised at all the discoveries along the way.

Transportation: The Palmetto Outdoor Center shuttle will depart the Conference Center at 12:30pm and return at 2:30pm.

Participant Limit: Min/Max: 5/15

Friday, 1:00 – 5:00

Field Trip FT5

Congaree River Kayak Adventure

Price: \$35

Description: Join Bill Stangler the Congaree Riverkeeper and other Adventure Carolina guides on this three mile guided kayak trip down the beautiful Congaree River. Come explore the scenic landscape of the Congaree waterways. This is an excellent trip for a beginner or experienced paddler. Bring your camera, binoculars, and dress for the weather. Hats, sunscreen, and bottled water are recommended.

Transportation: The Adventure Carolina shuttle will depart the Conference Center at 1:00pm and return at 5:00pm. Please note that this trip will end after the Conference ends, so you will need to take all of your belongings with you when you depart the Conference Center.

Participant Limit: Min/Max: 6/30

Wednesday

PreConference Sessions

Wednesday, 1:00 – 1:45

Session 74

Navigating the 2014 SC Science Standards

Description of Session: Participants will decode the standards and review the support documents for the 2014 SC Academic Standards and Performance Indicators for Science.

Type of Session: Presentation

Intended Audience: K-5

Participant Limit: 50+

Presenter(s): Dr. Regina E. Wragg

Time: 45 Minutes

Wednesday, 2:00 – 2:45

Session 75

Navigating the 2014 SC Science Standards

Description of Session: Participants will decode the standards and review the support documents for the 2014 SC Academic Standards and Performance Indicators for Science.

Type of Session: Presentation

Intended Audience: 6-8

Participant Limit: 50+

Presenter(s): Dr. Regina E. Wragg

Time: 45 Minutes

Wednesday, 3:00 – 3:45

Session 76

Navigating the 2014 SC Science Standards

Description of Session: Participants will decode the standards and review the support documents for the 2014 SC Academic Standards and Performance Indicators for Science.

Type of Session: Presentation

Intended Audience: 9-12

Participant Limit: 50+

Presenter(s): Dr. Regina E. Wragg

Time: 45 Minutes

Wednesday, 1:00 – 2:15

Session 77

What Everyone Ought to Know About the New South Carolina Mathematics Standards

Description of Session: Participants will gain an understanding of the expectations of the new South Carolina College- and Career-Ready Standards for Mathematics and explore resources and support documents aligned to the expectations of those standards.

Type of Session: Hands-On Workshop

Intended Audience: K-5, 6-8, 9-12

Participant Limit: 50+

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Lindsay Boozer

Time: 1 Hour 15 minutes

Explore and Engage with the new FOSS K-5 Modules!

(SC)² Pre-Conference Workshop Wednesday, November 4, 2015 1:00pm-4:00pm
Metropolitan Convention Center Columbia, SC

The FOSS Leadership Team at the Lawrence Hall of Science and Delta Education are pleased to offer a FREE special SC² pre-conference Elementary workshop.

Get a head start on your science adoption materials review! FOSS supports the content, practices, and crosscutting concepts as described in the new SC Academic Standards and Performance Expectations. FOSS has been recommended for adoption by the SC Instructional Materials Review Panel for Science K-5.

Topics of discussion and activities will include:

- Discover the magic of FOSS through our exciting problem based learning, active, hands-on, inquiry investigations
- Learn what's new, improved and distinctive in the new FOSS 3rd and NG Editions
- See how easy it is to integrate the three dimensions of Science and Engineering Practices, Disciplinary Core Ideas and the Cross Cutting Concepts with FOSS
- Explore FOSS' new K-5 instructional design and conceptual frameworks
- Experience effective implementation strategies for both new and existing FOSS users
- Understand how FOSS aligns with the new SC Academic Standards and Performance Expectations

The workshop will explore:

- Embedded teaching strategies
- Hands-on investigations
- Science notebooking
- Assessment
- Literacy components
- Online activities from the new FOSSweb.com

Who should attend:

Elementary Administrators, Curriculum Directors, Science Coordinators, Coaches, Specialists, Science Lead Teachers and Adoption Committee Members are all encouraged to join us. *

Advance Registration is required. Deadline to RSVP is Friday Oct. 22, 2015

The workshop is free to attend but space is limited 30 people.*

RSVP: Susan.Hardy@SchoolSpecialty.com RSVP's must include full name, email, cell & work phones, name of your school/district and your position

**We may need to limit attendance to 3 people per school/district to allow for participation by multiple schools/districts. If this occurs, we will automatically waitlist the additional participants. Waitlists will be filled on a first come first served basis by date of registration. Waitlisted individuals will be notified on October 23rd.*

The K-5 workshop will be taught by Marilyn Enoch, She has won numerous honors during her teaching career including the prestigious Ashland Oil 5 State Teacher of the Year Award, Kentucky Space Educator of the Year Award, and Newspaper in Education Teacher of the Year Award. Ms. Enoch taught self-contained elementary classes for 11 years and was a K-5 Science Lab teacher for 12 years. She has also worked for the Lawrence Hall of Science at UC Berkeley and is currently a consultant for Delta Education/School Specialty.

Explore and Engage with the new FOSS Middle School Courses!

(SC)² Pre-Conference Workshop Wednesday, November 4, 2015 1:00pm-4:00pm
Metropolitan Convention Center Columbia, SC

The FOSS Leadership Team at the Lawrence Hall of Science and Delta Education are pleased to offer a FREE special SC² pre-conference Middle School workshop.

Get a head start on your science adoption materials review! FOSS supports the content, practices, and crosscutting concepts as described in the new SC Academic Standards and Performance Expectations. FOSS has been recommended for adoption by the SC Instructional Materials Review Panel for Science 6-8.

The workshop will explore:

- Embedded teaching strategies
- Hands-on investigations
- Science notebooking
- Assessment
- Literacy components
- Online activities from the new FOSSweb.com

Topics of discussion and activities will include:

- Discover the magic of FOSS through our exciting problem based learning, active, hands-on, inquiry investigations
- Learn what's new, improved and distinctive in the FOSS Middle School courses
- See how easy it is to integrate the three dimensions of Science and Engineering Practices, Disciplinary Core Ideas and the Cross Cutting Concepts with FOSS
- Explore FOSS' new Middle School instructional design and conceptual frameworks
- Experience effective implementation strategies for both new and existing FOSS users
- Understand how FOSS aligns with the new SC Academic Standards and Performance Expectations

Advance Registration is required. Deadline to RSVP is Friday Oct. 22, 2015

The workshop is free to attend but space is limited 30 people.*

RSVP: Susan.Hardy@SchoolSpecialty.com RSVP's must include full name, email, cell & work phones, name of your school/district and your position.

**We may need to limit attendance to 3 people per school/district to allow for participation by multiple schools/districts. If this occurs, we will automatically waitlist the additional participants. Waitlists will be filled on a first come first served basis by date of registration. Waitlisted individuals will be notified on October 23rd.*

Brian Campbell, a FOSS Curriculum Developer at the Lawrence Hall of Science at UC Berkeley will teach this workshop. Campbell is involved in the revision of the current FOSS materials and professional development specifically focusing on science notebooks and formative assessment. He will use FOSS Middle School modules that have been recommended for the upcoming SC Middle School Science Adoption. Make plans to also attend his lunchtime address on Thursday November 5th.

Wednesday, 10:30 A.M. – 8:30 P.M.

WS #10 South Carolina State Museum and the Boeing Observatory

Type of Session: Workshop

Intended Audience: ALL

Summary: The South Carolina State Museum offers a FREE workshop for teachers in the museum's state-of-the-art Boeing Observatory. Workshop participants will learn how to remotely operate the 1926 Alvan Clark telescope and take still images and video of day and night sky objects. Teachers also will receive training in image processing software that they will share with their students. Once trained, educators will be able to operate the observatory from the classroom during a free distance learning program. Professional development is intended for elementary and middle school educators who teach astronomy. Lunch and dinner are provided.

Certificates & Credits Available!

Participant Limit:

Wednesday, 1:00 – 2:15

Workshop WS9

Home and School Science Activities

Price: \$35

Intended Audience: 6-8

Summary: Focusing on literacy and achieving a progression to higher levels based on everyday physical science. Receive 2 resource books, lessons and materials. Focus: Air pressure, forces, changes in state and Bernoulli.

Presenter(s): Bernie Horvath

Wednesday, 1:00 – 4:00

Workshop WS2

Model Rocketry: A Highly Motivational STEM Teaching Tool

Price: \$10

Intended Audience: All

Participant Limit: None noted

Summary: This is an introduction to Model Rocketry, Newton's Laws of Motion and Aerospace STEM Concepts. Teachers will build and launch a Model Rocket.

Focus: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Obtaining, evaluating, and communicating information

Presenter(s): Dr. Edward P. Donovan & Sharon L. Donovan

Time: 2 Hour 30 minutes

Wednesday, 1:00 – 4:00

Workshop WS8

Growing Up Wild

Price: \$30

Intended Audience: K-5

Participant Limit: 30

Summary: The Growing Up Wild Workshop, similar to Project Wild, contains curricula for those teaching ages 3-7. It uses a wide range of hands-on-activities to generate a child's sense of wonder about nature. Growing Up Wild (ages 3-7) – connects young children with nature and the outdoors with 25 activities focused on wildlife. This program builds on children's sense of wonder about nature and invites them to explore wildlife and the world around them.

Focus: Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations (for science) and designing solutions (for engineering), Obtaining, evaluating, and communicating information

Presenter(s): Nancy & Ray Thompson

Time: 3 Hours

Friday, 1:00 – 2:15

Workshop WS7

Geology of South Carolina Workshop

Price: \$20

Type of Session: Hands-On Workshop

Intended Audience: All Levels

Participant Limit: None noted

Summary: Rocks and landscapes are thought to be stable features, but geologic history reveals major changes in both occurred throughout South Carolina. Participants receive map sets.

Focus: Stability and change

Presenter(s): John Wagner

Time: 1 Hour 15 minutes

Thursday, Concurrent Sessions

Thursday, 7:15 – 7:45

Meet and Greet Continental Breakfast

SC2 Board Members welcome you to the Opening Session of the Conference

Thursday, 8:00 – 9:00

OPENING SESSION

Dr. Lowery

Thursday, 9:15 – 10:00

Session 81

Assessment of Science and Assessment AS Science

Description of Session: Measurement is a fundamental part of all science. It starts with counting and moves on up. As the different fields of science have matured so have the measurements used. Assessment or testing is a scientific field, too. Its measurements are growing in sophistication. This presentation will focus on both science assessment in SC, uncovering how assessment is science, and what that implies. The presentation will leave time for discussion.

Type of Session: Presentation

Intended Audience: ALL

Participant Limit: 26-50

Presenter(s): David Mott, Tests for Higher Standards / PO Works

Time: 45 Minutes

Thursday, 9:15 – 10:00

Session 9

South Carolina Science Olympiad - How to Get Involved

Description of Session: Come learn more about Science Olympiad - the nation's most exciting interscholastic academic competition! Learn how to prepare your students to compete in events from a wide range of STEM disciplines, including biology, chemistry, earth science, physics, and technology.

Type of Session: Presentation

Intended Audience: 6-8, 9-12

Participant Limit: 26-50

Addresses: Physical Sciences, Life Sciences, Earth and Space Sciences, Engineering, Technology, and Applications Science

Presenter(s): Bret Clark

Time: 45 Minutes

Thursday, 9:15 – 10:00

Session 45

Gearing Elementary Students Up for NGSS!

Description of Session: Participants will examine multi-level books to see how young students can understand disciplinary core ideas while incorporating literacy skills. Participants will also receive sample books.

Type of Session: Presentation

Intended Audience: K-5

Participant Limit: 26-50

Addresses: Physical Sciences, Life Sciences, Earth and Space Sciences, Engineering, Technology, and Applications Science

Presenter(s): Judy Smith

Time: 45 Minutes

Thursday, 9:15 – 10:00

Session 46

Electromagnetic Waves and the relationship between color and energy.

Description of Session: We will use real issues to explore the properties of light by investigating the colors of the visible spectrum and the energy of each color.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 26-50

Addresses: Planning and carrying out investigations, Analyzing and interpreting data, Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): John Garrett

Time: 45 Minutes

Thursday, 9:15 – 10:30

Session 16

Teaching Chemistry Just Got Easier!

Description of Session: With the CPO Science *Link* series **Chemistry Models**, students will use the Atom Building Game and Periodic Table Tiles to explore and learn more than 20 concepts; Including Atomic & Molecular structures, Compounds & Bonding, Formulas & Balancing Equations just to name a few! *Link* features include online materials and tablet-enabled investigations.

Type of Session: Hands-On Workshop

Intended Audience: 6-8, 9-12 Chemistry

Presenter(s): Alex Headen

Time: 1 Hour 15 minutes

Thursday, 9:15 – 10:00

Session 36

Incredible Journey of Water (Project WET)

Description of Session: This simulation begins with a study of the earth's water and participants travel through the water cycle from the perspective of a water droplet.

Type of Session: Hands-On Workshop

Intended Audience: 4-6

Participant Limit: 1-25

Addresses: Earth and Space Sciences

Presenter(s): Heather Mims and Terri Cosby

Time: 45 Minutes

Thursday, 9:15 – 10:00

Session 37

STEM: Investigating Touch Screen Devices

Description of Session: Have you ever wondered how a touch screen device works? Join the Smithsonian and Carolina to investigate static electricity and capacitive touch screens.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Carolina Curriculum

Time: 45 Minute

Thursday, 9:15 – 10:00

Session 3B

ADAPTIVE and PURPOSEFUL Technology for SC Science Classrooms

Description of Session: Is technology a burden or is it enabling you to go farther and faster with ease? In this session you'll see how classroom technology can be adaptive and purposeful, can meet you anywhere, and take you everywhere you want to go.

Type of Session: Presentation

Intended Audience: 6-8, 9-12

Addresses: Physical Sciences, Life Sciences, Earth and Space Sciences, Engineering, Technology, and Applications Science

Presenter(s): Jason Marshall

Time: 45 Minutes

Thursday, 9:15 – 10:30

Session 63

Argumentation: Developing oral language skills through scientific inquiry and the new SC Physical Science Light Standards

Description of Session: Scientists use evidence to support (or argue against) claims. Explore strategies/resources your students can use (from FOSS) to form logical arguments based on substantive claims, reasoning, and relevant evidence. Go home with ideas and samples how to implement the new South Carolina Academic Standards and Performance Indicators in your classroom. While we are demonstrating with examples from the new 1st grade Light standards, this session will benefit all K-2 Educators.

Type of Session: Hands-On Workshop

Intended Audience: K-2

Participant Limit: 30-35

Addresses: Asking questions (for science) and defining problems (for engineering), Analyzing and interpreting data, Constructing explanations (for science) and designing solutions (for engineering), Obtaining, evaluating, and communicating information. Physical Science, Earth and Space Science

Presenter(s): Marilyn Enoch

Time: 1 Hour 15 minutes

Thursday, 10:15 – 11:00

Session 79

The Building Blocks of STEM

Description of Session: Learn how to build on the STEM foundation while providing opportunities for students to engage in deep, contextual learning embedded in environmental science.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 26-50

Presenter(s): Dr. Deanna Taylor

Time: 45 Minutes

Thursday, 10:15 – 11:00

Session 52

Science Tool Time

Description of Session: We will have our own "Tool Time" to show how scientific notebooks can help organize and streamline classroom instruction, as the latest standards are implemented.

Type of Session: Presentation

Intended Audience: 6-8, High School Biology

Participant Limit: 50+

Addresses: Physical Sciences, Life Sciences, Earth and Space Sciences

Presenter(s): LearnEd Notebooks

Time: 45 Minutes

Thursday, 10:15 – 11:00

Session 62

SC Science Matters Supports Science and Engineering Practices

Description of Session: SC Science Matters is a National Science Teachers Association (NSTA) initiative that links science teachers to one another and to professional development opportunities in support of the Science and Engineering Practices. It is also a pipeline to information regarding science education initiatives and professional development in SC. Come join us and learn how you can access some of the resources of NSTA without being a member.

Type of Session: Presentation

Intended Audience: All Levels

Participant Limit: 26-50

Presenter(s): Linda D. Sinclair

Time: 45 Minutes

Thursday, 10:15 – 11:00

Session 28

Elementary Engineering: STEM Accreditation

Description of Session: Learn how students Plan, Create, and Improve STEM related projects in an Engineering Lab using the Engineering Design Process at Mount Lebanon Elementary School, STEM Accredited School.

Type of Session: Presentation

Intended Audience: K-5

Participant Limit: 26-50

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering)

Presenter(s): Tish Goode and Elliott Southard

Time: 45 Minutes

Thursday, 10:15 – 11:00

Session 53

Succeeding with S.T.E.A.M.

Description of Session: Presenters will also share practical implementation strategies for integrating STEAM in all curricular areas, and offer solutions to possible challenges of developing a STEAM initiative.

Type of Session: Presentation

Intended Audience: K-5

Participant Limit: 26-50

Addresses: Engineering, Technology, and Applications Science

Presenter(s): Sabrina Fair, Jennifer Faulkner

Time: 45 Minutes

Thursday, 10:15 – 11:00

Session 12

Reading Strategies to Assist Struggling Readers Grasp Science Concepts

Description of Session: Participants will learn strategies that can be used to assist struggling readers learn science concepts with ease! Practical examples and handouts will be given out.

Type of Session: Presentation

Intended Audience: 6-8, 9-12

Participant Limit: 1-25

Addresses: Physical Sciences, Life Sciences, Earth and Space Sciences, Engineering, Technology, and Applications Science

Presenter(s): Lucia K. Jacobs

Time: 45 Minutes

Thursday, 10:15 – 11:00

Session 50

STEM on a budget: How to use dollar store finds in your classroom

Description of Session: During this presentation you will be provided with ways to incorporate dollar store items into your STEM challenges. We will provide you with explanations and models from our classroom experiences, as well as, lesson plans to take back to your classroom. You will also have the chance to work through some of the challenges the way that a student would. As newer teachers, we realize that money sometimes gets in the way of having students perform labs so we found ways to get around that with our dollar store items. Our goal is to show you how simple supplies can help students create complex STEM activities.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering), Planning and carrying out investigations, Constructing explanations (for science) and designing solutions (for engineering), Obtaining, evaluating, and communicating information

Presenter(s): Emily Avery, Brittany Miller

Time: 45 Minutes

Thursday, 10:15 – 11:00

Session 38

STEM: Experimenting with Forces and Motion

Description of Session: Use stations to determine what students know about forces, energy and motion.. Come explore using Smithsonian and Carolina materials.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 1-25

Addresses: Science and Engineering practices

Presenter(s): Carolina Curriculum

Time: 45 Minutes

Thursday, 10:15 – 11:00

Session 51

STEM and Science and Engineering Practices Come Alive!

Description of Session: Online interactive simulations and visualizations ignite student interest, making hands-on inquiry-based instruction super easy with new SC Standards, SEPs, Crosscutting Concepts, and STEM initiatives.

Teachers can supplement and enhance instruction with powerful interactive visualizations of science and mathematics concepts.

Type of Session: Interactive Presentation

Intended Audience: K-5, 6-8

Participant Limit: 1-25

Addresses: Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering)

Presenter(s): Thom O'Brien

Time: 45 Minutes

Thursday, 10:15 – 11:00

Session 3A

ADAPTIVE and PURPOSEFUL Technology for SC Science Classrooms

Description of Session: Is technology a burden or is it enabling you to go farther and faster with ease? In this session you'll see how classroom technology can be adaptive and purposeful, can meet you anywhere, and take you everywhere you want to go.

Type of Session: Presentation

Intended Audience: 6-8, 9-12

Addresses: Physical Sciences, Life Sciences, Earth and Space Sciences, Engineering, Technology, and Applications Science

Presenter(s): Jason Marshall

Time: 45 Minutes

Thursday, 11:15 – 12:15

KEYNOTE – Brian Campbell

Thursday, 12:15 – 1:00

Lunch Break (Concessions in Vendor Hall)

Vendor Hall Open

Thursday, 1:00 – 2:15

Session 4

Improving Science Instruction: How Do You Know If What You Are Doing Is Working?

Description of Session: Participants will see classroom techniques and strategies that have proven to increase student understanding of science in low achieving schools. This session will address how to meet state standards, question students, provide constructive feedback, and measure what students understand. Ideas can be used on Monday when you return to school. All handouts will be given to participants.

Type of Session: Presentation

Intended Audience: ALL

Presenter(s): Manley Midgett, NSTA District VI Director

Time: 1 hour 15 Minutes

Thursday, 1:00 – 2:15

Session 11

Science and Engineering Practices in the Early Childhood Classroom

Description of Session: What do the Science and Engineering Practices look like in the early childhood classroom? Come and experience two centered based investigations from the new Smithsonian STC Kindergarten program.

Type of Session: Hands-On Workshop

Intended Audience: K-5

Participant Limit: 26-50

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Analyzing and interpreting data, Constructing explanations (for science) and designing solutions (for engineering), Obtaining, evaluating, and communicating information

Presenter(s): Ellen Mintz

Time: 1 Hour 15 minutes

Thursday, 1:00 – 2:15

Session 90

Think like an Engineer using the Science and Engineering Practices

Description of Session: The presenter will engage the group in a deep discussion with Science and Engineering Practices and connection to thinking like an engineer using the engineering design process. The participants will engage in engineering task that make connections to the practices and engineering design process.

Type of Session: Hands-On Workshop, Presentation

Intended Audience: All Levels

Participant Limit: 26-50

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Dr. Jacquely Walton

Time: 1 Hour 15 minutes

Thursday, 1:00 – 2:15

Session 6

Citizen Science

Description of Session: Citizen Science projects are used to show how easy it is for our students to help on a global scale.

Type of Session:

Intended Audience:

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Denise Wright

Time: 45 minutes

Thursday, 1:00 – 2:15

Session 85

What Happens to Properties When I Combine Substances?

Description of Session: Chemistry lesson from IQWST. Investigate, analyze data of chemical reaction. Participants will practice how to help students construct arguments from evidence and their questioning skills.

Type of Session: Hands-On Workshop ***Safety:** Wear goggles

Intended Audience: 6-8

Participant Limit: 1-25

Addresses: Energy and matter: Flows, cycles, and conservation, Physical Sciences

Presenter(s): Debbe Bingaman

Time: 1 Hour 15 minutes

Thursday, 1:00 – 2:15

Session 32

Modeling the Phases of the Moon.....on a budget!!

Description of Session: This hands-on activity will show teachers how to model the phases of the moon in an innovative, creative way! Use it in your classroom tomorrow!

Type of Session: Hands-On Workshop, Presentation

Intended Audience: 6-8

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations (for science) and designing solutions (for engineering), Obtaining, evaluating, and communicating information

Presenter(s): Lucia K. Jacobs

Time: 1 Hour 15 minutes

Thursday, 1:00 – 2:15

Session 69

Using Technology and Note-booking to go from a concrete thinker to an abstract thinker.

Description of Session: Today's world requires people to think in an abstract manner. Learn how to use hands-on activities, technology, and note-booking to take your learner from being a concrete thinker to an abstract thinker. Hand-outs and door prizes included!

Type of Session: Hands-On Workshop (Nonticketed)

Intended Audience: K-5

Participant Limit: 1-25

Presenter(s): Christy Papala

Time: 1 Hour 15 minutes

Thursday, 1:00 – 2:15

Session 14

Heredity and Adaptations with CPO Crazy Traits

Description of Session: Explore concepts such as Adaptations, Biodiversity, Dominant and Recessive traits, Alleles, Genotypes, Phenotypes, Punnett Squares and more! No better way to teach Genetics and Heredity!

Type of Session: Hands-On Workshop

Intended Audience: 6-8, 9-12

Participant Limit: 26-50

Addresses: Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Alex Headen

Time: 1 Hour 15 minutes

Thursday, 1:00 – 2:15

Session 59

Energy transfer- Electricity and magnetism

Description of Session: Active session, which models "Cause-Effect" and "Stability -Change" using grade 3rd energy standards. (Sample materials, lessons, and science notebooking strategies will be provided.)

Type of Session: Hands-On Workshop

Intended Audience: primarily grade 3

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information, Cause and effect: Mechanism and explanation, Stability and change Physical Sciences

Presenter(s): Jeanne McKinney

Time: 1 Hour 15 minutes

Thursday, 1:00 – 2:15

Session 68

Using Science Notebooks to Impact Student Learning with FOSS

Description of Session: Brian Campbell leads a "how-to-do" hands-on notebook session to compliment his engaging Lunchtime address. Come put into practice the Notebook strategies he spoke about. Go home with ideas and samples to use in the classroom immediately.

Type of Session: Hands-On Workshop

Intended Audience: K-5, 6-8

Participant Limit: 30-35

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Brian Campbell

Time: 45 Minutes

Thursday, 1:00 – 2:15

Session 65

Science-Centered Language Development to promote scientific understanding

Description of Session: Learn how to incorporate the best practices from language arts instruction to support your students' understanding of science concepts and their ability to communicate that understanding. Go home with ideas and samples to use in the classroom immediately.

Type of Session: Hands-On Workshop

Intended Audience: K-5

Participant Limit: 30-35

Addresses: Asking questions (for science) and defining problems (for engineering), Analyzing and interpreting data, Constructing explanations (for science) and designing solutions (for engineering), Obtaining, evaluating, and communicating information

Presenter(s): Marilyn Enoch, School Specialty

Time: 1 Hour 15 minutes

Thursday, 2:45 – 4:00

Session 80

Jump on the SEP-STEM Rollercoaster

Description of Session: Join a Pearson Science Specialist in this exciting hands-on engineering workshop. Participants will model how to engage students in real-world problem solving with SEP integration. Participants will learn how to facilitate science, technology, engineering, and mathematics in school science programs and extended learning opportunities within schools by challenging students to create and design their own solutions to real-world problems.

Type of Session: Hands On

Intended Audience: K-5

Presenter(s): Tom Gantt, Pearson Science Specialist

Time: 1 Hour 15 Minutes

Thursday, 2:45 – 4:00

Session 70

Meeting Your SEP's and Cross Cutting Concepts through Open-Ended Inquiry Based Labs

Description of Session: Address your SEP's and Cross Cutting Concepts with open-ended inquiry based labs. Design, build and test your own Mars Space Lander.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 26-50

Addresses: This session will address both the SEP's and Cross Cutting Concepts. Participants will be doing a hands-on open-ended inquiry based lab.

Presenter(s): Scott Skene, Pearson

Time: 1 Hour 15 minutes

Thursday, 2:45 – 4:00

Session 47

Using Problem-Based Learning for Effective Science Instruction

Description of Session: Participants will learn how to implement problem-based learning in the science classroom.

Type of Session: Hands-On Workshop

Intended Audience: K-5, 6-8, 9-12

Participant Limit: 1-25

Addresses: Physical Sciences, Life Sciences, Earth and Space Sciences, Engineering, Technology, and Applications Science

Presenter(s): Tonya Smith

Time: 1 Hour 15 minutes

Thursday, 2:45 – 4:00

Session 29

Connect the Dots

Description of Session: This fun, kinesthetic session addresses new standards related to constellations and navigation. Receive new understanding and hands-on activities that integrate science, math and social studies.

Type of Session: Hands-On Workshop

Intended Audience: All Levels

Participant Limit: 1-25

Safety: People need to walk, rotate, and bend a bit to do the activities. :)

Addresses: Earth and Space Sciences

Presenter(s): Darlene Smalley

Time: 45 Minutes

Thursday, 2:45 – 4:00

Session 7

Pasta Car Challenge

Description of Session: Design a race car made from various types of pasta that will travel 150 cm the fastest and that is built within the allowed budget.

Type of Session: Hands-On Workshop

Intended Audience: 5th - 6th

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Charlene Allen and Cindy Kennington

Time: 1 Hour 15 minutes

Thursday, 2:45 – 4:00

Session 8

Population Connections

Description of Session: This workshop uses population data to present/apply key science concepts regarding resource management. Participants will receive a variety of activities that integrate all content areas.

Type of Session: Hands-On Workshop

Intended Audience: 3rd - 8th

Participant Limit: 30

Addresses: Life Sciences, Earth and Space Sciences, Engineering, Technology, and Applications Science

Presenter(s): Karey Santos

Time: 1 Hour 15 minutes

Thursday, 2:45 – 4:00

Session 15

STEM Investigations using CPO Wind Turbine

Description of Session: With the CPO Science *Link* series **Wind Turbine**, students explore concepts in Engineering Design, Energy Transformation, Electromagnetism, and much more! Students will design, test, and refine a working turbine and challenge each other to see which model can generate the highest voltage with the unique equipment module. *Link* features include online materials and tablet-enabled investigations.

Type of Session: Hands-On Workshop

Intended Audience: 6-8, 9-12

Participant Limit: 26-50

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Alex Headen

Time: 1 Hour 15 minutes

Thursday, 2:45 – 4:00

Session 13

Enhance your Science Curriculum with Text Sets

Description of Session: Build interest and content knowledge with Text Sets in your science classroom. Participants will learn how to create a resource that supports all learning styles.

Type of Session: Presentation

Intended Audience: 6-8, 9-12

Participant Limit: 1-25

Addresses: Physical Sciences, Life Sciences, Earth and Space Sciences, Engineering, Technology, and Applications Science

Presenter(s): Lucia K. Jacobs

Time: 45 Minutes

Thursday, 2:45 – 4:00

Session 73

Don't Just Talk About Environmental Issues, Solve Them

Description of Session: Students research previous solutions to the world's environmental problems then work through the engineering process to develop a working model for their own invention to solve the issue.

Type of Session: Hands-On Workshop

Intended Audience: 9-12

Participant Limit: 1-25

Safety: We will use soldering devices and circuits so participants will need to follow safety standards for working with hot materials.

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Andie Anderson

Time: 1 Hour 15 minutes

Thursday, 2:45 – 4:00

Session 33

Ed-Tech and the 2014 SEPs

Description of Session: Participants will have hands-on experience with technology (Scratch and Makey Makey) as they explore how Ed-Tech supports implementation of the 2014 SC Science and Engineering Practices and problem-based learning.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 1-25

Addresses: Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Obtaining, evaluating, and communicating information

Presenter(s): Andrew Youngblood and Sabrina Myers

Time: 1 Hour 15 minutes

Special Requests: Due to a limited number of laptops, attendees are encouraged to bring their own laptop to be able to access the online software, Scratch.

Thursday, 2:45 – 4:00

Session 67

Fun and easy K-2 STEM lessons that combine the Science and Engineering Practices, Cross Cutting Concepts and Disciplinary Core Ideas (plus ELA).

Description of Session: A recipe to teach it all: STEM, Science-Engineering Practices, Disciplinary Core Ideas, Cross Cutting Concepts, ELA & Math with K-2 FOSS Next Generation Modules. Go home with ideas and samples to use in the classroom immediately.

Type of Session: Hands-On Workshop

Intended Audience: K-2

Participant Limit: 30-35

Addresses: Asking questions (for science) and defining problems (for engineering), Analyzing and interpreting data, Constructing explanations (for science) and designing solutions (for engineering), Obtaining, evaluating, and communicating information

Presenter(s): Marilyn Enoch

Time: 1 Hour 15 minutes

Thursday, 2:45 – 4:00

Session 64

Argumentation: Developing oral language skills through scientific inquiry

Description of Session: Scientists use evidence to support (or argue against) claims. Explore strategies, and resources your students can use (from FOSS) to form logical arguments based on substantive claims, reasoning, and relevant evidence. Go home with ideas and samples to use in the classroom immediately.

Type of Session: Hands-On Workshop

Intended Audience: 3-5

Participant Limit: 30-35

Addresses: Asking questions (for science) and defining problems (for engineering), Analyzing and interpreting data, Constructing explanations (for science) and designing solutions (for engineering), Obtaining, evaluating, and communicating information.

Presenter(s): Marilyn Enoch, School Specialty

Time: 1 Hour 15 minutes

Thursday, 5:00 – 7:00

President's Reception

Friday , Concurrent Sessions

Friday, 7:15 – 7:45

Continental Breakfast

Friday, 8:00 – 9:00

Business Meeting

Friday, 9:15 – 10:00

Session 17

Using Digital Tools for Student Evaluation and Communication

Description of Session: Students can use document cameras to evaluate and communicate their understandings in ways that make learning fun including dissection documentaries and stop motion animation.

Type of Session: Presentation

Intended Audience: 9-12

Participant Limit: 1-25

Addresses: Obtaining, evaluating, and communicating information

Presenter(s): Susan H. Turner

Time: 45 Minutes

Friday, 9:15 – 10:00

Session 72

Engineering/ Technology Design, It's Not Just for IB

Description of Session: While Experimental Design helps us learn new science, Engineering / Technology Design applies that knowledge in ways to help solve problems. See how to bring this exciting component to your classroom! Your students will love it! Participants will be provided with example templates that can be revised as needed.

Type of Session: Presentation

Intended Audience: 6-8

Participant Limit: 1-25

Presenter(s): Dr. Donna M. Petty

Time: 45 Minutes

Friday, 9:15 – 10:00

Session 25

Plate tectonics: Moving boundaries

Description of Session: Participants will be engaged in hands-on and computer-based inquiry activities that can be used to help students gain a deeper understanding of plate tectonics.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 1-25

Safety: There is safety precautions necessary.

Addresses: Earth and Space Sciences

Presenter(s): Kaye-Ann Williams, Keisha Amponsah, Lynne Thomas, Casey Kilareski, Rolando Curabo

Time: 45 Minutes

Special Requests: Participants will need a technological device to complete computer-based simulations, for example I-pad, Chromebooks, Laptops, Tablets, etc

Friday, 9:15 – 10:00

Session 55

Mind Anchoring

Description of Session: In this session the presenter will discuss how anchor charts can be used to help students visually conceptualize content. Participants will learn how anchor charts are created by using indicators as a guide for student interaction.

Type of Session: Presentation

Intended Audience: 6-8

Participant Limit: 1-25

Addresses: Physical Sciences, Life Sciences, Earth and Space Sciences

Presenter(s): Vita Segars

Time: 45 Minutes

Friday, 9:15 – 10:00

Session 86

OMG Earth

Description of Session: In this workshop earth science teachers will create an OMG! - reference fold-ables connected to the Disciplinary Core Ideas from Next Generation Science Standards.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 26-50

Addresses: Earth and Space Sciences

Presenter(s): Amy Gilbert, Ph.D.

Time: 45 Minutes

Friday, 9:15 – 10:00

Session 26

Prove It! Connecting Science and Literacy through Supporting Claims with Evidence (Part 1).

Description of Session: Want your students to write what they know? In part 1, you will dissect rigorous writing prompts and align them with Science and ELA standards.

Type of Session: Presentation

Intended Audience: K-5

Participant Limit: 26-50

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Ed Emmer, Gina Rodriguez

Time: 45 Minutes

Friday, 9:15 – 10:00

Session 43

Using Science Concepts to Define Nuclear Engineering Problems

Description of Session: Identify scientific principles important in designing shielding that will protect people from harmful nuclear emissions through a series of easy to perform classroom simulations.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering)

Presenter(s): John Wagner

Time: 45 Minutes

Friday, 9:15 – 10:00

Session 54

Using a flipped classroom model to increase inquiry activities in

Description of Session: Moving direct instruction to individual learning spaces allows for more student-centered, in-depth, inquiry activities

Type of Session: Presentation

Intended Audience: 6-8, 9-12

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering), Planning and carrying out investigations, Obtaining, evaluating, and communicating information

Presenter(s): Christina Crawford and Erin Jackson

Time:

Friday, 9:15 – 10:30

Session 66

What Causes Change of Motion?

Description of Session: Design and create conceptual and physical models to explain how something works and look at cause/effect in controlled experiments.

Type of Session: Hands-On Workshop

Intended Audience: K-5

Participant Limit: 1-25

Addresses: Patterns, Cause and effect: Mechanism and explanation, Systems and system models, Structure and function, Stability and change; Engineering, Technology, and Applications Science

Presenter(s): Marilyn Enoch, School Specialty

Time: 1 Hour 15 minutes

Friday, 10:15 – 11:00

Session 40

Statewide Science Assessment

Description of Session: We will be presenting information about the 2017 Science SCPASS and Biology EOCEP. We will include general information and sample question types.

Type of Session: Presentation

Intended Audience: 4-8, Biology (testing grades)

Participant Limit: 50+

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): LLewellyn Shealy and Kirsten Hural, SC State Department of Education

Time: 45 Minutes

Friday, 10:15 – 11:00

Session 31

Building Block of Science - Light and Sound

Description of Session: 1st grade physical science standards Exploring Light and Shadows will be explored using the Building Blocks of Science unit titled Light and Sound. Teachers will experience investigations to address the South Carolina Academic Standards and Performance Indicators.

Type of Session: Hands-On Workshop

Intended Audience: K-5

Participant Limit: 26-50

Addresses: Physical Sciences, Earth and Space Sciences

Presenter(s): Ellen Mintz

Time: 45 Minutes

Friday, 10:15 – 11:00

Session 82

The Monarch, Milkweed and Migration Project

Description of Session: Migrate through cross-cutting concepts and disciplinary core ideas by engaging students in the monarch marathon through eastern North America each spring and fall. Learn how to participate in the USC Monarch, Milkweed and Migration Project.

Type of Session: Presentation

Intended Audience: All

Participant Limit: None

Presenter(s): Dr. Arlene Marturano, Assistant Director

Center for Science Education, University of South Carolina

Time: 45 Minutes

Friday, 10:15 – 11:00

Session 18

Using the Modeling(TM) Method in High School Science

Description of Session: The Modeling(TM) method is an exciting way to teach science, and this presentation will discuss implementation in high school science courses.

Type of Session: Presentation

Intended Audience: 9-12

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Nathan Belcher

Time: 45 Minutes

Friday, 10:15 – 11:00

Session 20

Incorporating Cooperative Learning in the Classroom

Description of Session: The teacher is no longer the sole source of knowledge. Furthermore, the business world doesn't really care what you know but what you can do with what you know. The skills needed for succeeding in the business world can be developed in group work.

Type of Session: Presentation

Intended Audience: 6-8, 9-12

Participant Limit: 26-50

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): James Lillibridge

Time: 45 Minutes

Friday, 10:15 – 11:00

Session 44

SCESTA - Earth/Environmental Science Share-A-Thon

Description of Session: SCESTA (South Carolina Earth Science Teachers Association) members showcase exemplary standards-based activities in earth/environmental science suitable for a variety of grade levels.

Type of Session: Presentation

Intended Audience: All Levels

Participant Limit: 26-50

Addresses: Earth and Space Sciences

Presenter(s): John Wagner

Time: 45 Minutes

Friday, 10:15 – 11:00

Session 22

Classroom Management

Description of Session: Not for the weak of heart...screaming will occur...don't be afraid... come and find out some tips and tricks to make your classroom more manageable.

Type of Session: Presentation

Intended Audience: All Levels

Participant Limit: 50+

Presenter(s): Alice Gilchrist

Time: 45 Minutes

Friday, 10:15 – 11:00

Session 87

OMG Life

Description of Session: In this workshop life science teachers will create several fold-ables (called OMGs!) that are aligned to Disciplinary Core Ideas in the Next Generation Science Standards.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 26-50

Addresses: Life Sciences

Presenter(s): Amy Gilbert, Ph.D.

Time: 45 Minutes

Friday, 10:15 – 11:00

Session 27

Prove It! Connecting Science and Literacy through Supporting Claims with Evidence (Part 2).

Description of Session: Want your students to write what they know? In part 2, using Science and ELA standards, participants compose writing prompts that require evidence to respond.

Type of Session: Presentation

Intended Audience: K-5

Participant Limit: 26-50

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Ed Emmer, Gina Rodriguez

Time: 45 Minutes

Friday, 10:15 – 11:00

Session 56

And You Thought Celery Was Just For Eating

Description of Session: We will look at and dissect the vascular structure of celery stalks.

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 1-25

Addresses: Life Sciences

Presenter(s): Laurie Jordan

Time: 45 Minutes

Friday, 10:15 – 11:00

Session 71

Catapulting Into STEM

Description of Session: Use simple catapults to introduce both the scientific method and the engineering method, and let students see how failure "catapults you" into success!

Type of Session: Hands-On Workshop

Intended Audience: 6-8

Participant Limit: 1-25

Presenter(s): Gail Vawter

Time: 45 Minutes

Friday, 11:15 – 12:15

KEYNOTE CHOICES

Chris King, SpeedTree Visual Effects and Animation

Joe Levine, Welcome to the Anthropocene.

Jacqui Michel, SC Coastal Geology

Friday, 12:15 – 1:00

Lunch

Vendor Hall Open

Friday, 1:00 – 2:15

Session 2

Is America flunking science? If so, what can teachers, new South Carolina standards, and teaching tools do about it?

Description of Session: Scientific literacy, essential to America's future, eludes most students despite our best efforts. What changes in science education can address this challenge? Science is more important to everyday life, public health and national security today than it has ever been before. Yet, from the standpoint of real understanding of the nature and process of science, and of the value of science to individual and societal decision-making, the public and many students seem to be "dumb and getting dumber." What works against public understanding of science and quality science education, and how can the new generation of science standards and educational materials, and teaching practices help us rise to the challenges we face as science educators?

Presenter(s): Joseph Levine, PhD

Friday, 1:00 – 2:15

Session 19

The PBL Project — We're not preparing students for Jeopardy anymore!

Description of Session: FREE BOOKS! Our PBL Project (www.pblproject.com) gives teachers access to Problem-Based Learning scenarios and resources. Problem-Based Learning promotes communication, collaboration, problem-solving skills, and more. Attendees receive free books!

Type of Session: Presentation

Intended Audience: K-5, 6-8

Participant Limit: 50+

Addresses: Asking questions (for science) and defining problems (for engineering), Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Ben Bache

Time: 1 Hour 15 minutes

Friday, 1:00 – 2:15

Session 35

How can NASA STEM Resources help classroom teachers?

Description of Session: Teachers will be introduced to various available NASA STEM Classroom Resources with the emphasis placed on NASA's Missions to Explore our Solar System.

Type of Session: Presentation

Intended Audience: All Levels

Participant Limit: 26-50

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Dr. Edward P. Donovan & Sharon L. Donovan

Time: 1 Hour 15 minutes

Friday, 1:00 – 2:15

Session 41

Improving Severe Weather Classroom Instruction

Description of Session: This session provides teachers with modern day resources to enhance severe weather instruction including the latest weather technology and access to real time weather events.

Type of Session: Presentation

Intended Audience: All Levels

Participant Limit: 26-50

Addresses: Earth and Space Sciences, Engineering, Technology, and Applications Science

Presenter(s): Jim Hinton

Time: 1 Hour 15 minutes

Friday, 1:00 – 2:15

Session 57

Flipped over teaching chemistry with technology!

Description of Session: This session is intended for teachers who will be using tablets for the first time or those who are relatively new to using technology to teach chemistry (or science). The session explains how I (a first time 1 to 1 user) used Android tablets to teach and assess chemistry. Instructional explanations include strategies for students' first time exposure to topics, utilization of multiple representations of concepts and use of virtual labs to support wet labs. Assessment descriptions will include both summative and formative assessment examples that I used.

Session shares the first time instructional experiences for my 1 to 1 chemistry class, including instruction and assessment strategies.

Type of Session: Presentation

Intended Audience: 9-12

Participant Limit: 1-25

Addresses: Physical Sciences

Presenter(s): Dr. Joni Jordan

Time: 1 Hour 15 minutes

Friday, 1:00 – 2:15

Session 21

iDEAL (integrating Disciplinary Experiences Around Literacy)

Description of Session: iDEAL is designed to engage educators in an exploration of disciplinary literacy strategies in science, technology, engineering and mathematics for 21st Century learning.

Type of Session: Presentation

Intended Audience: All Levels

Participant Limit: 1-25

Addresses: Structure and function

Presenter(s): Alice Gilchrist

Time: 1 Hour 15 minutes

Friday, 1:00 – 2:15

Session 88

OMG Physical

Description of Session: In this workshop physical science teachers will make several fold-ables (called OMGs) which align to the Disciplinary Core Ideas of the Next Generation Science Standards.

Type of Session: Hands-On Workshop (Nonticketed)

Intended Audience: 6-8

Participant Limit: 26-50

Addresses: Physical Sciences

Presenter(s): Amy Gilbert, Ph.D.

Time: 45 Minutes

Friday, 1:00 – 2:15

Session 1

Science Notebooking with DOKs

Description of Session: Come and join an interactive session on “Science Notebooking” which will incorporate the implementation of the new SC Science Standards. We will discuss the different modalities of learning and ways to effectively use “DOK”’s for planning instruction. Teachers will leave the session with fun interactive and creative ideas for planning future lessons.

Type of Session: Presentation

Intended Audience:K-2, 3-5, 6-8

Presenter(s): Stephanie Carmichael

Time: 1 Hour 15 Minutes

Friday, 1:00 – 2:15

Session 30

Science Notebooking with ELA College and Career Readiness Standards

Description of Session: .Science Notebooks to address the 2014 Science Content Standards, Performance Indicators and South Carolina College and Career Readiness ELA Standards - a tool for teaching, learning, and assessing students’ understanding of science.

Type of Session: Hands-On Workshop (Nonticketed)

Intended Audience: K-5, 6-8

Participant Limit: 26-50

Addresses: Analyzing and interpreting data, Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Ellen Mintz

Time: 1 Hour 15 minutes

Friday, 1:00 – 2:15

Session 24

S.T.E.M. to STEM: Connecting the dots with the “E”

Description of Session: Gain strategies to implement an integrated approach to teaching STEM disciplines through engineering design principles. Experience the WOW of STEM through an engaging design challenge.

Type of Session: Hands-On Workshop

Intended Audience: All Levels

Participant Limit: 26-50

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Susie Teague

Time: 1 Hour 15 minutes

Friday, 1:00 – 2:15

Session 60

Using physical science exploration to convey Crosscutting Concepts

Description of Session: Rotating through multiple Geoscience investigations, we will first uncover the Crosscutting Concepts and then discuss how they are interwoven into SC elementary Physical science standards.

Type of Session: Hands-On Workshop

Intended Audience: K-5

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Jeanne McKinney, Michelle Lutz, Kevin Schultz

Time: 1 Hour 15 minutes

Friday, 2:45 – 4:00

Session 58

Want To Be WILD in SC?

Description of Session: This presentation will be an overview of the program and curricula provided by WILD in SC, giving the educators an idea of what workshops are available throughout the state.

Type of Session: Presentation

Intended Audience: All Levels

Participant Limit: 26-50

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data

Presenter(s): Nancy and Ray Thompson

Time: 1 Hour 15 minutes

Friday, 2:45 – 4:00

Session 89

STEM Challenge Labs - Engaging Students while Teaching Science and Engineering Practices.

Description of Session: Students use engineering and science to collaborate on solutions to challenges of windmill design, seed dispersal, and body shape to slow sinking rates.

Type of Session: Hands-On Workshop

Intended Audience: K-5, 6-8

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering), Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering)

Presenter(s): Lisa Pike

Time: 1 Hour 15 minutes

Friday, 2:45 – 4:00

Session 42

Science and Math Crossing Boundaries

Description of Session: In this session teachers will develop models using mathematical scales, data analysis, and literature examples to draw conclusions about scientific phenomena.

Type of Session: Hands-On Workshop

Intended Audience: Middle School Math and Science Teachers

Participant Limit: 25-30

Addresses: Developing and using models, Analyzing and interpreting data, Using mathematics and computational thinking, Engaging in argument from evidence

Presenter(s): Christy McCullough and Tiffany Reynolds

Time: 1 Hour 15 minutes

Friday, 2:45 – 4:00

Session 5

Free Science Resources for (SC)² Members

Description of Session: Access to NSTA's Learning Center will be given to all participants (free). Over 3,500 lesson plans, demonstrations, and other science resources are now available for (SC)² members. A sampling of Learning Center resources will be demonstrated. Don't miss this opportunity to gather resources to help you teach science. Free journals and other materials from NSTA will be given out.

Type of Session: Presentation

Intended Audience: ALL

Presenter(s): Manley Midgett, NSTA District VI Director

Time: 1 hour 15 Minutes

Friday, 2:45 – 4:00

Session 23

Exploring a STEM Teaching Fellows Program

Description of Session: Participants will explore existing STEM Teaching Fellows programs and provide input regarding priorities for the possible development of a STEM Teaching Fellows program in South Carolina.

Type of Session: Presentation

Intended Audience: All Levels

Participant Limit: 26-50

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Becky Cornwell

Time: 1 Hour 15 minutes

Friday, 2:45 – 4:00

Session 49

Engaging science, using engineering practices

Description of Session: Science and engineering practices using AGI activities. 5E and crosscutting concepts.

Type of Session: Hands-On Workshop (Nonticketed)

Intended Audience: 6-8

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Cindy Crawford and Laurie

Time: 1 Hour 15 minutes

Friday, 2:45 – 4:00

Session 48

No Science Teacher Left Behind: Future of Virtual Schools and Edgenuity

Description of Session: Virtual schools and online technologies are here to stay! They may even be the all-encompassing future of education. Don't get left behind!

Type of Session: Hands-On Workshop, Presentation

Intended Audience: 6-8, 9-12

Participant Limit: 26-50

Addresses: Physical Sciences, Life Sciences, Earth and Space Sciences, Engineering, Technology, and Applications Science

Presenter(s): Vicki LaPrad

Time: 1 Hour 15 minutes

Special Requests: Participants - Bring your laptops

Friday, 2:45 – 4:00

Session 61

Crosscutting concepts

Description of Session: Rotating through multiple Geoscience investigations, we will first uncover the Crosscutting Concepts and then discuss how they are interwoven into SC elementary Physical science standards.

Type of Session: Hands-On Workshop

Intended Audience: K-5

Participant Limit: 1-25

Addresses: Asking questions (for science) and defining problems (for engineering), Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations (for science) and designing solutions (for engineering), Engaging in argument from evidence, Obtaining, evaluating, and communicating information

Presenter(s): Jeanne McKinney, Michelle Lutz, Kevin Schultz

Time: 1 Hour 15 minutes