



NEW ORLEANS

NSTA 2009 National Conference on Science Education

Celebrating the
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Temps Rouler!

Saturday, March 21
Sunday, March 22

3

CAROLINA

Professional Development for NSTA 2009



Hone your teaching skills or explore a new topic. Our professional development sessions are taught by experienced presenters—classroom teachers, science coordinators serving as teaching partners, and our own staff scientists. Their training in the latest teaching techniques, requirements of the National Science Education Standards, and cutting-edge science topics means you'll receive concise, valuable information. See the schedule below for sessions, times, and locations. **Visit us in Booth 124!**

Session Schedule

Thursday, March 19, 2009

Time	Location	Grade*	Title
9:30 AM–11:00 AM	Room 215	E, M, H	Introduction to Wisconsin <i>Fast Plants</i> ®
9:30 AM–11:00 AM	Room 216	H	DNA Necklaces and Double-Helix Models
9:30 AM–11:00 AM	Room 217	E	Math Out of the Box®—Numbers Game!
11:30 AM–1:00 PM	Room 215	M, H	Take the Leap: <i>Carolina's Perfect Solution</i> ® Frog Dissection
11:30 AM–1:00 PM	Room 216	H	Introduction to Electrophoresis
11:30 AM–1:00 PM	Room 217	E	<i>Building Blocks of Science</i> ®: Measure It!
1:30 PM–3:00 PM	Room 215	H, C	Exploring Feline Anatomy with <i>Carolina's Perfect Solution</i> ® Cats
1:30 PM–3:00 PM	Room 216	H	Above and Beyond with Carolina's AP® Biology Series: Explore the Options!
1:30 PM–3:00 PM	Room 217	E	Addressing Difficult Physical Science Standards for Grades 1–3
3:30 PM–5:00 PM	Room 215	H, C	Think Mink! Exploring Mammalian Anatomy with <i>Carolina's Perfect Solution</i> ® Mink
3:30 PM–5:00 PM	Room 216	H	Molecular Models in the Classroom
3:30 PM–5:00 PM	Room 217	E, M	The Story Behind the Science—Scaffolding

Friday, March 20, 2009

Time	Location	Grade*	Title
8:00 AM–9:30 AM	Room 215	E, M	Carolina's Young Scientist Dissection Series
8:00 AM–9:30 AM	Room 216	H	Amplify Your Genetics Teaching Skills with Carolina's New <i>Inquiries in Science</i> ™ Biology Units
8:00 AM–9:30 AM	Room 217	E	Math Out of the Box®—Measuring Success!
10:00 AM–11:30 AM	Room 215	M, H	Genetics with Wisconsin <i>Fast Plants</i> ®/Flies/Corn
10:00 AM–11:30 AM	Room 216	H	Go APES! Explore Carolina's Quality AP® Environmental Science Series
10:00 AM–11:30 AM	Room 217	E	Science Investigations: Students, Notebooks, and the Power of Inquiry
12:00 PM–1:30 PM	Room 215	M, H	Comparative Vertebrate Anatomy with <i>Carolina's Perfect Solution</i> ® Specimens
12:00 PM–1:30 PM	Room 216	H, C	Illuminate Your Classroom with Carolina's Green Gene Colony Transformation
12:00 PM–1:30 PM	Room 217	E	<i>The Zula Patrol</i> ® Exploration Station—Mission: Simple Machines
2:00 PM–3:30 PM	Room 215	H	AUTOPSY: Forensic Dissection Featuring <i>Carolina's Perfect Solution</i> ® Pigs
2:00 PM–3:30 PM	Room 216	H	"Finding Solutions" for Your Chemistry Labs with Carolina's New <i>Inquiries in Science</i> ™ Chemistry Units
2:00 PM–3:30 PM	Room 217	E, M	Effective Science Materials Support Systems
4:00 PM–5:30 PM	Room 215	E, M, H	Butterflies in Your Classroom
4:00 PM–5:30 PM	Room 216	H	Drop the Lecture and Let Students Pick Up the Learning in AP® Science
4:00 PM–5:30 PM	Room 217	M	The Middle School Science Lab . . . Out of a Box!



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124!**

Saturday, March 21, 2009

Time	Location	Grade*	Title
8:00 AM–9:30 AM	Room 215	H	SQUID INK-UIRY: Inquiry-Based Invertebrate Anatomy Through Squid Dissection
8:00 AM–9:30 AM	Room 216	E, M, H	Hands-On Science with Classroom Critters
8:00 AM–9:30 AM	Room 217	E, M	Discover the Solar System and Beyond with GEMS® Space Science Sequences
10:00 AM–11:30 AM	Room 215	M, H	Rats! Inquiry-Based Dissection with <i>Carolina's Perfect Solution</i> ® Specimens
10:00 AM–11:30 AM	Room 216	H	Need "Energy" in Your Environmental Classes? Learn About Carolina's New <i>Inquiries in Science</i> ™ Environmental Science Series
10:00 AM–11:30 AM	Room 217	E	Math Out of the Box®: Data Analysis and Algebraic Thinking Connect to Science
12:00 PM–1:30 PM	Room 215	E, M, H	Creating Habitats in the Classroom
12:00 PM–1:30 PM	Room 216	H	Forensics for the Biology Lab
12:00 PM–1:30 PM	Room 217	E	<i>The Zula Patrol</i> ®: Blast Off with Mixtures, Solutions, and Chemical Reactions
2:00 PM–3:30 PM	Room 215	M, H	Comparative Mammalian Organ Dissection with <i>Carolina's Perfect Solution</i> ® Specimens
2:00 PM–3:30 PM	Room 216	H	Introduction to Protozoa
2:00 PM–3:30 PM	Room 217	E	Math Out of the Box®: Developing Geometric Logic

*E=Elementary, M=Middle School, H=High School, C=College



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NSTA 57th National Conference on Science Education

New Orleans, Louisiana • March 19–22, 2009

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Kathy K.
Technology Integration Specialist
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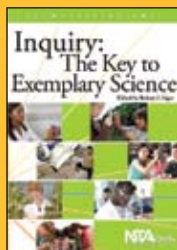


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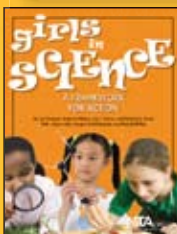
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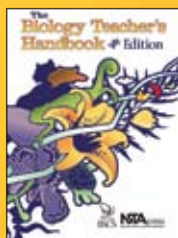
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Conference Highlights *Featured Speakers/Special Events*



Saturday, March 21

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8:00 AM–3:30 PM	Science Assessment, Linking Science and Literacy, and Science and English Language Learners: What Does Current Research Say About Best Practices?	14
8:00 AM–4:00 PM	The Centers for Ocean Sciences Education Excellence (COSEE) Program	10
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10:30 AM–12 Noon	Shell Science Seminar: Francis Halzen	60
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2:00–3:00 PM	NSTA/ASE Honors Exchange Lecture: Carolyn Yates	97
3:30–4:30 PM	Robert Karplus Lecture: Sakhalin Finnie	110
3:30–4:30 PM	Featured Presentation: R. King Milling	111
6:00–6:45 PM	Pre-Banquet Reception (M-10)	128
6:00 PM–12 Mid	Special Evening Session: A Stimulating Evening with the Late Richard P. Feynman	129
7:00–10:00 PM	President’s Banquet: A Celebration of Excellence (M-11)	128

Sunday, March 22

7:00–9:00 AM	NSTA Life Members Buffet Breakfast (M-12)	131
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Conference Program

Conference Strands *Sessions and Events*

The New Orleans Conference Committee has planned the conference around the following four strands, enabling you to focus on a specific area of interest or need. Strand events are identified by icons throughout the daily program.

See the following pages for a list of session and events for each strand.



Science and the Human Spirit

When facing decisions that require knowledge of science and technology, the resilient human spirit seeks understanding and renewal. Human interaction with the environment results in changes in the natural world that impact the human condition and promote awareness of our global interdependency.



Research to Practice: The Science Teacher Professional Continuum

Current science education research is providing critical insight into the specific needs of educators at various stages of their professional careers. As a result, the way science educators view the teaching and learning process, implement research-based instruction and assessment strategies, and use tools and resources to improve teaching and learning is changing.



Energy and the Environment: The Natural and Human-designed World

Our society's energy needs are growing at an alarming rate, which has resulted in the consumption of many of our natural resources at an unprecedented pace. The disruption of both coastal processes and Earth's natural climate cycles are but two consequences of this unparalleled demand for energy resources. A 21st-century proactive vision for solutions is required to promote responsible and efficient use of our natural resources while meeting growing energy demands.



ISTE: Meeting the Needs of the Digital Student

Many students today are natives of digital technology. How can teachers, many of whom are digital immigrants, help students become responsible digital citizens? The understanding and use of technology are critical components of STEM (science, technology, engineering, and mathematics) education.

Saturday, March 21

8:00–9:00 AM

Growing Environmental Learners Through Cross-Grade-Level Collaboration

9:30–10:30 AM

Environmental Heroes

Science and the Human Spirit

11:00 AM–12 Noon

Green Teens: Ideas for Action

1:00–4:00 PM

Short Course: International Year of Astronomy: Observe, Question, and Explore Our Solar System (By Ticket: SC-22)

3:30–4:30 PM

The Human Spirit, Function, and Artificial Consciousness

Conference Strands *Sessions and Events*

Research to Practice: The Science Teacher Professional Continuum

Saturday, March 21

8:00–11:00 AM

Short Course: The Young Scientist: Engaging Three- to Five-Year-Old Children in Science (By Ticket: SC-18)

9:30–10:30 AM

The Teacher Researcher: Using the RET Experience to Improve Your Classroom

11:00 AM–12 Noon

Research to Practice

12:30–3:30 PM

Online Science Professional Development—Formula for Success

2:00–3:00 PM

What Research Says to the Science Teacher About Effective Professional Development

3:30–4:30 PM

School Science Leaders: Professional Learning Communities That Work!

Sunday, March 22

9:30–10:30 AM

Lessons Learned Over the Continuum

Energy and the Environment: The Natural and Human-designed World

Saturday, March 21

8:00–9:00 AM

Arctic Climate-modeling Project

11:00 AM–12 Noon

From Farm to Table and Beyond—Making Systems Come Alive

12:30–1:30 PM

Hurricane Cycles and Global Warming

2:00–5:00 PM

Short Course: Science of Energy (By Ticket: SC-24)

3:30–4:30 PM

Featured Presentation: America's Energy Coast: An Introduction (Speaker: R. King Milling)

Lessons from the Ice

Sunday, March 22

9:30–10:30 AM

Addressing Societal Issues That Require Understanding of Science: Global Systems and NASA's Digital Earth Watch

11:00 AM–12 Noon

C2S2: Climate Change Student Summit

ISTE: Meeting the Needs of the Digital Student

Saturday, March 21

8:00–9:00 AM

We've Got the Technology, Now What?

8:30–11:30 AM

Short Course: Look What Technology Can Do for Your Classroom: Basics of Video Analysis (By Ticket: SC-19)

9:30–10:30 AM

Robotics in the Elementary School

11:00 AM–12 Noon

Beyond the Central Dogma: Epigenetics

12:30–1:30 PM

Biotechnology in the Classroom

2:00–3:00 PM

Technology Infusion in the Elementary Science Classroom

3:30–4:30 PM

Supporting Science Literacy with 21st-Century Tools

5:00–6:00 PM

Digital Learning: Does It "Measure Up"?

Sunday, March 22

8:00–9:00 AM

The Digital Evolution and Science Literacy with Virtual Notebooks



Isaac Ginis

The Centers for Ocean Sciences Education Excellence (COSEE) Program

Saturday, March 21, 8:00 AM–4:00 PM

Regent, New Orleans Marriott

Since 2002 the Centers for Ocean Sciences Education Excellence (COSEE) have worked to increase understanding of the ocean and its relevance to society. Primarily funded through the National Science Foundation, the COSEE network promotes partnerships between research scientists and educators, disseminates high-quality ocean sciences education resources, and promotes ocean science as a charismatic vehicle for learning at any age.

COSEE concurrent sessions will highlight activities and products designed for classroom science teachers. Participants will leave with links to real-time data, relevant scientific resources, lesson plans, information on regional programs, and connections to a nationwide network of scientists and educators who are dedicated to improving ocean literacy.

A list of COSEE events follows. *See the Saturday daily program for details.*

8:00–9:00 AM

COSEE NOW Data Activity—Don't Even "Sink" About It!

Page 25

9:00–9:30 AM

COSEE-West Opportunities for Teachers and Students in the Online World and Beyond

Page 36

9:30–10:00 AM

Coastal Trends in Sea Grass

Page 39

10:30–11:00 AM

From Sea to Inland Sea—COSEE Teachers Exchange Coastlines for Broader Professional Experience

Page 58

11:00 AM–12 Noon

New Views on Sand: Virtual Samples Bring the World's Beaches to Your Classroom

Page 75

12 Noon–1:30 PM

COSEE Luncheon

Natural Coastal Hazards and Their Impacts on the Human Condition

Isaac Ginis, Professor of Oceanography, University of Rhode Island, Narragansett

Page 79

1:30–3:00 PM

The Oceans They Are a-Changin'...How Might This Change You?

Page 96

3:00–4:00 PM

Sediment—It Ain't Just Dirt

Page 109

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NESTA Earth and Space Science Resource Day: Natural Hazards and the Environment

Saturday, March 21 • 7:00 AM–6:00 PM • Bissonet Room, New Orleans Marriott

The National Earth Science Teachers Association will host a full suite of events at the NSTA conference in New Orleans. On Saturday, March 21, we offer our Earth and Space Science Resource Day. This jam-packed day of professional development starts with a ticketed breakfast and speaker and finishes with the NESTA Annual Membership meeting. We look forward to seeing you on Saturday, as well as at our three share-a-thons and Friends of Earth Science Reception on Friday, March 20. For more information about NESTA and our events at the New Orleans NSTA conference, please visit the NESTA website at www.nestanet.org.

A list of Saturday events follows. *See the Saturday daily program for descriptions.*

7:00–8:30 AM NESTA Earth and Space Science Resource Day Breakfast
(Bacchus, New Orleans Marriott)

LSU Coastal Roots Program

Speaker: Pamela Blanchard, Assistant Professor, Science Education, and Director, LSU Coastal Roots Program, Louisiana State University, Baton Rouge

This event was available by ticket through NESTA (by preregistration only).

9:30–10:30 AM NESTA Natural Hazards and the Environment Share-a-Thon
11:00 AM–12 Noon **Hurricane Katrina's Impact on the Environment of Greater New Orleans: Fears, Concerns, and Prognosis for the Future**

Speaker: Robert A. Thomas, Loyola Chair in Environmental Communication, and Director, Center for Environmental Communication, Loyola University New Orleans

12:30–1:30 PM **Coastal Louisiana in a World of Global Change**
Speaker: Torbjörn E. Törnqvist, Associate Professor, Earth and Environmental Sciences, and Director, DOE National Institute for Climatic Change Research Coastal Center, Tulane University, New Orleans, La.

2:00–3:00 PM **Geologic Processes of Coastal Louisiana and the Impacts of Hurricanes: Can New Orleans Survive?**
Speaker: Randolph A. McBride, Associate Professor of Geology and Oceanography, Undergraduate Coordinator for Geology/Earth Sciences, Dept. of Atmospheric, Oceanic, and Earth Sciences, George Mason University, Fairfax, Va.

3:30–4:30 PM NESTA Rock and Mineral Raffle

4:30–6:00 PM NESTA Membership Meeting

These events are co-sponsored by the American Geophysical Union, Carolina Biological Supply Co., UCAR, and Windows to the Universe.



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Peter Dow



Michael Klentschy

Ticket C-1

On-site registration available: \$295

A daylong conference offering NSF-funded program findings and related research.

Upon purchase of a ticket (C-1), participants may select three breakout sessions that best match their needs and interests.

See the following page for a complete list of breakout sessions.

Science Assessment, Linking Science and Literacy, and Science and English Language Learners: What Does Current Research Say About Best Practices?

A research dissemination conference for grades K–12 Teachers, Administrators, and Professional Development Providers

Saturday, March 21 • 8:00 AM–3:30 PM • Rooms 343–345, Convention Center

The overall objective of this conference is to allow teachers, administrators at school and district levels, and professional development providers to learn about the implications of NSF-funded researchers' work for classroom practice and professional development. The conference includes two plenary sessions that address issues of general interest as well as 11 concurrent small-group sessions relevant to the interests and needs of specific groups, such as elementary teachers, secondary teachers, principals, curriculum coordinators, and professional development providers. Participants may select three breakout sessions.

Agenda

- 7:00–7:55 AM Continental Breakfast
- 8:00–8:15 AM Welcome and Introductions
Francis Q. Eberle, Executive Director, NSTA, Arlington, Va.
- 8:15–9:00 AM Plenary Session I
Peter Dow, Chairman, First Hand Learning, Inc., Buffalo, N.Y.
Lessons from the Sputnik Era?
The launching of Sputnik in 1957, followed by the National Defense Education Act of 1958, led to an unprecedented national investment in the reform of science and the development of revolutionary new curricula. Today, however, most of the developed world does a better job of teaching science than we do, and our ability to understand and cope with the world around us deteriorates by the day. Are there still educational lessons to be learned from the Sputnik era?
- 9:00 AM–12:15 PM Breakout Sessions
- 12:15–1:00 PM Lunch
- 1:00–2:45 PM Breakout Sessions
- 2:45–3:25 PM Plenary Session II
Michael Klentschy, Former Superintendent of Schools, El Centro, Calif.
Best Practice: How Have Schools Responded to Research Recommendations?
Schools and school districts have responded in a variety of ways to research-based practices in science, including aligning these practices to increasing science content understanding, using or instituting best practices for making science/literacy connections, and providing support to historically under-represented students. We'll look at the most effective district practices.
- 3:25–3:30 PM Closing/Evaluation



Science Assessment, Linking Science and Literacy, and Science and English Language Learners: What Does Current Research Say About Best Practices?

A research dissemination conference for grades K–12 Teachers, Administrators, and Professional Development Providers

Breakout Session C-2 (Room 335)

Aligning Classroom-Based Assessment with High-Stakes Tests

Marian Pasquale, Education Development Center, Inc., Newton, Mass.

Breakout Session C-3 (Room 336)

Implementing Formative Assessment: Belief System Changes Required

Kathy Long, Lawrence Hall of Science, University of California, Berkeley

Breakout Session C-4 (Room 337)

Reading and Writing in the Service of Inquiry-based Science

Gina N. Cervelti, University of Colorado at Boulder
P. David Pearson and **Jacqueline Barber**, Lawrence Hall of Science, University of California, Berkeley
Marco A. Bravo, San Francisco State University, San Francisco, Calif.

Breakout Session C-5 (Room 338)

Research on Effective Science Instruction for English Language Learners

David Crowther, University of Nevada, Reno
Joaquin Vila, Salisbury University, Salisbury, Md.

Breakout Session C-6 (Room 339)

Science IDEAS: Making the Case for Integrating Reading and Writing in Elementary Science as a Key Element in K–12 School Reform

Nancy Romance, Florida Atlantic University, Boca Raton
Michael R. Vitale, East Carolina University, Greenville, North Carolina

Breakout Session C-7 (Room 340)

Supporting and Assessing English Language Learners in Writing Scientific Explanations

Katherine L. McNeill, Boston College, Chestnut Hill, Mass.
Joseph S. Krajcik, University of Michigan, Ann Arbor

Breakout Session C-8 (Room 341)

Talk in the Science Classroom

Karen Worth, **Jeffrey Winokur**, **Sally Crissman**, and **Martha Winokur**, Educational Development Center, Inc., Newton, Mass.

Breakout Session C-9 (Room 342)

Contextualizing Science Instruction: Making Connections between School Science and Student Knowledge in Culturally and Linguistically Diverse Classrooms

Sara Tolbert, University of California, Santa Cruz
Regina Suriel, University of Georgia, Athens

Breakout Session C-10 (Room 346)

Using the Science Writing Heuristic to Promote Understanding of Science Conceptual Knowledge in Middle School

Brian Hand, The University of Iowa, Iowa City
Jay Staker, Iowa State University, Ames

Breakout Session C-11 (Room 347)

Using Assessment Design as a Model of Professional Development

Paul S. Kuerbis, Colorado College, Colorado Springs

Breakout Session C-12 (Room 349)

From Practice to Research and Back: Perspectives and Tools in Assessing for Learning

Jim Minstrell and **Ruth Anderson**, Facet Innovations, Seattle, Wash.

NSTA Press Sessions

NSTA Press books offer new classroom ideas and standards-based strategies, from earth science to nanoscience and from preK to college.

Join NSTA Press authors for these sessions linked to the topics of their books.

Saturday, March 21

12:30–2:30 PM

Planning Safe, Sustainable, and Flexible Facilities for Inquiry-based Science
Page 94

1:30–6:00 PM

NSTA Symposium (SYM-5): Energy: Stop Faking It! (*Ticket Required*)
Page 96

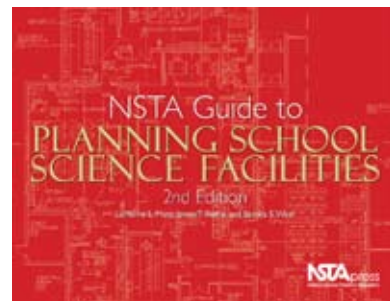
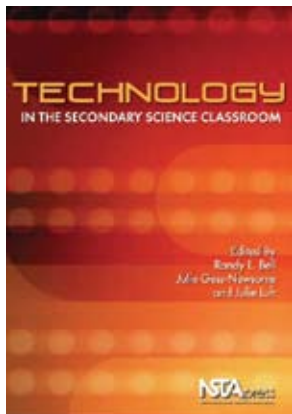
3:30–4:30 PM

Simulating Science: Using Computer Simulations to Enhance Elementary and Middle School Science Instruction
Page 112

Sunday, March 22

11:00 AM–12 Noon

Einstein Adds the Literacy Dimension
Page 142



Saturday, March 21

	Presentations/Workshops	General Sessions/Special Events	Shell Seminars	Exhibitor Workshops
8:00 AM				
9:00 AM				
10:00 AM			Shell Science Seminar 9:00–10:30 AM Room 352, Conv. Ctr. Speaker: Mary H. Manheim	
11:00 AM		Paul F-Brandwein Lecture 11:00 AM–12 Noon Room 352, Conv. Ctr. Speaker: Cheryl Charles	Shell Science Seminar 10:30 AM–12 Noon Room 243, Conv. Ctr. Speaker: Francis Halzen	
12 Noon				
1:00 PM				
2:00 PM		NSTA/ASE Honors Lecture 2:00–3:00 PM Room 352, Conv. Ctr. Speaker: Carolyn Yates	Shell Science Seminar 1:30–3:00 PM Room 243, Conv. Ctr. Speaker: Charles M. Falco	
3:00 PM		Robert Karplus Lecture 3:30–4:30 PM Room 352, Conv. Ctr. Speaker: Sakhalin Finnie		
4:00 PM		Featured Presentation 3:30–4:30 PM Room 243, Conv. Ctr. Speaker: R. King Milling		
5:00 PM				
6:00 PM				
7:00 PM		Special Evening Session 6:00 PM–12 Midnight Elmwood, Hilton <i>A Stimulating Evening with the Late Richard P. Feynman</i>		
8:00 PM				

7:00–8:30 AM BREAKFAST

NESTA Earth and Space Science Resource Day Breakfast

(By Ticket Through NESTA)

Bacchus, New Orleans Marriott

For additional information, visit nestanet.org.

7:30–9:00 AM BREAKFAST

NSTA Past Presidents Breakfast

(For NSTA Past Presidents Only)

Riverview (41st Floor), New Orleans Marriott

7:30–9:15 AM BREAKFAST

George Washington Carver Breakfast

(By Invitation Only)

Rosedown, Hilton

8:00–9:00 AM MEETINGS

TAC Members/Associates Meeting

(By Invitation Only)

Estherwood, Sheraton

Members and associate members of the Teacher Advisory Council will meet to discuss local, state, and national issues in science education.

NSTA Recommends Reviewer Coffee/Publisher Meeting

(By Invitation Only)

Evergreen, Sheraton

8:00–9:00 AM PRESENTATIONS

SESSION 1



Growing Environmental Learners Through Cross-Grade-Level Collaboration —Science Teaching— (Env)

(Elementary–High School)

Room 238, Convention Center

Renee Andrews (randrews@pky.ufl.edu), P.K. Yonge Developmental Research School, Gainesville, Fla.

Secondary students foster an understanding of problematic environmental issues in elementary learners in the southeastern U.S. These issues include water quality and invasive species.

SESSION 2



Arctic Climate-modeling Project —Science Content— (Env)

(General)

Room 239, Convention Center

Emma L. Walton (elwalton@aol.com), 1999–2000 NSTA President, and Science Consultant, Anchorage, Alaska

Learn how students in 15 schools in rural Alaska use atmospheric tools to add to global change data.

SESSION 3



A Helping Hand in the Classroom: Study of Teacher-Graduate Fellow Teams in Science Classrooms —*Science Teaching*— (Gen)

(Elementary–High School)

Room 240/241, Convention Center

Shane N. Woods, North Side High School, Fort Worth, Tex.

More Knowledge In The Sciences (MKITS) is working to increase underrepresented minorities in science careers. MKITS is an innovative science program using teacher-graduate student teams to provide minorities with the exposure, skills, and knowledge that will encourage them to pursue advanced studies in biomedical and public health sciences.

SESSION 4

Science Teaching as a Profession: Why It Isn't; How It Could Be —*Science Education System*— (Gen)

(General)

Room 243, Convention Center

Sheila Tobias, Science Teaching as a Profession, Tucson, Ariz.

Anne T. Baffert (azchemmom@yahoo.com), Salpointe Catholic High School, Tucson, Ariz.

What will it take to professionalize your tasks as a science teacher, your work life as a science teacher, and your status as a science teacher?

SESSION 5

Save the Penguins: Engineering Design in the Science Classroom —*Science Teaching*— (Gen)

(Middle Level)

Room 351, Convention Center

Christine G. Schnittka (cgs2d@virginia.edu) and **Randy L. Bell** (randybell@virginia.edu), University of Virginia, Charlottesville

Presider: Sara Cronin, University of Central Florida, Orlando

See how fun and easy it is to use engaging engineering design activities to help students learn and apply science knowledge.

SESSION 6

Using Online Games to Teach Science: Four Evidence-based Examples —*Science Teaching*— (Gen)

(Middle Level)

Room 355, Convention Center

Leslie Miller (lmml@rice.edu), Rice University, Houston, Tex.

Lynn Lauterbach, Loveland, Colo.

Looking for a way to engage students? Come see free web games on forensics, alcohol abuse, inhalant abuse, and infectious diseases.

SESSION 7

Bring the PBS Series Jean-Michel Cousteau: Ocean Adventures into Your Classroom to Teach Science Content Standards —*Science Content*— (Bio)

(Middle Level)

Room R02, Convention Center

Andrea Swensrud (scienceed@kqed.org), KQED Public Broadcasting, San Francisco, Calif.

Incorporate media and marine science into your curriculum to teach science content standards, including concepts such as ecosystems, adaptations, and human impact on the environment.

SESSION 8

Technology Tools for the Elementary Science Classroom —*Science Teaching—*
(Gen)

(Preschool/Elementary)

Room R04, Convention Center

Keith W. Harrison (*kharrison@obenschools.org*), Theodore Roosevelt Elementary School, Oyster Bay, N.Y.

Presider: Thomas Lynch (*tlynch@obenschools.org*), Oyster Bay-East Norwich Central School District, Oyster Bay, N.Y.

We will showcase a number of different technology tools that have been used successfully to differentiate, enhance, and improve teaching and learning in the elementary science classroom.

SESSION 9

Science Olympiad: The Best-Kept Secret in Science Education —*Science Education Program—*
(Gen)

(General)

Belle Chasse, Hilton

Thomas B. Grayson, Jr. (*graysonb@greenhill.org*), Greenhill School, Addison, Tex.

The BEST workshop all week! No brag, just fact. Want excitement from your students, parents, and administrators? Last time, we ran out of room!

Age is just a number.
Life is what you make of it.



The NSTA Retired Advisory Board invites you to a vibrant and useful information-sharing session. Join your fellow colleagues and share your ideas about staying active both in and out of the profession.

**Before and After Retirement:
Practicalities and Possibilities**

Saturday, March 21
8:00–9:00 AM
New Orleans Marriott
Jackson

For information on the Retired Members Advisory Board, contact Marily DeWall, chair, at mdewall@cox.net.

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SESSION 10

Teaching in the 21st Century: Traditional Teaching Infrastructure vs. Cyber-infrastructure Learning —Science Teaching— (Gen)

(General)

Elmwood, Hilton

Julie M. Angle, National Science Foundation, Arlington, Va.

Develop teaching strategies for using a network of content-rich collections of online educational resources and technology-based information.

SESSION 11

Leadership Teams: Addressing Change and Challenge Together —Science Teaching— (Gen)

(General)

Norwich, Hilton

Jody Bintz (jbintz@bscs.org), BSCS, Colorado Springs, Colo.

Establishing leadership teams can improve science education in your school or district. Come learn about a successful model and share your experiences.

SESSION 12

Exploring Genes to Cognition Online: Using Neuroscience to Unlock the Secrets of the Brain —Science Teaching— (Bio)

(High School–College/Informal Education)

Maurepas, JW Marriott

John J. Connolly and **Bruce Nash** (nash@cshl.edu), Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.

Through the lens of modern neuroscience research, G2C Online explores how molecules, cells, and the environment produce complex behavior, creating student-driven opportunities to learn about learning.

SESSION 13 (two presentations)

(High School–College/Supervision)

Bonaparte, New Orleans Marriott

The Digital e-Portfolio in Science Teacher Professional Development —Professional Development— (Gen)

David A. Wiley (david.wiley@lr.edu), NSTA Director, Preservice Teacher Preparation, and Lenoir-Rhyne University, Hickory, N.C.

Vanessa Silla-Zaleski (sillav2@scranton.edu), The University of Scranton, Pa.

Come hear what research revealed as strengths of using reflective e-portfolios to assess science teacher professional development over more traditional forms of assessment.

Redefining Science Teacher Preparation: The Woodrow Wilson Indiana Teaching Fellowship Program —Science Teaching— (Gen)

Susan M. Johnson, Ball State University, Muncie, Ind.

Charles R. Barman (cbarman@iupui.edu), Indiana University-Purdue University, Indianapolis

Learn about research-based models being developed in Indiana to prepare STEM teachers to work with disadvantaged students in high-need high schools.

SESSION 14

Before and After Retirement: Practicalities and Possibilities —Professional Development— (Gen)

(General)

Jackson, New Orleans Marriott

Howard Wahlberg (hwahlberg@nsta.org), Assistant Executive Director, Member, Chapter, and Customer Relations, NSTA, Arlington, Va.

Marilyn DeWall (*mdewall@cox.net*), Chair, Retired Members Advisory Board, Newport News, Va.

The NSTA Retired Advisory Board invites you to this information-sharing session. Join your fellow active colleagues and share ideas about staying active in and out of the profession.

SESSION 15

Combining the Power of Inquiry with Digital Technology to Investigate Photosynthesis —Professional Development— (Bio)

(Middle Level–High School)

Bayside A, Sheraton

Jane Larson (*jl Larson@bscs.org*) and **Paul Beardsley** (*pbeardsley@bscs.org*), BSCS, Colorado Springs, Colo.

Use digital data collection and analysis tools to explore the essential features of inquiry through investigations of photosynthesis.

SESSION 16

Leading Discussions About the Societal Impact of Advances in Nanotechnology —Science Teaching— (Gen)

(Informal Education)

Edgewood A/B, Sheraton

Sara Dombkowski (*sdombkowski@berkeley.edu*) and **Barbara Nagle** (*bnagle@berkeley.edu*), Lawrence Hall of Science, University of California, Berkeley

Presider: Anne L. Kern (*akern@uidaho.edu*), University of Idaho, Coeur d'Alene

See some clips from the NSF-funded program *The Power of Small*, available online at www.powerofsmall.org, and engage in short role-plays and discussions to explore the societal and personal impacts of nanotechnology. The program and the strategies presented are appropriate for middle school through adult audiences.

SESSION 17

Using Models and Analogies to Enhance Student Learning in the Chemistry Classroom —Science Teaching— (Chem)

(High School)

Gallier A/B, Sheraton

Mary M. Coogan (*mcoogan@liberty.k12.mo.us*), Liberty (Mo.) Public School District

Rosemary V. Camp (*rcamp@liberty.k12.mo.us*), Liberty High School, Liberty, Mo.

Presider: Janell Simpson (*jsimpson@pftsta.jpss.k12.la.us*), Patrick F. Taylor Science and Technology Academy, Jefferson, La.

Make abstract chemical concepts concrete with these analogies and models. We'll also look at conceptual questions used to elicit student understanding.

SESSION 18

Applying Current Research to Reach All Biology Students —Science Content— (Bio)

(Middle Level–High School)

Napoleon A1&2, Sheraton

James J. Spagnoli (*mistspag@aol.com*), East Meadow High School, East Meadow, N.Y.

By applying proven research techniques, my students of varied academic levels have consistently outperformed more gifted classes on state assessments.

SESSION 19

Amazing Things Cells Can Do —Science Content— (Bio)

(Middle Level–College)

Napoleon A3, Sheraton

Louisa A. Stark (*louisa.stark@utah.edu*), University of Utah, Salt Lake City

Bring your cell unit to life with a 3-D movie and interactive animations! Online and class-

room activities explore organelles and cell communication. Activities are available free at <http://learn.genetics.utah.edu>.

SESSION 20

WAIS Divide Outreach Program —Science Content—

(Earth)

(General)

Napoleon B3, Sheraton

Zach Smith (zach.smith@tufts.edu), Tufts University, Medford, Mass.

Learn about the multimedia outreach efforts of the West Antarctic Ice Sheet (WAIS) Divide ice coring project. Free materials will be distributed.

SESSION 21

Hurricane Katrina: The Intersection of Human Justice and Environmental Issues and Why We Must Care —Science Teaching—

(Gen)

(Middle Level–High School)

Napoleon D3, Sheraton

Blinn Dorsey (bdorsey@gordonschool.org), The Gordon School, Providence, R.I.

Presider: **Eric Rowley** (rowley1@nku.edu), Northern Kentucky University, Highland Heights

I will share a life science curriculum relating environmental issues to the devastation and social justice issues wrought on New Orleans by Hurricane Katrina.

SESSION 22

Students' Conceptions of Basic Concepts in Physical Chemistry —Professional Development—

(Chem)

(Middle Level–College)

Salons 817 & 821, Sheraton

Adolfo E. Obaya (ayabo10@aol.com), UNAM Cuautitlan, Mexico City, Mexico

Chemical engineering and industrial chemistry students were questioned on three tasks that were designed around evaporation, condensation, and vapor pressure. Qualitative analysis of student responses showed a range of understandings in each area, including some misconceptions.

SESSION 23

Nanomagnets? Thresholds of Force and Energy at the Nanoscale —Science Content—

(Phys)

(Middle Level–High School)

Salons 825 & 829, Sheraton

David Sederberg (dsederbe@purdue.edu), **Shanna R. Daly** (sdaly@purdue.edu), **Kelly Hutchinson** (khutchin@purdue.edu), and **Emily Wischow** (ewischow@purdue.edu), Purdue University, West Lafayette, Ind.

Experience the transition of magnetic behavior from macroscale to nanoscale in this learning progression. See how nanoscale magnetic materials are revolutionizing biomedical and physical sciences.

8:00–9:00 AM WORKSHOPS



We've Got the Technology, Now What? —Science Teaching—

(Gen)

(High School)

Room 242, Convention Center

Simpson Gradnigo (simpsong@vrml.k12.la.us), Erath High School, Erath, La.

Christina Menard, Abbeville High School, Abbeville, La.

Patrice Mire, Kaplan High School, Kaplan, La.

Perform hands-on activities in physical science and biology using digital sensors. Handouts for all activities provided.

Trash Lab —Science Teaching—

(Gen)

(Middle Level)

Room 353, Convention Center

Thomas Doughty (doughtyt@pcsb.org), **Vicki Lee Kahler** (kahlerv@pcsb.org), and **Zadot Velez** (velezz@pcsb.org), Safety Harbor Middle School, Safety Harbor, Fla.

Get your students motivated to learn middle school science concepts and raise awareness of environmental and ecological issues facing the next generation.

Rev Your Engines: A Low-Budget, High-Tech Middle School Automotive Lab —Science Content—

(Gen)

(Middle Level)

Room 354, Convention Center

Jennifer L. Sharp and **Margaret Blanchard** (meg_blanchard@ncsu.edu), North Carolina State University, Raleigh

Presider: Margaret Blanchard

Use handheld probeware to measure piston pressure, car speed, headlight brightness, and more in this student-centered station lab that uses inexpensive materials you can find at Wal-Mart®.

NSTA Student Member Events

Thursday, March 19

De-cookbooking Science Activities: A Recipe for Success

9:30–10:30 AM

New Orleans Marriott
Bissonet

NSTA Student Chapter Session: Becoming a Leader in the Profession

12:30–1:30 PM

JW Marriott New Orleans
Ile de France III

Getting Connected: NSTA Student Chapter ITV Meetings

3:30–4:30 PM

New Orleans Marriott
Mardi Gras A/B

Friday, March 20

NSTA Student Chapter Faculty Advisor Roundtable

8:00–9:00 AM

JW Marriott New Orleans
Ile de France II

NSTA Student Chapter Action Session

9:30–10:30 AM

JW Marriott New Orleans
Ile de France II

Motivating College Students to Be Science Teachers:

Starting an NSTA Student Chapter

11:00 AM–12 Noon

JW Marriott New Orleans
Ile de France II

Saturday, March 21

Starting an NSTA Student Chapter: Student and Faculty Perspectives

9:30–10:30 AM

New Orleans Marriott
Jackson



To the Moon, Alice! Or How to Build a Rocket to Send Someone Far Away
—*Professional Development*— **(Earth)**

(Elementary–Middle Level)

Room 356, Convention Center

Anthony E. Grisillo, Glenwood Elementary School and Indian Lane Elementary School, Media, Pa.

Charles Keeler, Glenwood Elementary School, Media, Pa.

Presider: Judy Williams, Price Elementary School, Anaheim, Calif.

Build rockets, discuss the Saturn V rocket and the challenge of landing on the Moon, and learn what NASA has planned for the future.

Cultivating Literacy: Linking Children’s Literature and Plant Science —*Science Content*— **(Bio)**

(Elementary)

Room R01, Convention Center

Pamela A. Koch (*pkoch@tc.edu*), Teachers College, Columbia University, New York, N.Y.

Explore ways to use children’s literature to introduce form and function in plants. Review a selection of books and participate in a plant parts lab.

Physical Science in an Early Childhood Classroom —*Science Content*— **(Chem)**

(Preschool/Elementary)

Room R03, Convention Center

Becky L. Villareal and **Lori Thomas** (*lthomas@dallasisd.org*), Dallas (Tex.) Independent School District

Early childhood classrooms usually focus on life science. However, physical science can be readily incorporated in a hands-on, developmentally appropriate manner. Come join us for some “energizing” fun!

Inquiry with Young Scientists: Helping Children Investigate Their World —*Science Teaching*— **(Gen)**

(Preschool/Elementary)

Room R05, Convention Center

Steven T. Ross and **Lauren Inouye** (*linouye@hanahauoli.org*), Hanahauoli School, Honolulu, Hawaii

Experience how children in a multi-age setting use inquiry to learn about “their world.” Join in engaging discussions and activities and receive instructional materials.

Be a Model Scientist —*Science Teaching*— **(Gen)**

(Elementary)

Room R06, Convention Center

Christy Bucker, Kathy R. Brandon, Robert Sayers, Laurie Ilgenfritz, and Elise Spoor, STARBASE Louisiana, Barksdale Air Force Base

Use concrete, inexpensive models to enhance students’ learning of abstract science concepts through hands-on activities that build on content knowledge.

NASA: Exploring Magnetism in Space Science —*Science Content*— **(Earth)**

(Elementary–Middle Level)

Room R07, Convention Center

Bryan J. Mendez (*bmendez@ssl.berkeley.edu*) and **Greg Schultz**, University of California, Berkeley

These fun hands-on activities and strategies teach the basic concepts of magnetism and its importance in the Sun-Earth connection.

Reality Physics: Activities That Engage Students in Real-World Applications
—*Science Teaching*— (Phys)

(High School–College)

Ile de France I, JW Marriott

Kathy Mirakovits (*kmirakovits@portageps.org*), Portage Northern High School, Portage, Mich.

Engage your students in reality physics, including the vector scavenger hunt, density dunk, cardboard boat race, accident investigation, bloodstain pattern analysis, and glass analysis.

Science Notebooks—Making Deep Connections —*Professional Development*— (Gen)

(Elementary–High School)

Ile de France II, JW Marriott

Kellie M. Marcarelli (*kmarcarelli@sandi.net*), Pershing Middle School, San Diego, Calif.

We will share strategies for getting started, as well as highlight new ways to deepen student understanding through the use of science notebooks.

Geosciences ROCKS! Discover the Excitement of Geosciences Research in Antarctica —*Science Teaching*— (Earth)

(Informal Education)

Carondelet, New Orleans Marriott

Betty Trummel (*boop82@aol.com*), Husmann Elementary School, Crystal Lake, Ill.

Explore geosciences activities and materials produced as a result of an exciting partnership between scientists and educators of the ANDRILL (Antarctic DRILLing) program.

What Does Color Have to Do with It or Why Is Earth Red? —*Science Content*— (Env)

(Middle Level–High School/Informal Education)

La Galerie 5, New Orleans Marriott

Brian Rogan (*brogan@mos.org*), Museum of Science, Boston, Mass.

Let’s unravel the mystery behind the different colors that are seen in satellite imagery.

Teaching About Global Warming —*Science Content*— (Env)

(High School)

La Galerie 6, New Orleans Marriott

Mark A. Van Hecke (*mvanhecke@comcast.net*), Anchor Bay High School, Fair Haven, Mich.

Presider: Karen Lancour, National Science Olympiad, Alpena, Mich.

Use remote-sensing imagery and science and mathematics process skills to teach students an understanding of the causes and potential consequences of global warming.

COSEE Session: COSEE NOW Data Activity—Don’t Even “Sink” About It! —*Science Teaching*— (Phys)

(High School–College/Informal Education)

Regent, New Orleans Marriott

Christopher J. Petrone (*petrone@vims.edu*), Virginia Institute of Marine Science, Gloucester Point

Learn about buoyancy using real scientific data. It’s all about density! Work through this classroom-ready activity created by the Bridge website and COSEE NOW.

Energize Your Classroom (While Teaching Those Tough Energy Concepts)
—*Science Teaching*— (Phys)

(Elementary–High School)

Maurepas, Sheraton

Hallie Mills (*hmills@need.org*), The NEED Project, Manassas, Va.

Confidently teach an energy unit using fun hands-on activities that explore the forms of energy-motion, heat, light, sound, electricity, and energy transformations.

The Dead T-Shirt Contest! —Science Content—

(Bio)

(Middle Level–High School)

Napoleon B1, Sheraton

Michael J. Lazaroff (michael_lazaroff@westport.k12.ct.us), Staples High School, Westport, Conn.

Determine the cause, mechanism, and manner of death in an activity in which students act as both victims and forensic pathologists.

The Murder of Kirsten Knight-Jensen: Using Chemistry to Solve the Crime —Science Teaching—

(Chem)

(High School)

Napoleon B2, Sheraton

Sara McCubbins (samccub@ilstu.edu), Illinois State University, Normal

Angie Codron (codrona@unit5.org), Normal Community West High School, Normal, Ill.

Explore performance-based assessments in forensic chemistry that address a wide variety of topics from density to acid/base chemistry to infrared spectroscopy. Handouts.

Astronomy—Solar Labs and Activities Workshop —Science Content—

(Earth)

(Middle Level–High School)

Napoleon C2, Sheraton

John McFarland (mcfarland.john@att.net), Johannes Kepler Project, Charleston, S.C.

Johannes Kepler helps teachers build a spectroscope, shows how to make sunspot drawings to measure the Sun's rotational period, and offers several other solar-related activities.

NASA: An Introduction to Cosmic Times: Astronomy History and Science for the Classroom —Science Content—

(Earth)

(High School)

Napoleon C3, Sheraton

James Lochner (james.c.lochner@nasa.gov), USRA & NASA Goddard Space Flight Center, Greenbelt, Md.

Barbara Mattson, NASA Goddard Space Flight Center, Greenbelt, Md.

Through the Cosmic Times materials and lessons, your students will experience the process of science by studying the history of our understanding of the universe.

To the Moon Alice! An Alice in Wonderland Adventure —Science Content—

(Gen)

(Middle Level–High School)

Napoleon D1&2, Sheraton

Nancy L. Foote (tinkerbell0611@gmail.com), Higley Unified School District, Gilbert, Ariz.

Use Lewis Carroll's *Alice's Adventure in Wonderland* to integrate math and science in a fun and innovative way.

8:00–9:00 AM EXHIBITOR WORKSHOPS

InterActions in Physical Science—Newly Revised

(Chem)

(Grades 7–8)

Room 212, Convention Center

Sponsor: It's About Time

Robert H. Poel, Western Michigan University, Kalamazoo

Introducing a new and exciting InterActions! Build your students' content knowledge with a structured program that provides motivating, relevant activities; expository readings; and computer simulations. And, at the same time, build students' skills in measurement, scientific thinking, cooperative learning, and problem solving—skills that will help them

Great Workshops from Fisher Science Education at NSTA New Orleans!

Please join us in Room 211 to learn more about these engaging and informative topics.

Fun and Games That Help Improve Test Scores

Friday, March 20th, 8:00 to 9:30 am Room 211

Attendees gain hands-on experience with a unique, teacher-designed interactive learning game for Grades 1 to 8. FREE SAMPLES for all attendees. Presented by New Path Learning®.

How Safe is Your Lab?

Friday, March 20th, 10:30 am to 12:00 pm Room 211

Saturday, March 21st, 8:00 to 9:30 am Room 211

Find out how to maintain a safe and compliant lab with the Fisher Science Education Lab Safety Program.

Using Technology in Your Science Classroom:

How to Really Hook Your Students

Friday, March 20th, 1:30 to 3:00 pm Room 211

Learn how to encourage student involvement and enrich your curriculum using a digital camera in the classroom. Presented by Ken-A-Vision®.

Green Chemistry in the Classroom

Friday, March 20th, 4:00 to 5:00 pm Room 211

Incorporate green chemistry into your curriculum with hands-on demonstrations presented by Fisher Science Education and Beyond Benign.

New High School Curriculum Mastery® Games

Saturday, March 21st, 10:30 am to 12:00 pm Room 211

Engage your students with this board-game-based learning system that covers NSES standards for Grades 9 to 11. FREE SAMPLES for all attendees. Presented by New Path Learning®.

PCR Made Easy

Saturday, March 21st, 1:30 to 3:00 pm Room 211

Bring the polymerase chain reaction into your classroom using the EdvoCycler™ to create single-session lab experiments that won't break your budget. Presented by Edvotek®.



Fisher Science Education

Part of Thermo Fisher Scientific

Making Science Matter®

handle the rigorous high school science. Explore with a teacher who has experienced the success of this program with her students. This innovative physical science program is targeted for grades 7–8.

Introduction to ScienceA–Z.com

(Gen)

(Grades K–6)

Room 213, Convention Center

Sponsor: Science A–Z.com (brought to you by Learning A–Z)

Bob Holl and **Elizabeth Ackerman**, Learning A–Z/Science A–Z, Tucson, Ariz.

Learning A–Z, creators of Reading A–Z, announce their new website, Science A–Z. Take a tour of this rich new website that allows you to access elementary science materials 24/7. Learn how to use the unit map to discover all the wonderful things included in each unit. Use the search function to find the materials you need to teach to your state’s standards. Receive free one of our multi-leveled *Science in the News*, a news piece that engages students through stories of current real-life applications in science. *Note:* This session will be repeated on Saturday at 11:00 AM (page 77) and 2:00 PM (page 106).

Tough Topics in Earth Science: Plate Tectonics with GIS —Science Teaching—

(Earth)

(Grades 6–12)

Room 218, Convention Center

Sponsor: PASCO Scientific

Ryan Reardon, Alabama School of Fine Arts, Birmingham

Explore PASCO’s state-of-the-art science solutions to one of the most comprehensive and important topics in earth science—plate tectonics. In this hands-on workshop you will participate in standards-based lab activities using My World GIS from PASCO’s new earth science curriculum. See how the SPARK Science Learning System can enhance your teaching practice and improve student understanding of core topics.

Tough Topics in Chemistry: Gas Laws —Science Teaching—

(Chem)

(Grades 6–12)

Room 219, Convention Center

Sponsor: PASCO Scientific

Angela Hill, Blythewood High School, Blythewood, S.C.

We will explore PASCO’s state-of-the-art science teaching solutions to one of the toughest topics in chemistry—gas laws. Participate in standards-based probeware lab activities from PASCO’s new chemistry curriculum. See how the SPARK Science Learning System can change your teaching practice and improve student understanding of core topics.

8:00–9:30 AM EXHIBITOR WORKSHOPS

Practical Insights into What Research Tells Us About Learning and Memory: Classroom Strategies

(Gen)

(Grades K–12)

Room 208, Convention Center

Sponsor: Society for Neuroscience

Barbara Tharp, Baylor College of Medicine, Houston, Tex.

How can we help students learn and remember in the classroom? What situations create the most successful atmospheres for learning? In this hands-on workshop participants will experience learning and remembering and discover why certain strategies are more successful.

Genetics: The Crazy Traits Game —Science Content—**(Bio)***(Grades 5–8)**Room 210, Convention Center*

Sponsor: CPO Science/School Specialty Science

Patsy Eldridge, Erik Benton, and Scott Eddleman, CPO Science/School Specialty Science, Peabody, Mass.

Learn hands-on strategies for teaching genetics and natural selection as you flip coins representing the alleles of the parent generation and determine the traits for an offspring. Discover how the genetic makeup of the parents, along with chance, determines the traits of offspring.

How Safe Is Your Lab?**(Gen)***(Grades 6–College)**Room 211, Convention Center*

Sponsor: Fisher Scientific Education

Presenter to be announced

Not sure how safe your lab is? At Fisher Scientific Education, we understand that you face laboratory safety challenges every day. During this dynamic workshop, we will highlight what you need to know to maintain a safe and compliant lab. We'll introduce you to the Fisher Scientific Lab Safety Program that includes the new *Fisher Scientific Laboratory Safety Resource Manual*, a comprehensive resource guide outlining lab safety requirements and training, and the new *Fisher Scientific 2009 Safety and Laboratory Fundamentals Catalog*, a quick resource for equipment, supplies, and products designed to help meet your laboratory and safety needs.

FREE Teaching Resources from the Howard Hughes Medical Institute **(Bio)***(Grades 9–College)**Room 214, Convention Center*

Sponsor: Howard Hughes Medical Institute

Anthony Bertino, University at Albany, Scotia, N.Y.**Patricia Nolan Bertino**, Scotia-Clenville High School, Scotia, N.Y.

Preview free resources (DVD, poster, animations, video clips) from HHMI's 2008 Holiday Lectures on the brain. Concepts include localization of brain function, brain development, control of movement, and neural basis of memory. Neural communication and sensory feedback affecting limb movement will be examined, as well as cellular, molecular, and protein differences in long- and short-term memory.

SQUID INK-UIRY: Inquiry-based Invertebrate Anatomy Through Squid Dissection **(Bio)***(Grades 9–12)**Room 215, Convention Center*

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

These beautiful, mysterious creatures fascinate students and teachers. Learn morphology and anatomy of the common squid, a representative mollusk, through hands-on, guided, basic dissection and detailed dissection of the organ systems. Large specimens provide a clear view of invertebrate anatomy (much easier than other mollusks, such as clams).

Hands-On Science with Classroom Critters

(Bio)

(Grades K–12)

Room 216, Convention Center

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

Here's a sure-fire boost to your class—live organisms. Whether you use hands-on curriculum (e.g., STC®, FOSS®) or develop your own lessons, animals broaden students' inquiry-based explorations and increase their interest in science. Participate in fun, simple hands-on activities. Care and handling information presented. Receive free product samples and literature.

Discover the Solar System and Beyond with GEMS® Space Science Sequences

(Earth)

(Grades 3–8)

Room 217, Convention Center

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

GEMS®, in partnership with Carolina™ Curriculum, introduces the NEW! Space Science Sequences. The Sequence for grades 3–5 builds student understanding of scale, motion, gravity, light, and shadow. The NEW! Sequence for grades 6–8 builds on these concepts, focusing on the Sun's effect on Earth, seasons, the solar system, and beyond.

Visual Literacy in Science —Science Teaching—

(Gen)

(Grades K–5)

Room 220, Convention Center

Sponsor: Pearson

Glenn Gordon, Pearson, Upper Saddle River, N.J.

Our world is becoming ever more visual as information is provided to us via computers, the internet, video games, DVDs, etc. Research shows that children are able to construct meaning out of graphic symbolization and drawing, and that comprehension increases when verbal information is augmented by high-quality visual displays. Learn how visual literacy can be used in the science classroom.

The Origin After 150 Years: Teaching the Science of Darwin's Great Idea in the Climate of Controversy —Science Teaching—

(Bio)

(Grades 9–12)

Room 221, Convention Center

Sponsor: Pearson

Kenneth R. Miller, Brown University, Providence, R.I.

Evolution remains a contentious part of the biology curriculum in many states and school districts. Having dealt with these issues as an author and expert witness in the Kitzmiller v. Dover trial, I will suggest ways in which you can present Darwin's great idea in a climate of controversy.

Physics with Vernier —Science Teaching—

(Phys)

(Grades 9–College)

Room 222, Convention Center

Sponsor: Vernier Software & Technology

David Carter (info@vernier.com) and **Rick Sorensen** (info@vernier.com), Vernier Software & Technology, Beaverton, Ore.

Experiments such as sound waves, motion of a cart on a ramp, and video analysis from our popular *Physics with Vernier* lab book will be performed in this hands-on workshop. You will be able to try these experiments using LabQuest as a stand-alone device and on a computer. Experiments are appropriate for introductory, AP, IB, and college courses.

Advanced Biology and Biotechnology with Vernier —Science Teaching— (Bio)*(Grades 9–College)**Room 224, Convention Center*

Sponsor: Vernier Software & Technology

Mike Collins (info@vernier.com) and **Robyn Johnson** (info@vernier.com), Vernier Software & Technology, Beaverton, Ore.

AP* Biology experiments such as transpiration and cell respiration from our new *Advanced Biology with Vernier* lab book will be demonstrated. See how to use Bio-Rad equipment with Vernier's Digital Bioimaging System to perform gel electrophoresis and analyze the results. Spectral analysis of chlorophyll using our low-cost SpectroVis spectrophotometer will be shown.

Fuel Our Future Now —Science Teaching—**(Gen)***(Grades 6–12)**Room 225, Convention Center*

Sponsor: Discovery Education

Lance Rougeux, Discovery Education, Silver Spring, Md.

Fuel student curiosity about alternative energy sources, advanced vehicle design, climate change, and the future of transportation with engaging K–12 classroom resources connected to the Progressive Automotive X PRIZE Education Program, sponsored by the U.S. Department of Energy. Get a sneak peek at the brand-new STEM curriculum and learn how you can win a free DVD.

Lab-Aids Kits: Find the Answers Inside the Box**(Gen)***(Grades 4–12)**Room 226, Convention Center*

Sponsor: Lab-Aids, Inc.

Mark Koker, Lab-Aids, Inc., Ronkonkoma, N.Y.

Over the years you have come to expect the best from Lab-Aids—kits that save you time and money and zero in on key, hard-to-teach science standards and concepts. Join us as we take the wraps off three brand-new kits for the life, earth, and physical sciences. To make it any easier, we'd have to come and teach it for you!

From the Field: Igniting a Passion for Science —Science Content—**(Gen)***(Grades 3–9)**Room 228, Convention Center*

Sponsor: National Academy of Sciences

Diane France, Colorado State University, Fort Collins**April Luehmann** (aluehmann@warner.rochester.edu), University of Rochester, N.Y.

The National Academy of Sciences invites you to meet world-renowned forensic anthropologist Diane France, the Bone Detective. Learn about Diane's fascinating experiences solving mysteries as she leads a forensic science–based activity you can duplicate in your classroom. Also meet professor April Luehmann and find out how educators are using the stories of Diane and other contemporary women scientists to ignite a passion for science in their classrooms. Discover ways to build community and encourage inquiry using the *iWASwondering.org* website. Be among the first to find out about ASK IT!—a free, NAS-moderated online resource dedicated to engaging students in science inquiry.

Wild About Safety® with Timon and Pumbaa Goes Green! (Earth)

(Grades K–3)

Room 229, Convention Center

Sponsor: Disney Educational Products/Underwriters Laboratories

Barbara Guthrie, Underwriters Laboratories, Northbrook, Ill.

Presented by a UL® Safety Ambassador, this workshop is jam-packed with hands-on activities designed to get kids in grades K–3 excited about making sure the world around them is clean, green, and safe.

Bio-Rad—Microbes and Health: “What Causes Yogurtiness?”™ —Science Teaching— (Bio)

(Grades 5–College)

Room 230, Convention Center

Sponsor: Bio-Rad Laboratories

Essy Levy (essy_levy@bio-rad.com) and **Sherri Andrews** (sherri_andrews@bio-rad.com), Bio-Rad Laboratories, Hercules, Calif.

Introduce your students to microbiology using yogurt. In this lab students isolate bacteria from yogurt on a petri dish and then use these strains to inoculate fresh milk to produce more yogurt. Learn about disease transmission and progression and apply Koch’s postulates. Teach microbiology, microscopy, health science, and biology with one lab.

BIOZONE Showcases Their Biology Workbooks and Presentation Media for Grades 10–12 (Bio)

(Grades 10–College)

Room 231, Convention Center

Sponsor: BIOZONE International Ltd.

Richard Allan (richard@biozone.co.nz), BIOZONE International Ltd, Hamilton, New Zealand

We will showcase BIOZONE’s critically acclaimed biology workbooks and presentation media. Our resources provide cutting-edge, current, and state-of-the-art content. Ideal supplemental resources with their highly visual content and write-on format make a winning formula to engage students, facilitating “differential learning.” FREE samples of the latest workbooks will be provided to each participant.

A Virtual Tour of Your Watershed (Env)

(Grades 4–9)

Room 232, Convention Center

Sponsor: LaMotte Co.

Kristen S. Travers, Stroud Water Research Center, Avondale, Pa.

Enjoy a virtual tour of four stream sites and gather data on the chemistry and biology of a stream. Watershed Tour, a curriculum filled with opportunities for hands-on experiences, is a wonderful introduction to watersheds, stream ecology, and the impact of land use on water quality. Door prizes!

Educational Gaming in Science: Shifting the Paradigm —Science Teaching— (Gen)

(Grades 3–5)

Room 235, Convention Center

Sponsor: Tabula Digita

Nt Etuk (nt@tabuladigita.com), Tabula Digita, New York, N.Y.

At least 93% of U.S. K–12 students play videogames. Math has capitalized, with Tabula Digita math games more than DOUBLING score increases on district exams. Now it’s time for science. Education is about to become very cool—let the games begin!

Using Math and Science as the “New Literacy” to Combat “At-Risk” Student Achievement (Gen)

(General)

Room 236, Convention Center

Sponsor: The JASON Project

Peter Haydock (info@jason.org), The JASON Project, Ashburn, Va.

Faced with dramatic changes in 21st-century business practices, our public schools risk becoming obsolete unless teaching practices are adapted to meet the business community’s rapidly changing needs. Advances in technology have created an environment where children need to begin early in their educational career to develop strong problem-solving, communication, and critical-thinking skills. If not addressed, our children and our society face dire consequences. Both the Albemarle and Charlottesville public school systems in Virginia and Georgetown public schools in South Carolina are committed to meeting this challenge. Educators and education advocates have developed a program to emphasize these important areas, not only to satisfy student learning and achievement, but to break new ground.

Starting an NSTA Student Chapter:
Faculty & Student Perspectives

**Saturday
March 21st
9:30–10:30 AM
New Orleans Marriott
Jackson**

Interested in getting your preservice teachers more involved in the profession? You won’t want to miss this must-see panel discussion conducted by NSTA student chapter advisors on the advantages of starting an NSTA student chapter at your college or university.



8:00–10:00 AM **SESD “SCIENCE ABLED” BREAKFAST**

Doing What’s Right: Accessibility Through the Eyes of a Parent, Teacher, and Advocate

(Tickets Required; \$40)

M-6

Newberry, Hilton



Speaker

Patricia D. Davidson

Instructor in Education

Dept. of Teacher Education

University of Southern Indiana

Evansville, Ind.

pdavidson@usi.edu

For the past 27 years, I have been a parent to my wonderful son Zach, who just so happens to be cognitively challenged. In those 27 years, I have worn many hats—mom, special education teacher, general education teacher, and, currently, university instructor to future special education teachers. As a parent who advocates for her son at many levels and as a teacher who teaches about the need to promote self advocacy skills, I serve on local, state, and national boards to help create awareness of the important issues of self advocacy that will promote equal accessibility. With a focus on all three of these roles—mom, teacher, and advocate—I will discuss how to approach complex systems that must be explored, understood, and eventually used when working in the field of special education.

Patricia Davidson was an elementary teacher in public school systems for many years. She became increasingly aware of the need for widespread information pertaining to special education following her own experience as an advocate for her son Zachary. For the past five years she has been employed by the University of Southern Indiana, where she teaches future special education and general education teachers.

Tickets, if still available, must be purchased at the NSTA Registration Area before 3:00 PM on Friday.

8:00–11:00 AM **SHORT COURSES**

Convincing the Policy Makers: The Research Behind Effective Inquiry-based Science Learning in K–16 Classrooms (SC-17)

(General)

Tickets Required; \$25

Ballroom I, Westin

Pam Blanchard (pamb@lsu.edu) and **Gayle Glusman** (gayleglusman@bellsouth.net), Louisiana State University, Baton Rouge

Michael Jabot, SUNY Fredonia, N.Y.

Jim McDonald (mcdonlit@cmich.edu), Central Michigan University, Mount Pleasant

Brenda Nixon (bnixon@lsu.edu), Program Coordinator, NSTA New Orleans National Conference on Science Education, and Louisiana State University, Baton Rouge

Laura Tucker (ltucker@berkeley.edu), Lawrence Hall of Science, University of California, Berkeley

For description, see Volume 1, page 87.

**The Young Scientist: Engaging Three- to Five-Year-Old Children in Science (SC-18)***(PreK–Elementary)***Tickets Required; \$3***Imperial, Westin***Jeff Winokur** (jwinokur@edc.org) and **Karen Worth** (kworth@edc.org), Education Development Center, Inc., Newton, Mass.

For description, see Volume 1, page 87.

8:00 AM–12:30 PM NSTA SYMPOSIUM**NOAA/NSTA Symposium: The Heat Is On! Climate Change and Coral Reef Ecosystems (SYM-4)***(Grades 5–12)***Tickets Required; \$54***Room 255, Convention Center***Paulo Maurin**, **Tyler Christensen** (tyler.christensen@noaa.gov), **Dwight Gledhill** (dwright.gledhill@noaa.gov), **Karen Palmigiano** (karen.palmigiano@noaa.gov), and **Bruce Moravchik**, NOAA, Silver Spring, Md.**Kelly Drinnen** (kelly.drinnen@noaa.gov), Flower Garden Banks National Marine Sanctuary, Galveston, Tex.

For description, see Volume 1, page 78.

8:00 AM–3:30 PM RESEARCH DISSEMINATION CONFERENCE**Science Assessment, Linking Science and Literacy, and Science and English Language Learners: What Does Current Research Say About Best Practices?***(Tickets Required; \$295)***#C-1***Rooms 343–345, Convention Center*

The overall objective of this conference is to allow teachers, administrators at school and district levels, and professional development providers to learn about the implications of NSF-funded researchers' work for classroom practice and professional development. For description, see pages 14–15.

8:30–11:30 AM SHORT COURSE**Look What Technology Can Do for Your Classroom: Basics of Video Analysis (SC-19)***(General)***Tickets Required; \$45***River Room I/II, Westin***Karen Jo Matsler** (kjmatsler@gmail.com), Dallas Baptist University, Dallas, Tex.**Janie Head** (mhead@lcisd.org) and **Jill Lewis** (jlewis@lcisd.org), Foster High School, Richmond, Tex.

For description, see Volume 1, page 87.

8:30–11:30 AM EXHIBITOR WORKSHOP

Using Science Notebooks with FOSS Modules K–6 —Science Content— (Gen)

(Grades K–6)

Room 209, Convention Center

Sponsor: Delta Education/School Specialty Science-FOSS

Ellen Mintz, Consultant, Charleston, S.C.

Jeri Calhoun, Science Associate, Isle of Palms, S.C.

Science is the perfect context for exercising and applying language skills. Learn how science notebooks can be used in FOSS modules to improve student achievement in all areas of the K–6 curriculum. Sample materials will be distributed.

9:00–9:30 AM PRESENTATION

SESSION 1

COSEE Session: COSEE-West Opportunities for Teachers and Students in the Online World and Beyond —Science Teaching— (Env)

(Middle Level–High School)

Regent, New Orleans Marriott

Lynn Whitley (lwhitley@usc.edu), University of Southern California, Los Angeles

Through online workshops and challenge events, teachers and students benefit from bringing research experiences directly to the classroom and providing opportunities for student-centered learning.

9:00–10:00 AM MEETING

Past Presidents Advisory Board Meeting

Riverview (41st Floor), New Orleans Marriott

9:00–10:30 AM SHELL SCIENCE SEMINAR

Fantasy, Reality, and Almost Miracles: Forensic Anthropology in the 21st Century (Gen)

(General)

Room 352, Convention Center



Speaker

Mary H. Manheim

Professional in Residence,
Forensic Anthropologist, and
Director, LSU Forensic Anthropology and
Computer Enhancement Services (FACE) Lab
Louisiana State University
Baton Rouge, La.
gaman@lsu.edu

Presider: Vickie Hinson (*vickie.hinson@lpsb.org*), Livingston Parish Middle School Science Coordinator, Livingston, La.

Come get an overview of the changing world of forensic anthropology. We'll look at its realities and fantasies, along with a healthy dose of near miracles, when it comes to solving cases of identity using both traditional tools and 21st-century technology. A glimpse into what lies above and below the ground in old New Orleans adds some local historic flavor.

Mary Manheim is a physical anthropologist and bioarchaeologist with 25 years' experience in field recovery and analysis of human skeletal remains from prehistoric, historic, and forensic contexts. In addition to her responsibilities at LSU, she is director of the Louisiana Repository for Unidentified and Missing Persons Information Program, a deputy coroner for East Baton Rouge Parish, a member of the National Disaster Medical System DMORT, and a member of Louisiana State Mass Fatalities and Disaster Team.

Manheim also serves as an expert witness in forensic anthropology. She has handled more than 1,000 forensic cases in the last 25 years, including fires and explosions at major chemical refineries. She has given hundreds of public and scientific presentations. Among other media appearances, she and the FACES lab have been featured on national news programs and the popular TV series America's Most Wanted and Cold Case Files.

9:00–11:00 AM PRESENTATION

SESSION 1

Teacher Share! A Share-a-Thon for Teachers Involved in the International Polar Year —Professional Development— (Gen)

(General)

Carondelet, New Orleans Marriott

Janet Warburton, Arctic Research Consortium of the United States, Fairbanks, Alaska

This session is a share-a-thon presented by teachers for teachers!

9:00 AM–12 Noon **SHORT COURSE**

DuPont Presents—Exploring the Science and Uses of Disposable Fabrics (SC-20)

(Middle Level—High School)

Tickets Required; \$20

Executive, Westin

Karl L. Johnson, DuPont, Old Hickory, Tenn.

Sue Gleason, Middletown High School, Middletown, Del.

Karen McDermott and **Peggy Vavalla**, DuPont, Wilmington, Del.

Gerber M. Porter, Peabody Magnet High School, Alexandria, La.

For description, see Volume 1, page 88.

9:00 AM–12 Noon **MEETING**

Research for Classroom Teachers (RAISE) Meeting

Windsor, Hilton

Come participate in this special discussion and working group on current research in science teaching and learning and the implications for K–16 classroom practitioners. For more information, contact Patricia Simmons at psimmons@umsl.edu.

9:00 AM–4:00 PM **SHORT COURSE**

Science Notebooks: Developing a Deeper Understanding (SC-21)

(Grades K–12)

Tickets Required; \$25

Terrace, Westin

Trisha Herminghaus (herminghaus_trisha@asdk12.org); **Joanna Hubbard** (hubbard_joanna@asdk12.org); **Judith Onslow** (onslow_judy@asdk12.org), and **Texas Gail Raymond** (raymond_gail@asdk12.org), Anchorage (Alaska) School District

For description, see Volume 1, page 88.

9:00 AM–5:00 PM **EXHIBITS**

Exhibit Hall B1, Convention Center

Come see the most up-to-date science textbooks, software, equipment, and other teaching materials. Some exhibitors will offer materials for sale.

9:00 AM–5:00 PM **MEETING**

NSTA International Lounge

Trafalgar, Hilton

Please stop by the NSTA International Lounge to relax and meet colleagues while you're here at the NSTA New Orleans National Conference on Science Education.

9:30–10:00 AM PRESENTATION

SESSION 1

COSEE Session: Coastal Trends in Sea Grass —Science Content— **(Env)**
(Middle Level–High School) *Regent, New Orleans Marriott*

Laura Murray, University of Maryland Center for Environmental Science, Cambridge
 This innovative teaching module on sea grass illustrates the importance of these coastal systems, their decline, and science research on restoring these ecosystems.

9:30–10:30 AM SOCIAL

NSTA Districts Meet and Greet*Acadia, New Orleans Marriott*

The 18 district directors elected to the National Science Teachers Association (NSTA) Council cordially invite their NSTA members to the First Annual NSTA District Meet and Greet. Wear your District ribbon, meet friends and colleagues from your part of the country, and trade pins with others.

9:30–10:30 AM PRESENTATIONS

SESSION 1

Environmental Heroes —Science Content— **(Env)**
(Middle Level/Informal Education) *Room 238, Convention Center*

James M. Bader (*james.bader@case.edu*), Case Western Reserve University, Cleveland, Ohio

This after-school program, a collaboration with Cleveland Metroparks, is designed to cultivate the spirit of applied citizenship in middle school students.

SESSION 2

Ethanol: Is It Really a Fuel for the Future? —Science Content— **(Env)**
(Middle Level–High School) *Room 239, Convention Center*

Paul Beardsley (*pbeardsley@bscs.org*), BSCS, Colorado Springs, Colo.

Participate in activities designed to help students learn about ethanol generation from plants and think critically about ethanol as a fuel.

SESSION 3

The Teacher Researcher: Using the RET Experience to Improve Your Classroom —Science Teaching— **(Gen)**

(Middle Level–High School) *Room 240/241, Convention Center*

Jennifer L. Berry (*jenniferbrickert@yahoo.com*), Murfreesboro, Tenn.

President: Jennifer Perry (*jenniferp@wcs.edu*), Williamson County School District, Franklin, Tenn.

Explore the benefits of participating in a Research Experience for Teachers program, including content knowledge, pedagogical skills, and curriculum development.

SESSION 4

AoA Session: Leadership for Science Education (NSELA) —Professional Development— (Gen)

(Supervision/Administration)

Room 252, Convention Center

Linda Atkinson, University of Oklahoma, Norman

Brenda S. Wojnowski (bwojnowski@cftexas.org), Communities Foundation of Texas, Dallas

Learn about cultivating leadership capacity for 21st-century interactive science learning communities by developing virtual collaborative networks with administrators, teachers, research scientists, and the community.

SESSION 5

AoA Session: Get the Scoop (CESI) —Professional Development— (Gen)

(Preschool–Middle Level)

Room 253, Convention Center

Alan J. McCormack (amccorma@mail.sdsu.edu), San Diego State University, San Diego, Calif.

Kay Atchison Warfield (kaw@alsde.edu), Alabama State Dept. of Education, Montgomery

Mary Beth Katz (mbkatz@bellsouth.net), Alabama Science Teachers Association, Birmingham

Join us as we share opportunities to stimulate, improve, and coordinate science teaching at preschool, elementary, and middle school levels, and to promote the improvement of science curricula.

SESSION 6

SciLinks: Using the Online Assignment Tool —Science Content— (Gen)

(Elementary–High School)

Room 354, Convention Center

Virginie L. Chokouanga (vchokouanga@nsta.org), Customer Service and Database Administrator, SciLinks, NSTA, Arlington, Va.

Tyson Brown (tbrown@nsta.org), Director, SciLinks, NSTA, Arlington, Va.

The SciLinks Assignment Tool allows students to show what they have learned from the web resources SciLinks provides. Learn to create and distribute assignments.

SESSION 7

Nature-based Inquiry —Science Education Program— (Env)

(Preschool/Elementary)

Room R01, Convention Center

Mary E. Earick (earick@sc.edu), **Doug Earick** (dearick@sc.edu), and **Chanda Cooper** (ccooper@environ.sc.edu), University of South Carolina, Columbia

Brian G. Clark (bclark@ae.gcsd.k12.sc.us), **Tracy F. Dunn**, and **Claire W. Grant**, Andrews Elementary School, Andrews, S.C.

Donna E. LeGette, Pleasant Hill Elementary School, Hemingway, S.C.

We will share a standards-based professional development and student instruction (preK–2) approach that incorporates the use of outdoor settings to develop effective inquiry.

SESSION 8

Project See What Happens! An Early-Childhood Science Literacy Project —Science Teaching— (Gen)

(Preschool/Elementary)

Room R06, Convention Center

Lori Norton-Meier (nortonme@iastate.edu) and **Sara Nelson** (sdnelson@iastate.edu), Iowa State University, Ames

Learn about a unique approach that combines inquiry and language practices. Walk away with new resources and ideas for your classroom.

SESSION 9

Science for Students with Significant Intellectual Disabilities —*Science Content*— **(Gen)**

(General)

Belle Chasse, Hilton

Steven R. Lyon (srlyon@education.pitt.edu) and **Peter Heh** (petehh@hotmail.com), University of Pittsburgh, Pa.

Presider: Steven R. Lyon

We will provide an overview and illustrations of an alternate performance assessment and achievement benchmarks for students with significant intellectual disabilities.

SESSION 10

I Love FREE! —*Science Teaching*— **(Gen)**

(General)

Elmwood, Hilton

Jan Coley (coleyj@k12tn.net), Jefferson County Schools, Dandridge, Tenn.

Come see how shareware and Web 2.0 tools enhance both teaching and learning in the science classroom and laboratory.

2009 Paul F-Brandwein Lecture



**Cheryl Charles, President & CEO
Children & Nature Network**

**The Ecology of Hope: Building a Movement
To Reconnect Children and Nature**

Sat., March 21, 11am, Rm. 352, Conv. Ctr.

**A Brandwein Medal will be
presented to Dan Bisaccio
Director of Science Education
Brown University
Providence, Rhode Island**



SESSION 11

Middle Level Share-a-Thon —*Science Teaching*—

(Gen)

(Middle Level)

Napoleon Ballroom , Hilton

Susan German (sgerman@hallsville.org), NSTA Director, Middle Level Science Teaching, and Hallsville Middle School, Hallsville, Mo.

Diana Hunn (diana.hunn@notes.udayton.edu), University of Dayton, Ohio

Carol Scott (cscott@pinerichland.org), Pine-Richland Middle School, Gibsonia, Pa.

Pamela L. Smith (smithp8@duvalschools.org), Julia Landon College Preparatory and Leadership Development School, Jacksonville, Fla.

Mary Dunn (mdunn@mmsa.org), Maine Mathematics and Science Alliance, Augusta

Arlene Jurewicz-Leighton (ajl@midcoast.com), TeachLearn Collaborate.com, Lincolnville, Maine

Join middle level teachers as they present their best lessons. At the end of the session, each participant will receive a CD of all lessons.

SESSION 12

Metric Week —*Science Teaching*—

(Gen)

(General)

Norwich, Hilton

Robert B. Shaw (rshaw@micds.org), Mary Institute and Saint Louis Country Day School, St. Louis, Mo.

Find out how a week dedicated to the international standard of measurement changes student (and adult) perceptions of the modern metric system.

SESSION 13

Genomics Research with a Computer: Free Tools for Bringing Cutting-Edge Bioinformatics Research into the Classroom —*Professional Development*— (Bio)

(High School–College)

Maurepas, JW Marriott

Chad W. Dorsey (cdorsey@concord.org), The Concord Consortium, Concord, Mass.

A new program allows high school biology students to perform bioinformatics research using the same tools and datasets currently used by active science researchers. Participants are encouraged to bring laptops.

SESSION 14

Engaging Students and Challenging Science Misconceptions Through Discrepant Events —*Science Teaching*—

(Gen)

(General)

Rosalie, JW Marriott

Scott Moore, Valley High School, West Des Moines, Iowa

Katherine A. Larson (kberanek2004@aol.com), Des Moines East High School, Des Moines, Iowa

We will demonstrate several simple activities from various content areas that engage students, provide counterintuitive observations, and challenge misconceptions. Handouts provided.

SESSION 15

The Built Environment: A Springboard to STEM Learning and Citizenship —*Science Teaching*—

(Gen)

(Informal Education)

St. Claude, JW Marriott

Leonisa Ardizzone (ardizzone@salvadori.org), Salvadori Center, New York, N.Y.

By using structures and systems to teach STEM concepts, including “Green” Engineering and Design, teachers and students increase content knowledge, stewardship, and civic participation.

SESSION 16 (two presentations)*(College/Supervision)**Bonaparte, New Orleans Marriott***Preservice Elementary Teachers: The Impact of Methods and Field Experience on Professional Development —Professional Development— (Gen)**

Teresa Higgins (teresa.higgins@unco.edu), **MaryAnne Richards** (ramarich@msn.com), and **Yeni Garcia** (garc7544@bears.unco.edu), University of Northern Colorado, Greeley

This study examines preservice elementary teachers' changes in self-efficacy and attitudes toward elementary science instruction at two critical points in their professional development—after completing a science methods course and after the field experience.

Art and Science Preservice Intersections —Professional Development— (Gen)

Lydia Dambekalns, University of Wyoming, Laramie

Art and science education preservice seniors experience a university-level science/art unit that they will eventually implement in student teaching.

SESSION 17**Starting an NSTA Student Chapter: Student and Faculty Perspectives —Professional Development— (Gen)***(General)**Jackson, New Orleans Marriott*

Howard Wahlberg (hwahlberg@nsta.org), Assistant Executive Director, Member, Chapter, and Customer Relations, NSTA, Arlington, Va.

Interested in getting your preservice teachers more involved in the profession while still preparing them to enter the classroom? Be sure to join us for an interactive and participatory discussion by and about NSTA student chapter advisors on the advantages of starting an NSTA student chapter at your college or university.

SESSION 18**Problem Based Learning: A Practical Approach for STEM Education —Science Teaching— (Gen)***(Informal Education)**Edgewood A/B, Sheraton*

Nicholas M. Massa (massa@stcc.edu), Springfield Technical Community College, Springfield, Mass.

Judith Donnelly (jdonnelly@lasertechonline.org), Three Rivers Community College, Norwich, Conn.

Experience the excitement of Problem Based Learning (PBL) and learn how to create simple multimedia PBL “challenges” using authentic real-world problems that will captivate your students.

SESSION 19**Sharing the Responsibility for Learning with Your Students —Science Teaching— (Chem)***(High School)**Gallier A/B, Sheraton*

Rosemary Camp (rcamp@liberty.k12.mo.us), Liberty High School, Liberty, Mo.

Mary M. Coogan (mcoogan@liberty.k12.mo.us), Liberty (Mo.) Public School District
 Presider: Glenn Brooks, Lower Merion High School, Ardmore, Pa.

Use these techniques in your chemistry classroom to assist students in working cooperatively while taking responsibility for their own learning.

SESSION 20

Energize Your Energetics Unit! —Science Content—

(Bio)

(High School)

Napoleon A1&2, Sheraton

Mark C. Krotec (*mckrotec@yahoo.com*), Pittsburgh Central Catholic High School, Pittsburgh, Pa.

Presider: Sabriya Dempsey, School District of Philadelphia, Pa.

Engage your students with FREE stimulating activities spanning the realm of energy metabolism. Shoebox Energetics, Prime Time Enzyme, Amazing Amylase, Photo Finish, and Carbo Respiration Races are sure to revolutionize your course.

SESSION 21

Model Organisms: Research and Learning with Fruit Flies, Thale Cress, Zebrafish, and Others —Science Content—

(Bio)

(Middle Level–College)

Napoleon A3, Sheraton

Kevin J. Niemi (*kjniemi@wisc.edu*), University of Wisconsin, Madison

Model organisms are invaluable in research. Come learn more about many model organisms and about resources that will help your students learn from them.

SESSION 22

Increasing Student Achievement Through Instructional Technology Using Astrobiology in an All-inclusive Learning Environment —Science Teaching—

(Earth)

(General)

Napoleon B3, Sheraton

Barry Fried (*bfried@schools.nyc.gov*) and **Honora Dash** (*hdash@schools.nyc.gov*), John Dewey High School, Brooklyn, N.Y.

Learn how to create student-centered, technology-driven environments to foster an understanding of science concepts in astrobiology and earth system sciences, increase science literacy through differentiated instruction, and create opportunities for students and teachers to interact with experts in the STEM field through authentic science learning experiences.

SESSION 23

Climate Change and the WAIS Divide Ice Coring Educational Outreach Program —Science Content—

(Earth)

(General)

Napoleon C1, Sheraton

Zach Smith, Tufts University, Medford, Mass.

The West Antarctic Ice Sheet Divide (WAIS Divide) Outreach Program (WDOP) is an educational site dedicated to improving the understanding of ice coring and how it pertains to the study of climate change.

SESSION 24

NASA: Inquiry Activities for Learning About Light and the EM Spectrum and Multiwavelength Astronomy —Science Content—

(Earth)

(Middle Level–High School/Informal Education)

Salons 817 & 821, Sheraton

Edna K. DeVore, SETI Institute, Mountain View, Calif.

Denise A. Smith, Space Telescope Science Institute, Baltimore, Md.

Experience inquiry activities for learning about visible and invisible light using simple classroom technologies. Standards-based lessons, colorful posters, and spectroscopes will be distributed and multiwavelength astronomical applications presented.

SESSION 25

Physics for All—Differentiating Instruction —Science Teaching— (Phys)
(High School) Salons 825 & 829, Sheraton

Arthur Eisenkraft (eisenkraft@att.net), 2000–2001 NSTA President, and University of Massachusetts, Boston

Physics First and Physics for All both require differentiated instruction to ensure that all students will be challenged and successful in physics. Let's explore how we can adapt our physics classes to meet the needs of all students.

9:30–10:30 AM WORKSHOPS



Robotics in the Elementary School —Science Content— (Phys)
(Elementary) Room 242, Convention Center

Angela D. Harrison, Browning Elementary School, Houston, Tex.

Nicki Frankie (nfrankie@houstonisd.org), Barrick Elementary School, Houston, Tex.

Learn about the EARLY Robotics Program and how to build robots using LEGO's Simple Machines kits.

NMLSTA Session: Secrets of Fun in Science —Professional Development— (Gen)
(Middle Level) Room 353, Convention Center

Annette M. Barzal (abarzal@gmail.com), NMLSTA, Sharon Center, Ohio

Julie Bellamy (julie.bellamy@yahoo.com), St. Michael School, North Royalton, Ohio

Dazzle your students with more than 10 fun activities that increase attention and learning in the science classroom.

Teaching Elementary Science with Everyday Items —Science Teaching— (Gen)
(Elementary–Middle Level) Room 355, Convention Center

Jeanelle Day (dayj@easternct.edu), Eastern Connecticut State University, Willimantic

Cheryl Sundberg (sundbergc@att.net), Millbrook, Ala.

Experience engaging K–8 hands-on/minds-on demonstrations and lesson ideas related to science standards, including energy, solubility, and material properties.

Sands of Time and Place: Year Two —Science Content— (Earth)
(Elementary–Middle Level) Room 356, Convention Center

Lynne H. Hehr (lhehr@uark.edu) and **John G. Hehr** (jghehr@uark.edu), University of Arkansas, Fayetteville

Explore sands from “beginning to end.” Join this inquiry-based, hands-on exploration of “all new” sands of the world. Leave with a CD packed with content, lessons, and sand samples (different from last year).

Modeling: Naturally Selecting an Effective Teaching Method —Science Teaching— (Bio)
(Middle Level) Room R02, Convention Center

Karen L. Mesmer (kmesmer@centurytel.net), Jack Young Middle School, Baraboo, Wis.

Presenter: Linda R. Gauthier (lgauth1@lsu.edu), St. Louis King of France, Baton Rouge, La.

As part of the NSTA *Exemplary Science Program* book series, a modeling approach to teaching natural selection to middle schoolers will be examined in this presentation.

Energy Everywhere: Physics for Kids —Science Content— (Phys)

(Preschool/Elementary)

Room R03, Convention Center

Angela S. Galindo, Gray Elementary School, Houston, Tex.

These hands-on science activities focusing on basic and powerful physics concepts connect elementary science with particle physics. Capture your students' interest and equip them with the knowledge needed to pass standardized tests.

After-School Robotics for Children: Creative and Critical Tinkering —Professional Development— (Gen)

(Elementary)

Room R04, Convention Center

Marilyn L. Fowler (mlfowler@austin.rr.com), Austin (Tex.) Independent School District

Children's robotics is all about thinking skills—sequencing, logic, analysis, synthesis, and evaluation. Give some design challenges a try and receive Austin Children's Museum lessons.

Purple, Pointed, and Pokey! Exploring and Investigating the Potential of Properties in Early Childhood Science —Science Teaching— (Gen)

(Preschool/Elementary)

Room R05, Convention Center

Beverly L. Kutsunai (bekutsun@ksbe.edu), Kamehameha Elementary School, Honolulu, Hawaii

Discover amazing treasure in everyday objects for science with young children. Observe, compare, change things, and share your discoveries—do what scientists do.

Pendulums and the Physics of Music —Science Content— (Phys)

(Middle Level)

Room R07, Convention Center

Sandra Robins (srobins@exploratorium.edu), The Exploratorium, San Francisco, Calif.

Construct a set of pendulums with graduated lengths and explore their relationship to corresponding musical sounds.

Sports Equipment and Materials Science —Science Teaching— (Chem)

(Middle Level–College)

Oak Alley, Hilton

Justin Sickles (sicklesj@wmasd.org), **Veronica Mattson**, and **Alexis Zywan**, West Mifflin Area High School, West Mifflin, Pa.

Presider: Robert Wesolowski, Carnegie Mellon University, Pittsburgh, Pa.

Looking for a way to introduce materials science into your classroom? This workshop uses familiar sports equipment to help illustrate the applications of materials science.

Molecular Evolution of Cholera —Science Content— (Bio)

(High School–College)

Ile de France I, JW Marriott

Dina G. Markowitz (dina_markowitz@urmc.rochester.edu) and **Susan Holt**, University of Rochester, N.Y.

Explore the molecular evolution of *Vibrio cholerae* using a real-life case study on the emergence of a new epidemic disease-causing strain of *Vibrio cholerae*.

A Leader's Guide to Science Curriculum Topic Study: Designs, Tools, and Resources for Professional Learning —Professional Development— (Gen)

(General)

Ile de France II, JW Marriott

Joyce Tugel, Maine Mathematics and Science Alliance, Augusta

Learn how science education leaders and professional development providers can use cur-

riculum topic study (CTS) to help K–12 teachers bridge the gap between standards and research and classroom practice.

ASTE Session: Let’s Explore Early Childhood Science —Science Content— (Gen)

(Elementary–Middle Level)

Ile de France III, JW Marriott

Carla C. Johnson (carla.johnson@uc.edu) and **Kim Lemon**, University of Cincinnati, Ohio

Paula Schoeff (paula.schoeff@utoledo.edu), University of Toledo, Ohio

Come and learn about inexpensive science explorations you can do with your early childhood (K-3) science class. Units on the seasons, water, weather, plants, and animals will be shared. All lessons utilize the 5 E Model of Instruction and use common items to engage students in doing science! Sample lessons plans will be provided.

NESTA Session: National Earth Science Teachers Association Natural Hazards and the Environment Share-a-Thon —Science Content— (Earth)

(Elementary–High School)

Bissonet, New Orleans Marriott

Michelle C. Harris (michelle_harris@apsva.us) and **Bonnie Nelson** (bnelson@arlington.k12.va.us), Wakefield High School, Arlington, Va.

Michael J. Passow (michael@earth2class.org), Dwight Morrow High School, Englewood, N.J.

Roberta M. Johnson (rmjohnsn@ucar.edu) and **Becca Hatheway** (hatheway@ucar.edu), University Corporation for Atmospheric Research, Boulder, Colo.

Aeve Abington-Pitre (evepitre@louisiana.edu), University of Louisiana at Lafayette

Michael Anderson, Northbrook Middle School, Mendota, Ill.

Lynn S. Blaney, ESSEA/IGES, Broomfield, Colo.

Kathleen Cochrane (cochrane@ccsd15.n35), Frank C. Whiteley Elementary School, Hoffman Estates, Ill.

Danila Colosi (daniclac@verizon.net), Northern Illinois University, Maple Park

Chris Costello (chris.costello@leanderisd.org), Wiley Middle School, Leander, Tex.

Michael Hubenthal (hubenth@iris.edu), IRIS Consortium, Washington, D.C.

Nina L. Jackson (nina.jackson@noaa.gov), NOAA Satellite and Information Service, Silver Spring, Md.

Karen Johnson (karen.johnson@adams12.org), Niver Creek Middle School, Thornton, Colo.

Carol E. Landis, The Ohio State University, Columbus

Hao Tran (info@urbangreenbuild.com), Urban Green Build, Fort Worth, Tex.

Pamela Whiffen (pwpwr@aol.com), NASA/Scottsdale Gifted Program, Scottsdale, Ariz.

Presider: Michelle C. Harris

Join NESTA members and other education specialists as they share their favorite classroom activities. Lots of free handouts!

Drop the Lecture and Let the Students Pick Up the Learning in AP Environmental Science —Professional Development— (Env)

(High School)

La Galerie 5, New Orleans Marriott

Kristen R. Dotti (kristen_dotti@yahoo.com), Christ School, Arden, N.C.

Sun-tracking devices, carrying capacity scurry games, coal-fired power plant barons—could this be AP Environmental Science? Come see hands-on learning with rigorous AP content.

Understanding the Hydrogen Fuel Cell and Its Impact On the U.S. —Science Teaching— **(Env)**

(Middle Level–High School)

La Galerie 6, New Orleans Marriott

Carol L. Jones (*cjones@misd.net*), Macomb Intermediate School District, Clinton Township, Mich.

Presider: Elizabeth Niehaus (*niehaus_p@msn.com*), Lawrence Technological University, South Lyon, Mich.

Participate in simple activities that explore hydrogen fuel cells and their impact on our environment and economy.

Earthquakes: Activities and Models for Your Classroom —Science Content— **(Earth)**

(Middle Level–High School)

Bayside C, Sheraton

Gary B. Lewis and **Christine V. McLelland** (*cmcllland@geosociety.org*), Geological Society of America, Boulder, Colo.

Experience teaching methods and great activities for your earthquake unit. We'll share invaluable earthquake information, activities, and 3-D models. CD provided.

Dr. Gadget Presents Flying (Gliding and Floating) Gadgets —Science Teaching— **(Phys)**

(Elementary–High School)

Maurepas, Sheraton

Joe Laszlo (*jos.laszlo@hawaiiintel.net*), University of Hawaii, Honolulu

Discover the basic principles of flight as you construct and test paper airplanes and other paper flying gadgets that glide and float through the air.

Minds-On/Bodies-On! Teaching Biology Is a Whole-Body Experience —Science Teaching— **(Bio)**

(High School)

Napoleon B1, Sheraton

Patsy Jones, Higley High School, Gilbert, Ariz.

Teaching complex biological concepts is easy with these interactive lessons that involve both mind and body. Get them out of their desks and learning biology.

A–Z Chemistry —Science Content— **(Chem)**

(Middle Level–High School)

Napoleon B2, Sheraton

Deborah Campbell (*dcampbel@houstonisd.org*), Waltrip High School, Houston, Tex.

Let's look at purposes, techniques, procedures, modifications, and process skills necessary for effective chemistry instruction.

Feed Their Hunger to Learn —Science Teaching— **(Earth)**

(Elementary–High School)

Napoleon C2, Sheraton

Elizabeth A. Blanton (*eblanton@vdoh.org*), Villa Duchesne/Oak Hill School, St. Louis, Mo.

I will demonstrate various activities using food to model science. Topics include faults, geological timeline, continental accretion, rock and crystal formation, heat transfer, and more.

Teaching Middle and High School Teachers How to Help Students Develop Scientific Explanations Based On Claims, Evidence, and Reasoning —Professional Development— (Gen)

(Middle Level–High School/Informal Education)

Napoleon D1&2, Sheraton

Jim Short (jshort@amnh.org) and **David Randle** (drandle@amnh.org), American Museum of Natural History, New York, N.Y.

Learn how to use a research-based scaffold to help secondary students construct a scientific explanation that includes a claim supported by evidence and science reasoning.

DUPONT Session: Middle School Activities Focused On Addressing Gender Equity (Gen)

(Middle Level)

Southdown, Sheraton

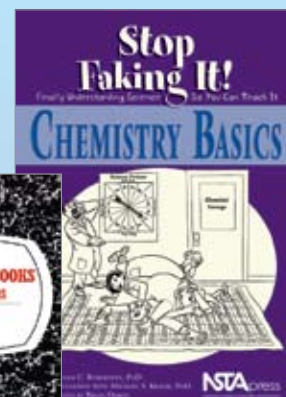
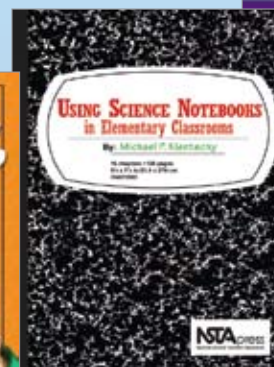
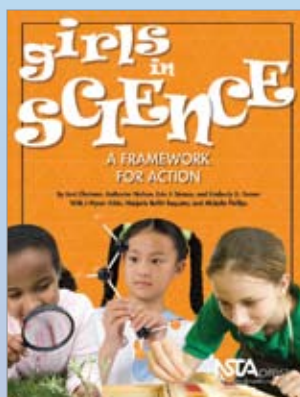
Ronna Robertson, DuPont Fayetteville Works, Fayetteville, N.C.

Learn how to inform parents, teachers, and counselors about educating young women in opportunities in engineering and science-related fields.

Have you stopped by the Science Bookstore yet?

If you buy an NSTA Press title, you may want it signed.

Ask for a complete listing of author signing schedules at the Science Bookstore!



Get your book signed!



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9:30–10:30 AM EXHIBITOR WORKSHOP

Project-Based Inquiry Science: A New Middle School Science Program—From a Cognitive Scientist’s Point of View (Bio)

(Grades 6–8)

Room 212, Convention Center

Sponsor: It’s About Time

Mary Starr, The University of Michigan, Ann Arbor

Janet Kolodner, Georgia Institute of Technology, Atlanta

In PBIS, students are engaged in real-world projects that matter to them. They investigate scientific content and learn science practices while addressing project challenges or answering driving questions about the world around them. Not only do students learn the required content, they also learn scientific reasoning and practice skills in ways that help them apply the content they are learning. This combination of project execution and inquiry-driven investigations is the hallmark of PBIS.

Closer Look at a Unit (Gen)

(Grades K–6)

Room 213, Convention Center

Sponsor: Science A–Z.com (brought to you by Learning A–Z)

Bob Holl and **Elizabeth Ackerman**, Learning A–Z/Science A–Z, Tucson, Ariz.

Learn the ins and outs of a Science A–Z lesson as you make a leveled science reader, use multi-leveled Quick Reads to assess comprehension, play science games, watch a slideshow, engage in a leveled discussion of key science concepts, and have fun!

Tough Topics in Physics: Archimedes’ Principle —Science Teaching— (Phys)

(Grades 6–12)

Room 218, Convention Center

Sponsor: PASCO Scientific

Geoffrey Clarion, PASCO Scientific, Roseville, Calif.

Explore PASCO’s state-of-the-art science teaching solutions to one of the toughest aspects of physics investigations—Archimedes’ Principle. In this hands-on workshop you will participate in standards-based probeware lab activities from PASCO’s new physics curriculum. See how the SPARK Science Learning System can enhance your teaching practice and improve student understanding of core topics.

Tough Topics in Biology: Diffusion and Osmosis —Science Teaching— (Bio)

(Grades 6–12)

Room 219, Convention Center

Sponsor: PASCO Scientific

Ryan Reardon, Alabama School of Fine Arts, Birmingham

We will explore PASCO’s state-of-the-art science teaching solutions to one of the toughest aspects of biological investigations—diffusion and osmosis. Participate in standards-based probeware lab activities from PASCO’s new biology curriculum. See how the SPARK Science Learning System can enhance your teaching practice and improve student understanding of core topics.

9:30–11:00 AM WORKSHOP

Multicultural/Equity Division and AMSE Joint Share-a-Thon/Poster Session —Science Teaching— (Gen)

(General)

Versailles Ballroom, Hilton

Vanessa Westbrook (*vwestbrook@mail.utexas.edu*), NSTA Director, Multicultural/Equity in Science Education, and The University of Texas at Austin

Cherry C. Brewton (*cbrewton@georgiasouthern.edu*), Georgia Southern University, Statesboro

Colleagues from around the country will provide you with an opportunity to interact with discussions around posters, listen to information about research, and engage in hands-on experiences. Whether your interest is urban science, science in the rural school setting, motivating middle school girls, or science for ELL, we have something for you. Join us!

10:00–10:30 AM PRESENTATIONS

SESSION 1

Developing Mentor Teachers to Support Inquiry Science Implementation
—Professional Development— **(Gen)**

(Elementary/College/Supervision)

Bacchus, New Orleans Marriott

Judith A. Morrison (*jmorrison@tricity.wsu.edu*), Washington State University Tri-Cities, Richland

In a two-year project, mentor teachers were trained to implement inquiry in their classrooms and then to support the inquiry implementation of their colleagues.



Igniting 21st Century Science Education

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50-minute sessions explore and model ways to teach tough science concepts while addressing misconceptions and revealing how technology can take student learning to the next level. Topic areas include:

Friday, March 20 – Room 218

- 8:00-9:00 Tough Topics in Middle School Science: Earth Science
- 9:30-10:30 Tough Topics in Physics: Conservation of Energy
- 11:00-12:00 Tough Topics in Middle School Science: Life Science
- 12:30-1:30 Tough Topics in Physics: Ohm's Law
- 2:00-3:00 Tough Topics in Middle School Science: Physical Science
- 3:30-4:45 Technology and National Board Certification for Accomplished Teachers

Friday, March 20 – Room 219

- 8:00-9:00 Tough Topics in Chemistry: States of Matter
- 9:30-10:30 Tough Topics in Biology: Enzymes
- 11:00-12:00 Tough Topics in Earth Science: Understanding Weather with GIS
- 12:30-1:30 Tough Topics in Biology: Cell Respiration
- 2:00-3:00 Tough Topics in Chemistry: Determining the Concentration of a Solution: Beer's Law
- 3:30-4:30 Tough Topics in Environmental Science: Field Data Collection

**Saturday, March 21
Room 218**

- 8:00-9:00 Tough Topics in Earth Science: Plate Tectonics with GIS
- 9:30-10:30 Tough Topics in Physics: Archimedes' Principle

**Saturday, March 21
Room 219**

- 8:00-9:00 Tough Topics in Chemistry: Gas Laws
- 9:30-10:30 Tough Topics in Biology: Diffusion/Osmosis

PASCO presents the 7th Annual Evening of "Just Physics"

Friday, March 20 • 5:00-6:30 • Room 244/245

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A-0209_NSTA_0109

SESSION 2

COSEE Session: Explorations: COSEE Great Lakes —Science Content— (Env)
(Middle Level—High School/Informal Education) *Regent, New Orleans Marriott*

Bruce H. Munson, University of Minnesota, Duluth

Rosanne W. Fortner (*fortner.2@osu.edu*), COSEE Great Lakes, Oak Island, N.C.

Online resources and summer programs engage teachers in learning about Great Lakes coastal resources. We'll share activities and resources and details on upcoming opportunities.

10:00–11:00 AM EXHIBITOR WORKSHOP

Bio-Rad—Teach Standards Using Hands-On Biotech Labs —Science Teaching— (Bio)

(Grades 5–College)

Room 230, Convention Center

Sponsor: Bio-Rad Laboratories

Essy Levy (*essy_levy@bio-rad.com*) and **Sherri Andrews** (*sherri_andrews@bio-rad.com*), Bio-Rad Laboratories, Hercules, Calif.

Biotechnology impacts multiple subject areas and engages students in the rapidly changing scientific landscape. Looking for inquiry-based lab activities that are easy to set up, guaranteed to work, and come with complete curricula? Join us for an overview of the Biotechnology Explorer program and learn how our kits and research-quality equipment combine to bring relevant real-world lab experiences to your students. The kits can be used individually to enhance your life science, chemistry, or health science courses, or in series as a complete biotechnology course.

10:00–11:30 AM EXHIBITOR WORKSHOPS

Teach AP Chemistry—It Is Now Easy for You —Science Teaching— (Chem)
(Grades 9–12) *Room 204/205, Convention Center*

Sponsor: Flinn Scientific, Inc.

Scott Stahler, Flinn Scientific, Inc., Batavia, Ill.

Perform two AP Chemistry experiments from *Laboratory Experiments for Advanced Placement Chemistry*. You can begin an AP program around this fantastic lab manual, written specifically for high school chemistry.

Understanding Executive Function: Linking Brain Science to Education (Gen)

(Grades K–12)

Room 208, Convention Center

Sponsor: Society for Neuroscience

Martha Bridge Denckla, The Johns Hopkins University, Baltimore, Md.

Executive Function is a term used to describe the mental processes that help guide and regulate our actions and activities, such as the ability to plan, organize, manage time, strategize, form concepts, and think abstractly. Linking brain science to education is extremely valuable to our understanding of student development and learning, and there is much to be gained through expanded dialogue in relating such research to teaching and learning. Dr. Denckla has published widely on the biological bases for learning disabilities and ADHD in children of normal or above-average intelligence.

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- **Leadership Opportunities.** Submit your name for nomination to become a candidate on a committee, review board, or the NSTA Board of Directors and Council.
- **NSTA Student Chapters.** Start a student chapter at your college or university.

Enhance Your Skills

- **NSTA Learning Center.** Select high-quality online learning opportunities to build content knowledge. Use our suite of tools for self-assessment and to document your progress.
- **NSTA Symposia.** These ticketed conference workshops include presentations and classroom activities by NSTA partner organizations as well as online follow-up in the form of web seminars and a discussion listserv.
- **Web Seminars.** Update your content knowledge with these free, 90-minute, live online presentations. Voice questions and share in rich chat conversations with the presenters and other educators.
- **SciGuides.** Explore online resources and lessons organized by grade level and specific content themes. All are pre-evaluated and aligned with the National Science Education Standards.

Add Your Voice

- **Building a Presence for Science.** Learn how you and your school can get connected to local, state, and national professional development opportunities and resources focused on curriculum, assessment, and instruction.

Expand Your Mind

- **NSTA Press®** publishes 20 new titles each year. Visit the Science Bookstore to view the newest releases, best sellers, and texts that puts your professional development in your hands and in your classroom. Current authors will be there to discuss their books and do signings. For those who have a book idea, submit it to NSTA, at <http://mc.manuscriptcentral.com/instapress>.
- **SciLinks®.** Link to science resources on the internet. Expert science educators recommend sites with accurate information and effective pedagogy—the best content available online.

Distinguish Yourself

- **NSTA Awards.** Compete for awards from 17 programs, ranging from kindergarten to college.
- **Toshiba/NSTA ExploraVision® Awards.** This team-based K–12 competition awards up to \$240,000 in savings bonds annually.
- **Toyota TAPESTRY Grants for Science Teachers.** Share in \$550,000 in grants available in 2009. Fifty large grants of up to \$10,000 each and 20–25 mini-grants of \$2,500 will be awarded.
- **THE DUPONT CHALLENGE© Science Essay Competition.** This competition for grades 7–12 students promotes scientific literacy and inspires them to excel. Winners receive cash prizes and an expenses-paid trip to The Walt Disney World® Resort and the Kennedy Space Center.
- **Siemens We Can Change the World Challenge.** Siemens, Discovery Education, and NSTA are pleased to introduce middle school teachers to the Siemens “We Can Change the World Challenge,” the premier national student sustainability competition. Enhance your life science curriculum with a unique, hands-on way to engage students in developing actionable local solutions for a “greener” world, and learn how you and your students can win exciting prizes!

Chemistry and the Atom —Science Content—

(Chem)

(Grades 6–College)

Room 210, Convention Center

Sponsor: CPO Science/School Specialty Science

Erik Benton, Patsy Eldridge, and Scott Eddleman, CPO Science/School Specialty Science, Peabody, Mass.

The discoveries of the structure of the atom and the periodic table are great detective stories. Our understanding of matter is so abstract that students have a hard time making sense of these concepts. Participants will experience innovative activities that give students with different learning styles opportunities to grasp atomic structure and the periodic table.

Enrich Your AP Biology Lessons with Free Resources from the Howard Hughes Medical Institute

(Bio)

(Grades 9–College)

Room 214, Convention Center

Sponsor: Howard Hughes Medical Institute

Anthony Bertino, University at Albany, Scotia, N.Y.

Patricia Nolan Bertino, Scotia-Clenville High School, Scotia, N.Y.

Link HHMI resources to your AP program. View animations, video clips, and virtual labs that will enhance your presentations. Topics include meiosis, sex determination, X inactivation, tool kit genes, genetic switches, evolution, homeostasis, obesity, stem cells, cancer, growth and development, aging, cell communication, and HIV. Free DVDs and posters!

Rats! Inquiry-based Dissection with Carolina’s Perfect Solution® Specimens

(Bio)

(Grades 6–12)

Room 215, Convention Center

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

Experience a far superior and safer alternative to formaldehyde with Carolina’s Perfect Solution® specimens. Participants study the external anatomy of the rat and explore its major internal organs and organ systems through inquiry-based dissection. Exclusively from Carolina, these preserved rat specimens are nontoxic and the most lifelike available.

Need “Energy” in Your Environmental Classes? Learn About Carolina’s New Inquiries in Science Series

(Env)

(Grades 9–College)

Room 216, Convention Center

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

Looking for relevant, exciting lab activities for environmental science? Mine for minerals and explore alternative energy sources in this inquiry-based workshop. Carolina’s *Inquiries in Science*™ Environmental Series provides hands-on activities to make teaching challenging topics effortless. Free teacher materials and door prizes!

Math Out of the Box®: Data Analysis and Algebraic Thinking Connect to Science

(Gen)

(Grades K–5)

Room 217, Convention Center

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

Math and science connections come alive with Math Out of the Box®, an inquiry-based math curriculum developed by Clemson University’s College of Engineering and Science. Through sample lessons, participants explore how students use hands-on activities to understand algebraic and data analysis representations commonly found in a science classroom.

How to Analyze Your Prints —Science Teaching—

(Gen)

(Grades 6–8)

Room 220, Convention Center

Sponsor: Pearson

Clarence Cocroft, Memphis, Tenn.

Do prints actually solve crimes? What prints are the most important? We will analyze patterns in both footprints and fingerprints to classify common print patterns. Mr. Cocroft will do printing and impressions and explain how both are used when no other direct evidence is present.

Integrating Scenario-based Instruction into Your Science Curriculum —Science Teaching—

(Gen)

(Grades 6–8)

Room 221, Convention Center

Sponsor: Pearson

Russell Wright, The George Washington University, Washington, D.C.

Event-Based Science creator Russ Wright is at it again with his newest project, “Scenario Based Investigations.” Built in the spirit of the original NSF grant that led to it being called “what we envision as the future for mathematics and science education,” these new one- to two-day investigations can be easily integrated into your current middle grades science curriculum. Get samples of these new investigations.

Become An Earth-Mover & Shaker Join the Canon Envirothon



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Biology with Vernier —Science Teaching—

(Bio)

(Grades 9–College)

Room 222, Convention Center

Sponsor: Vernier Software & Technology

Mike Collins (info@vernier.com) and **Robyn Johnson** (info@vernier.com), Vernier Software & Technology, Beaverton, Ore.

Experiments such as transpiration, cell respiration, and EKG from our popular *Biology with Vernier* and *Advanced Biology with Vernier* lab books will be performed in this hands-on workshop. Use LabQuest as a stand-alone device and on a computer. Experiments are appropriate for introductory, AP, IB, and college courses.

IB* Science with Vernier —Science Teaching—

(Gen)

(Grades 9–12)

Room 224, Convention Center

Sponsor: Vernier Software & Technology

Gretchen Stahmer DeMoss (info@vernier.com) and **Dan Holmquist** (info@vernier.com), Vernier Software & Technology, Beaverton, Ore.

Do you want to learn how to conduct IB experiments using Vernier probeware? Learn how to use Logger Pro and LabQuest to support the IB protocols for probeware data collection. Correlations between Vernier lab books and the IB sciences will be provided.

Interactive Technology = Interactive Science

(Gen)

(Grades 5–College)

Room 225, Convention Center

Sponsor: Luidia, Inc.

Kathryn Hunt (kathryn@luidia.com), Luidia, Inc., San Carlos, Calif.

Interactive whiteboards integrated with document cameras provide an ideal method for making all areas of science come alive. Students can review classroom activities with authentic artifacts captured during class and teachers can build and share professional resources. See sample projects and methods using portable and cost-effective products from Luidia's eBeam line.

New Tools for Teaching About the Periodic Table

(Chem)

(Grades 6–8)

Room 226, Convention Center

Sponsor: Lab-Aids, Inc.

Mark Koker, Lab-Aids, Inc., Ronkonkoma, N.Y.

Most state science standards include content dealing with the periodic table and classification of elements. But students still have trouble with this content because all they ever do is read about it. In this workshop you will classify 20 element cards based on criteria of your own design and re-sort them using scientists' criteria from the modern day periodic table. You'll then examine an account of the development of the periodic table and its implications for bonding and for predicting properties of elements.

Smithsonian Science: Bottleneck Genes and the Cheetah Conservation Story —Science Content—

(Bio)

(Grades 4–12)

Room 228, Convention Center

Sponsor: Smithsonian Institution

Ricki Ferrence and **Adrienne Crosier**, Smithsonian National Zoological Park, Front Royal, Va.

A Smithsonian scientist shares groundbreaking research in managing the genetic health of cheetah populations worldwide using cutting-edge reproductive technologies and behavior research. Through an interactive "bottleneck" activity, participants discover how the loss

of genetic diversity and genetic characteristics can affect a population's ability to respond to changes in its environment.

No Boundaries: An Exploration of STEM Careers Led by USA TODAY/NASA (Earth)

(Grades 7–12)

Room 229, Convention Center

Sponsor: USA TODAY

Jan Brown, USA TODAY, McLean, Va.

No Boundaries, a USA TODAY education initiative in partnership with NASA, encourages students to explore future careers in science, technology, engineering, and math (STEM). Students explore STEM careers through stimulating project-based learning and team competition. No Boundaries targets students in grades 7–12 and is designed as a team-centered cooperative learning program. No Boundaries is cross curricular, requires minimal teacher preparation, aligns to national standards, and includes assessment rubrics. Students who submit their final No Boundaries career presentation projects to the National No Boundaries competition are eligible to win cash awards and VIP passes to a NASA shuttle launch. For more information, visit www.noboundaries-stemcareers.com.

Soil, Sand, and Density (Earth)

(Grades 6–9)

Room 231, Convention Center

Sponsor: Adam Equipment Inc.

Penney Sconzo, Adam Equipment Inc., Danbury, Conn.

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*Formative Research conducted by external experts to ensure scientific accuracy and credibility. Research Results to be published in an upcoming article in the Journal of Science Education and Technology titled "Evaluation of Online, On-Demand Science Professional Development Materials Involving Two Different Implementation Models"



In this simple workshop Penney Sconzo offers an earth science activity where participants learn about the composition of soil and sand through the use of the cubic centimeter unit of volume measurement and electronic balances. The activity incorporates measuring sand samples, collecting data, graphing results, and drawing conclusions.

Living by Chemistry: Take a Breath (Chem)

(Grades 9–11)

Room 232, Convention Center

Sponsor: Key Curriculum Press

Jeffrey Dowling (jdowling@keypress.com), Key Curriculum Press, Emeryville, Calif.

The gas laws can be challenging for students, but hands-on activities can give students the experiences they need to make sense of gas behavior. Learn about a program that does this and much more. We will perform several activities from Living by Chemistry, an inquiry-based high school program.

Educational Gaming in Science: Shifting the Paradigm —Science Teaching—

(Gen)

(Grades 3–5)

Room 235, Convention Center

Sponsor: Tabula Digita

Nt Etuk (nt@tabuladigita.com), Tabula Digita, New York, N.Y.

At least 93% of U.S. K–12 students play videogames. Math has capitalized, with Tabula Digita math games more than DOUBLING score increases on district exams. Now it's time for science. Education is about to become very cool—let the games begin!

Student Success with Inquiry —Science Teaching—

(Gen)

(Grades K–5)

Room 236, Convention Center

Sponsor: National Geographic School Publishing

Carl Benoit (cbenoit@ngsp.com) and **Henry Layne** (hlayne@ngsp.com), National Geographic School Publishing, Evanston, Ill.

Engage in the “doing” part of science with National Geographic. Explore how different levels of inquiry can help students build science knowledge and inquiry skills. See how teachers can support student investigations through directed, guided, and open inquiry approaches.

10:00 AM–12 Noon MEETING

Climate Literacy Planning Group Meeting

(By Invitation Only)

Salon 828, Sheraton

For more information, please contact Susan Van Gundy, NSDL Deputy Director, at 303-818-4742.

10:30–11:00 AM PRESENTATION

SESSION 1

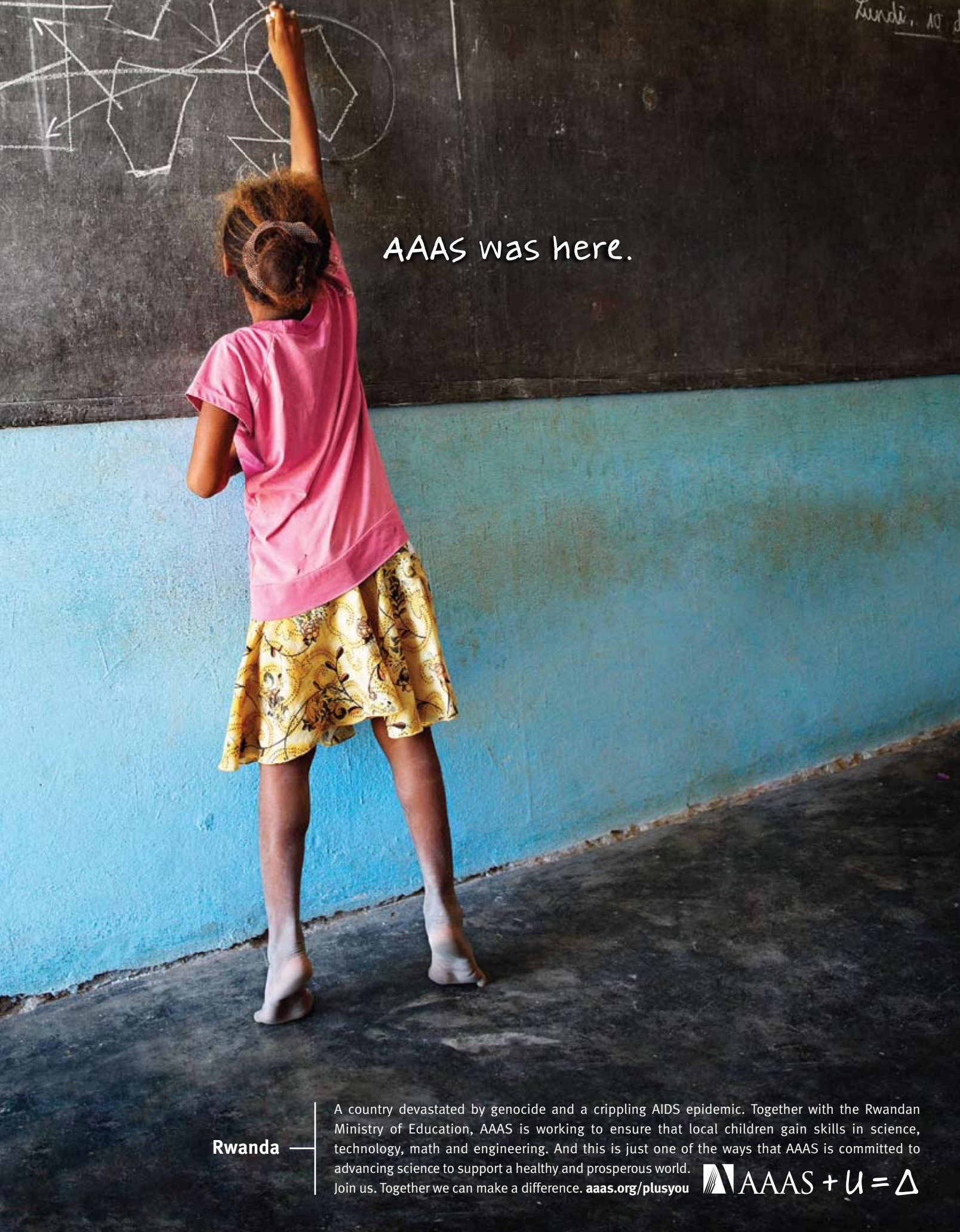
COSEE Session: From Sea to Inland Sea—COSEE Teachers Exchange Coastlines for Broader Professional Experience —Science Content— (Gen)

(Informal Education)

Regent, New Orleans Marriott

Rosanne W. Fortner (fortner.2@osu.edu), COSEE Great Lakes, Oak Island, N.C.

Lundie Spence (lundie.spence@scseagrant.org), South Carolina Sea Grant Consortium, Charleston



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10:30 AM–12 Noon SHELL SCIENCE SEMINAR

Ice Fishing for Neutrinos

(Phys)

(General)

Room 243, Convention Center



Speaker

Francis Halzen

Hilldale Professor, Gregory Breit
Distinguished Professor, and
Director, Institute for Elementary Particle
Physics Research
Dept. of Physics
University of Wisconsin-Madison
Madison, Wis.
francis.halzen@icecube.wisc.edu

Presider: Michelle Brand-Buchanan (*buchananm@rapides.k12.la.us*), LSTA Secretary, and Rapides Parish Science Teacher, Pineville, La.

Scientists are melting holes in the bottom of the world! We have melted half of 80 holes in the Antarctic icecap, each over two km deep, to be used as astronomical observatories. Into each hole is lowered a string knotted with basketball-sized light detectors that are sensitive to the shimmering blue light emitted in the surrounding clear ice when ghostly particles called neutrinos pass through Earth. These neutrinos are cosmic messengers from the most violent processes in the universe—for example, giant black holes gobbling up stars in the heart of quasars and gamma-ray bursts, which are the biggest explosions since the Big Bang. Neutrinos will tell us if there are dark-matter particles trapped in the heart of the Sun and, perhaps, even reveal if there are additional dimensions in space.

Francis Halzen, professor and director of the Institute for Elementary Particle Physics Research at the University of Wisconsin-Madison, is a theoretician studying problems at the interface of particle physics, astrophysics, and cosmology. Since 1987, he has been working on the AMANDA experiment, a first-generation neutrino telescope at the South Pole. AMANDA observations represent a proof of concept for IceCube, a kilometer-scale observatory now under construction. Halzen has authored several articles in scientific and popular journals, including Science and Nature magazines.

10:30 AM–12 Noon EXHIBITOR WORKSHOP

New! High School Curriculum Mastery* Games —Science Content— **(Gen)**

(Grades 9–11)

Room 211, Convention Center

Sponsor: Fisher Scientific Education

Presenter to be announced

Discover an engaging board game–based learning system that covers NSES Standards for grades 9–11. Each game provides a hands-on review of 25 standards-based science topics per subject. Students can play independently, in small groups, or as an entire class for

periods ranging from 10 to 30 minutes or more. Both class-pack and take-home editions are available. Participants will gain hands-on experience in the integration of the Science Curriculum Mastery Game Learning System in their classroom. The web-based learning system, which is included with the Curriculum Mastery Games, will be discussed. FREE SAMPLES! This workshop is presented by New Path Learning.

11:00–11:30 AM PRESENTATION

SESSION 1

Telling Science Tales: Promoting Inquiry for ELLs Using Digital Stories —*Science Teaching*— (Gen)

(Elementary–Middle Level)

Room 351, Convention Center

Randall Spaid (randy.spaid@maconstate.edu), Macon State College, Macon, Ga.

Learn how we used digital stories as a pedagogical tool to promote science inquiry and scientific literacy for preadolescent ELLs conducting science fair investigations.



Stop by NSTA's Booth #1030
Meet Staff and Learn About Our Services

Thursday March 19, 2009	
11:30–12:30	NSTA Learning Center
1:00–1:30	Costa Rica Field Study
2:30–3:00	NSTA Learning Center
3:00–3:30	Siemens We Can Change the World Challenge
Friday March 20, 2009	
10:00–10:30	NSTA Learning Center
11:00–11:30	Science Program Improvement Review (SPIR)
2:30–3:00	NSTA Learning Center
1:00–1:30	Costa Rica Field Study
Saturday March 21, 2009	
11:30–Noon	NSTA Membership
2:00–2:30	NSTA Sci-Links
2:30–3:00	NSTA Learning Center

* Attendees will receive a gift. Limited seats available.

11:00 AM–12 Noon **PAUL F-BRANDWEIN LECTURE**

**The Ecology of Hope: Building a Movement to Reconnect Children and Nature
(Gen)**

(General)

Room 352, Convention Center



Speaker

Cheryl Charles

President and CEO

Children & Nature Network

Santa Fe, N.Mex.

cheryl@childrenandnature.org

Presider: Jack Padalino, Paul F-Brandwein Institute, Unionville, N.Y.

We will look at the growing disconnect between children and nature, the indicators of what Richard Louv calls “nature-deficit disorder,” and the scientific as well as common-sense evidence of the benefits to children from direct experience with nature on a daily basis. I’ll share practical suggestions, grounded in research as well as experience, for action by parents, grandparents, physicians, urban planners, architects, designers, business leaders, public officials, academics, educators, and others concerned about the nature of childhood, the health of communities, and the future of Earth.

Cheryl Charles, PhD, is an innovator, entrepreneur, educator, author, and organizational executive. Throughout her career, she has been recognized for her leadership, collaboration, and communications skills. Among her many interests, she has demonstrated a lifelong commitment to the importance of getting children into the outdoors—for their health, success, and happiness. Charles is president and CEO of the Children & Nature Network (C&NN), which she co-founded in 2006 with author Richard Louv. The C&NN has launched a campaign to Leave No Child Inside, inspired in part by the exceptional response to Richard’s best-selling book Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder. Charles also serves as a member of the Board of Directors for the Keystone Center and the Paul F-Brandwein Institute.

11:00 AM–12 Noon **SPECIAL SESSION**

NESTA Session: Hurricane Katrina's Impact on the Environment of Greater New Orleans: Fears, Concerns, and Prognosis for the Future —Science Content—
(Earth)

(Elementary–High School)

Bissonet, New Orleans Marriott

Speaker: **Robert A. Thomas**, Loyola University of New Orleans, La.

Presider: Roberta M. Johnson (*rmjohnsn@ucar.edu*), University Corporation for Atmospheric Research, Boulder, Colo.

During and immediately after Katrina, there were reports of “toxic soup,” heavily contaminated waters and soils, and dangerously high mold counts in flooded New Orleans. Fears lingered for months as citizens debated the timing of their return and the safety of the city. Communicating such issues was important in helping the city and surrounding regions determine their priorities.

Dr. Robert A. Thomas was founding director of the Louisiana Nature Center, where he served as the liaison for the community in information pertaining to science education, environmental issues, and natural history. Dr. Thomas is presently interim director of Loyola's School of Mass Communication and is founding director of the Center for Environmental Communications at Loyola University New Orleans. Bob fervently believes that environmental solutions will be the result of open and honest communication, coupled with trust and integrity, among stakeholders.

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11:00 AM–12 Noon PRESENTATIONS

SESSION 1



Research to Practice —Science Teaching— (Gen)

(General)

Room 240/241, Convention Center

Celestine H. Pea, National Science Foundation, Arlington, Va.

Alma S. Miller, Science Education Consultant, Washington, D.C.

Michael Kaspar (*michael.kaspar@dc.gov*), District of Columbia Public Schools, Washington, D.C.

Presenter: Alma Miller

Let's discuss research results and findings that have practical implications for everyday classroom instruction at all levels.

SESSION 2



Beyond the Central Dogma: Epigenetics —Science Content— (Bio)

(High School–College)

Room 242, Convention Center

Louisa A. Stark (*louisa.stark@utah.edu*), University of Utah, Salt Lake City

Take students beyond the textbook with the latest discoveries about control of genetic traits and inheritance. Interactive animations and classroom activities explore epigenetics (available free at <http://learn.genetics.utah.edu>).

SESSION 3

AoA Session: 21st-Century Skills (CESI) —Professional Development— (Gen)

(Preschool–Middle Level)

Room 252, Convention Center

Dee Goldston, The University of Alabama, Tuscaloosa

Join members of the Council for Elementary Science International for an open conversation—time to share research, teaching strategies, materials, and ideas surrounding important 21st-century understandings and behaviors.

SESSION 4

AoA Session: 21st-Century Skills (NSELA) —Professional Development— (Gen)

(Supervision/Administration)

Room 253, Convention Center

Linda Atkinson, University of Oklahoma, Norman

Join members of the National Science Education Leadership Association for an open conversation—time to share research, teaching strategies, materials, and ideas surrounding important 21st-century understandings and behaviors.

SESSION 5

Win the \$10,000 Shell Science Teaching Award (Gen)

(Elementary–High School)

Room 354, Convention Center

Kathleen B. Horstmeyer, Chester, Conn.

Begin the application process to win \$10,000! Learn how NSTA, in partnership with Shell, recognizes an exemplary teacher (K–12) and two finalists. Concrete tips will be given on the application process.

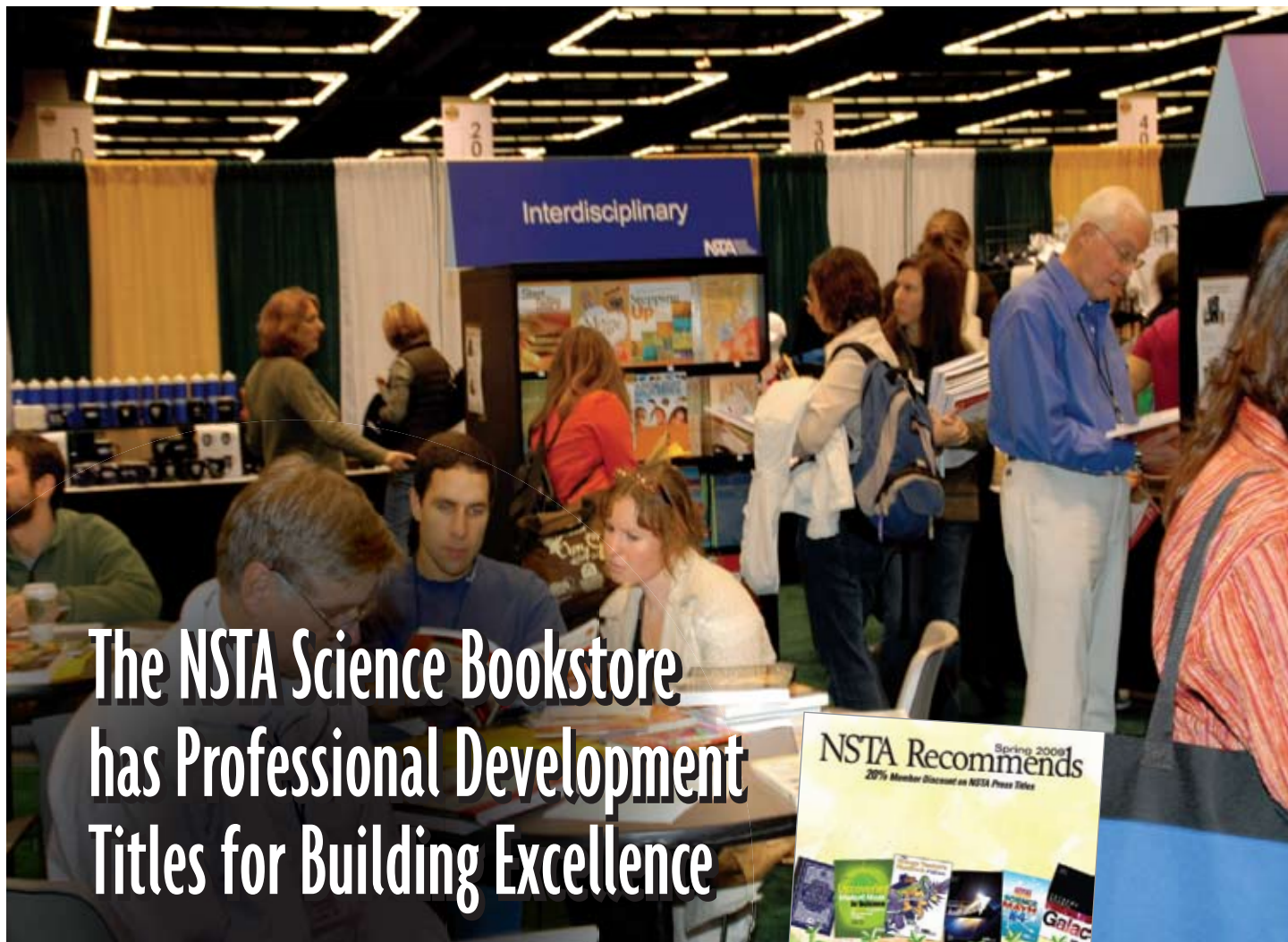
SESSION 6

Sensational Science for Kids! —Science Teaching— (Gen)

(Preschool/Elementary)

Room R06, Convention Center

Judy M. Johnson (*judyjohnson13@comcast.net*) and **Kathryn L. Jordan** (*kathy_jordan@smanet.org*), St. Mary's Academy, Englewood, Colo.



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Sunday	7:30 a.m. – Noon

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SESSION 7

Creating Access to Science: Developing Accommodations for Middle School Students with Learning Disabilities —Professional Development— (Gen)

(General)

Ascot, Hilton

Gillian M. Puttick (gilly_puttick@terc.edu) and **Polly Hubbard** (polly_hubbard@terc.edu), TERC, Cambridge, Mass.

Inclusive science classrooms can be challenging for students with learning disabilities. Explore learning challenges and accommodations that create access to science.

SESSION 8

Integrating Science and Technology —Science Teaching— (Gen)

(General)

Belle Chasse, Hilton

LaTonya E. Waller, Lucille Brown Middle School, Richmond, Va.

Learn to integrate the internet and other technology applications into the science classroom. Each participant will receive a CD.

SESSION 9

Web 2.0 in the Classroom: Collaborative Learning Tools for Science —Science Teaching— (Gen)

(General)

Elmwood, Hilton

Stephen Best (sdbest@umich.edu), University of Michigan, Ann Arbor

Several Web 2.0 tools can support inquiry and problem solving for learners. See how these new tools are providing new learning opportunities specifically for science.

SESSION 10 (two presentations)

(General)

Norwich, Hilton

Presider: Alton Dozier, Swayze Elementary School, Monroe, La.

Become an Einstein Fellow! —Science Education System— (Gen)

Liz Burck (burckl@triangle-coalition.org), Triangle Coalition for Science and Technology Education, Arlington, Va.

This career-altering opportunity is for YOU! You can spend a year living in Washington, D.C., working on national education programs as an Einstein Fellow.

The Japan Fulbright Memorial Fund Teacher Program —Professional Development— (Gen)

Paula B. Webb (webb@opsb.net), Ouachita Junior High School, Monroe, La.

The Japan Fulbright Memorial Fund Teacher Program allows distinguished primary and secondary U.S. school educators to travel to Japan for a three-week study visit.

SESSION 11

The Case of the Coughing Construction Worker —Science Teaching— (Bio)

(High School–College)

Maurepas, JW Marriott

Joel Gluck (jglucl@aol.com), **Jackie FitzGerald** (jfitzgerald@cpsed.net), and **John Santangelo** (jsantangelol3@verizon.net), NEL/CPS Construction Career Academy, Cranston, R.I.

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SESSION 12

Integrating Rich Media into the STEM Classroom —Science Content— (Gen)

(Elementary–High School)

Rosalie, JW Marriott

Daniella Quinones (daniella.quinones@wgbh.org), WGBH Teachers' Domain, Boston, Mass.

Cathi Cox, Louisiana Public Broadcasting, Baton Rouge

Download short clips from public broadcasting shows such as *NOVA*, *ZOOM*, and *FRONT-LINE* through WGBH Teachers' Domain. Participants will have chances to take home *NOVA* DVDs.

SESSION 13

Strategies, Tools, and Tips from a Mentor —Professional Development— (Gen)

(General)

St. Claude, JW Marriott

Catherine McCulloch and **Marian Pasquale** (mpasquale@edc.org), Education Development Center, Inc., Newton, Mass.

Mentors share strategies and tools to gain trust and credibility as a mentor. They also effectively plan, set goals, conduct observations and discussions, and manage logistics.

SESSION 14

Going Green—From Classrooms to Curriculum Application —Science Education System— (Env)

(General)

La Galerie 5, New Orleans Marriott

Julia B. Feder (jfeder@usgbc.org), U.S. Green Building Council, Washington, D.C.

Anisa Baldwin Metzger (abalwinmetzger@usgbc.org), U.S. Green Building Council, Recovery School District, New Orleans, La.

Deborah Bruick (dbruick@bryantschools.org), Bryant (Ark.) School District

Learn how to use the built environment as context for learning and to meet state learning standards. We will share success stories and available resources.

SESSION 15

Summer Multi-Day Field Trips—See Your Students in a Different Light! —Science Teaching— (Bio)

(Middle Level–High School)

Bayside A, Sheraton

Robert T. Jefferson, Jr. (mrrtj@yahoo.com), Tantasqua Regional Junior High School, Fiskdale, Mass.

Design, organize, and lead a multi-day field trip for your students and watch their interest in science skyrocket!

SESSION 16 (two presentations)

(General)

Edgewood A/B, Sheraton

NOAA Education Outreach in Alabama —Science Teaching— (Earth)

Timothy W. Troutman (tim.troutman@noaa.gov), NOAA National Weather Service, Huntsville, Ala.

The collaborative partnership between the NASA/U.S. Space and Rocket Center and NOAA/National Weather Service office in Huntsville, Alabama, has led to the development of a robust natural hazards learning curriculum for Alabama schools. This comprehensive learning program is accomplished via a combination of NOAA-led teletraining through

the NASA Digital Learning Network and through online and computer-based learning via NOAA's Jetstream curriculum.

The U.S. and Italy: International Cooperation and Educational Outreach Efforts During IPY —Science Teaching— (Earth)

Matteo Cattadori (*mcattadori@gmail.com*), Museo Tridentino di Scienze Naturali, Trento, Italy

Betty Trummel (*boop82@aol.com*), Husmann Elementary School, Crystal Lake, Ill. Come learn about educational outreach initiatives in the U.S./Italy stemming from the ANDRILL (Antarctic Drilling) ARISE (ANDRILL Research Immersion for Science Educators) program.

SESSION 17

Tissue Engineering/Regenerative Medicine: A Biomedical and Classroom Revolution —Science Teaching— (Bio)

(Middle Level–High School) *Napoleon A1&2, Sheraton*

Mark C. Krotec (*mckrotec@yahoo.com*), Pittsburgh Central Catholic High School, Pittsburgh, Pa.

Revolutionize middle and high school biology, human anatomy and physiology, and integrative science courses. Use Tissue Engineering (TE) strategies to enhance student interest and science process skills.

SESSION 18

A Zoo in My CLASSROOM?!? —Science Teaching— (Bio)

(General) *Napoleon A3, Sheraton*

Mitch Goodkin (*drgoodkin@aol.com*), J.H.S. 190 Russell Sage, Queens, N.Y.

Jenny Wong (*jwong16@schools.nyc.gov*), P.S. X017 at 298, Bronx, N.Y.

I can't keep animals in my class, can I? Participants will learn how to maintain a classroom zoo and use it for science research projects.

SESSION 19

Meteorites Decoded: A Sideways Take on Asteroids, Comets, and the Wonderful World of the “Poor Man’s Space Probe” —Science Teaching— (Earth)

(Elementary–High School) *Napoleon C1, Sheraton*

Martin G. Horejsi (*martin.horejsi@umontana.edu*), The University of Montana, Missoula

This humorous, slightly irreverent presentation details the nature and science behind meteorites and provides depth, clarity, and a few dead animals to your understanding of meteorites.

SESSION 20 (two presentations)

(General) *Napoleon C2, Sheraton*

Remote Sensing: Mapping the Community with Model Rockets —Science Teaching— (Earth)

John R. Sode (*jsode@socket.net*), Marshfield High School, Marshfield, Mo.

Recent developments in model rocketry enable students to photograph and interpret small portions of Earth's surface using low-altitude photography.

Create Your Own Zero Gravity Chamber! —Professional Development— (Earth)

Mark R. Malone (*mmalone@uccs.edu*), University of Colorado, Colorado Springs

Learn how to create true micro-gravity experiences in your classroom using inexpensive miniature cameras and a digital video recorder.

SESSION 21

Tested Model for “Doing Science” in the IB Group 4 Project —Science Teaching— **(Gen)**

(High School)

Napoleon D3, Sheraton

Thomas P. Kelley (*tkelley@ash.nl*) and **R. Paul Terry** (*pterry@ash.nl*), American School of The Hague, Wassenaar, The Netherlands

James Tisel (*jtisel@spa.edu*), St. Paul Academy and Summit School, St. Paul, Minn.

Presider: **Michael DiSpezio** (*icaris@aol.com*), JASON Academy, North Falmouth, Mass.

We challenged students to observe nature, ask a meaningful question about what they observe, design a realistic way to seek the answer to that question, carry out those investigations, evaluate the results, and finally present the results to a symposium of their peers.

SESSION 22

Interactive Lecture Demonstration: An Engaging Alternative for Limited Budgets —Science Teaching— **(Phys)**

(Middle Level–College)

Salons 825 & 829, Sheraton

Mark Greenman (*greenman.mark@marbleheadschoools.org*), Marblehead (Mass.) Public Schools

This eight-step process developed by Dr. Ron Thornton, Tufts Center for Excellence in Science Education, has been demonstrated to improve concept learning of science ideas.

11:00 AM–12 Noon WORKSHOPS



Green Teens: Ideas for Action —Science Content— **(Env)**

(Middle Level–High School)

Room 238, Convention Center

Mary C. Whaley (*mwhaley@mbayaq.org*) and **Lacey Moore** (*lmoore@mbayaq.org*), Monterey Bay Aquarium, Monterey, Calif.

Join Monterey Bay Aquarium educators and learn how to enable your teens to be more “green” through action-oriented projects. Help youth understand how their consumer choices impact their world.



From Farm to Table and Beyond—Making Systems Come Alive —Science Teaching— **(Env)**

(Elementary–Middle Level/Informal Education)

Room 239, Convention Center

Pamela Koch (*pkoch@tc.edu*), Teachers College, Columbia University, New York, N.Y.

Darlene Beal (*darlene_beal@pvusd.net*), Linscott Charter School, Watsonville, Calif.

Engage students in the study of systems and interactions by investigating the farm-to-table food system.

NMLSTA Session: Let’s Explore Middle Level Magnetism, Electricity, Heat, Light, Sound, and Earth Science —Science Content— **(Gen)**

(Middle Level)

Room 353, Convention Center

Carla C. Johnson (*carla.johnson@uc.edu*), **Tammy Miller**, and **Kim Lemon**, University of Cincinnati, Ohio

Paula Schoeff, University of Toledo, Ohio

Learn about inexpensive science exploration you can do with your middle level (grades 4–9) science class. Units on magnetism, electricity, heat, light, sound, and earth science will be shared. All lessons use the 5E model of instruction and use common items to engage students in doing science. Sample lesson plans provided.

National Earth Science Teachers Association



Events at New Orleans NSTA 2009

All events located in the New Orleans Marriott (555 Canal St.)
Bissonet Room unless otherwise noted.

Friday March 20

- 9:30** • NESTA Geology Share-a-Thon
- 11:00** • NESTA Oceans and Atmospheres Share-a-Thon
- 12:30** • NESTA Space Science Share-a-Thon
- 2:00** • American Geophysical Union Lecture!
The Grand Isle Project - Using Service Learning to Generate Genuine Scientific Experiences for Students While Serving Society
Dr. Sadredin C. Moosavi, Tulane University
Morial Convention Center Room 244/245
- 6:30** • NESTA Friends of Earth Science Reception
La Galerie 6

Saturday March 21

NESTA Earth and Space Science Resource Day: Natural Hazards and the Environment

- 7:00** • NESTA Resource Day Breakfast
LSU Coastal Roots Program
Dr. Pamela Blanchard, LSU
New Orleans Marriott, Bacchus Room
Purchase tickets (\$38) by March 18 online
at <http://www.nestanet.org>.
- 9:30** • NESTA Natural Hazards and the Environment Share-a-Thon
- 11:00** • ***Environmental Issues Associated with Katrina***
Dr. Bob Thomas, Loyola University of New Orleans
- 12:30** • ***Coastal Louisiana in a World of Global Change***
Dr. Torbjörn E. Törnqvist, Tulane University
- 2:00** • ***Geologic Processes of Coastal Louisiana & the Impacts of Hurricanes: Can New Orleans Survive?***
Dr. Randolph Mcbride, George Mason University
- 3:00** • NESTA Rock and Mineral Raffle
- 4:30** • NESTA Membership Meeting



AGU CAROLINA



WINDOWS TO THE UNIVERSE

These events are cosponsored by the American Geophysical Union,
Carolina Biological Supply, UCAR, and Windows to the Universe.

Using the School Yard as an Outdoor Classroom —Science Content— (Gen)
(Elementary–Middle Level) Room 355, Convention Center

Karen R. Dawkins, East Carolina University, Greenville, N.C.

Teachers from North Carolina share lessons they developed to take advantage of the resources in their school yards or local sites.

Exploring Our Solar System and Beyond: Thinking Outside the Spacecraft —Science Content— (Earth)

(Middle Level) Room 356, Convention Center

Lynne H. Hehr (lhehr@uark.edu) and **John G. Hehr** (jghehr@uark.edu), University of Arkansas, Fayetteville

Are we eight, nine, ten, or more? Discover what this means and bring the mysteries of planetary exploration into your classroom. This inquiry-based, fast-paced, and hands-on session deals with planet surfaces and the spacecraft needed to land on them. CD with loads of materials and resources provided.

Louisiana’s Wetlands Are Everyone’s Treasure —Professional Development— (Env)

(Elementary–Middle Level) Room 357, Convention Center

Christy I. Flynn (sunshine.70@suddenlink.net), South Grant Elementary School, Dry Prong, La.

Learn exciting hands-on activities for exploring and sharing Louisiana’s unique wetlands with your students. Also learn how Louisiana’s wetlands affect your students.

Bring Your Biology Classroom into the Bioscience Century —Science Teaching— (Bio)

(High School) Room R01, Convention Center

Xan Simonson (nxsimons@mpsaz.org), **Katrena Alber** (ksalber@mpsaz.org), **Jennifer Brierton** (jlbriert@mpsaz.org), and **Amanda Cherry Grimes** (aacgrime@mpsaz.org), Mesa Public Schools Biotechnology Academy, Mesa, Ariz.

Experience a fun and engaging three-week biotechnology unit for the general biology classroom. Take away activities that you can use in your classroom next week.

Field Studies: They Can Be Elementary! —Science Content— (Bio)

(Elementary–Middle Level/Informal Education) Room R02, Convention Center

Laura A. Molenaar (laura@mlmp.org), New London-Spicer Middle School, New London, Minn.

Help your students gain a deeper understanding of the environment around your school through student-tested investigations and field studies.

News from Saturn and the Cassini Spacecraft —Science Content— (Earth)

(Elementary) Room R03, Convention Center

Sally L. Feldman (feldmom@aol.com), Washington Elementary School, Richmond, Calif.

Explore the newest scientific discoveries from Saturn along with your students. Join us for hands-on activities about Saturn, its rings, and its moons.

Deck the Halls with Science Cycles! —Science Teaching— (Gen)

(Elementary) Room R04, Convention Center

Kathleen M. Schofield (kmschofield@mail.clay.k12.fl.us), Oakleaf Village Elementary School, Orange Park, Fla.

It's never too soon to think about the December holidays. Add pizzazz to your classroom by having students research and give presentations on natural science cycles.

Technology: Where Science, Engineering, and Society Meet—Implications for the Future —Science Content— **(Gen)**

(Elementary)

Room R05, Convention Center

Kate E. Hester (*khester@mos.org*) and **Sharlene Yang**, Museum of Science, Boston, Mass.

Carolyn DeCristofano (*carolyn@carolyndecristofano.com*), Professional Development Resources Consultant, Plympton, Mass.

There's no easy answer! Experience the trade-offs inherent in the creation of a new technology as the scientific, societal, and engineering implications are balanced.

Activities, Materials, and Resources That TEACH SCIENCE! —Science Teaching— **(Phys)**

(Elementary–Middle Level)

Room R07, Convention Center

Christine Wheeler (*wheelerc@jlab.org*), **Janet H. Tyler** (*tyler@jlab.org*), **Lisa Surles-Law**, **Stephen Gagnon** (*gagnon@jlab.org*), and **Joe Amma**, Thomas Jefferson National Accelerator Facility, Newport News, Va.

Jennifer Everett (*jeverett@ccps.org*), North East Middle School, North East, Md.

Carl Morrison (*cmorrison@yescd.york.va.us*), Grafton Middle School, Yorktown, Va.

We will share activities and resources for teaching physical science that we learned at the Department of Energy's Academies Creating Teacher Scientists (ACTS) teacher program. Leave with activities to use in class on Monday!

Writing in the Content Area of Science —Science Content— **(Gen)**

(Elementary–High School)

Jasperwood, Hilton

Julie E. Mosley, Gwinnett County Public Schools, Suwanee, Ga.

Presider: Mary Elizabeth Davis, Gwinnett County Public Schools, Suwanee, Ga.

Conduct an investigation and then explore persuasive and expository writing prompts that involve the use of data from the investigation.

K–12 Share-a-Thon —Science Teaching— **(Gen)**

(General)

Napoleon Ballroom, Hilton

Susan German (*sgerman@hallsville.org*), NSTA Director, Middle Level Science Teaching, and Hallsville Middle School, Hallsville, Mo.

Jean Tushie (*jtushie@comcast.net*), NSTA Director, High School Science Teaching, and Eden Prairie High School, Eden Prairie, Minn.

Pita Martinez-McDonald, NSTA Director, Preschool/Elementary, and Cuba (N.Mex.) Independent Schools

This session features groups of K–12 teachers demonstrating how a concept is taught from elementary to high school. CDs of exemplary lessons provided.

Cut It, Stab It, Slice It, Dice It: Using the Potato in the Science Classroom —Science Teaching— **(Gen)**

(General)

Oak Alley, Hilton

David Mastie (*mastie@umich.edu*), Retired Educator, Chelsea, Mich.

Bonnie Moody, Cabot Junior High School, Cabot, Ark.

Presider: Alfred Porter (*apporter12@aol.com*), Benjamin E. Mays High School, Riverdale, Ga.

Use potatoes in hands-on activities for classroom implementation. Activities include solving Pangaea puzzles, studying stratigraphy, creating topographic maps, and drawing conclusions from data. Handouts provided.

Math Modeling in Physics Using Physics Simulations —Science Content—

(Phys)

(High School–College)

Ile de France I, JW Marriott

Andrzej Sokolowski (*andrzejsoko@yahoo.com*), Texas A&M University and Magnolia West High School, Magnolia

Implement math modeling in your physics classes with physics simulations provided by Physics Education Technology at Colorado University. We'll focus on motion and waves.

What Were They Thinking? Uncovering Student Ideas with Formative Probes and FACTS —Assessment—

(Gen)

(General)

Ile de France II, JW Marriott

Joyce Tugel, Maine Mathematics and Science Alliance, Augusta

Ray Barber (*rbarber@chicousd.org*), Pleasant Valley High School, Chico, Calif.

Bonnie Mizell (*mizellb@ocps.net*), Howard Middle School, Orlando, Fla.

Uncover a gold mine of data about student thinking in science using formative assessment probes combined with a variety of formative assessment classroom techniques (FACTs).

Using the Natural World as an Integral Part of Learning —Science Teaching—

(Gen)

(General)

Ile de France III, JW Marriott

Susan H. Wirth (*swirth@arbordayfarm.org*), Arbor Day Foundation and Dimensions Educational Research Foundation, Nebraska City, Neb.

Learn practical, field-tested strategies for helping young children develop valuable observation and science skills while making closer connections to the natural world.

Bringing the Poles to Your Classroom—Polar Bears, Penguins, Climate Change, and More —Science Content—

(Gen)

(Elementary–High School)

Carondelet, New Orleans Marriott

Jean Pennycook (*jean.pennycook@fresnounified.org*), Ahwahnee Middle School, Fresno, Calif.

Dena Rosenberger (*drosenberger@guhsd.net*), El Capitan High School, Lakeside, Calif.

Presider: Jean Pennycook

Bring polar research to your classroom with these cross-curricular activities that engage students in climate change, oceans, atmosphere, and life in the harsh regions of the Arctic and Antarctic.

Earth Matters: Hands-On Population and Environmental Activities —Science Teaching—

(Env)

(General)

La Galerie 6, New Orleans Marriott

Mark A. McJunkin, Greg B. Meeks, and Ron Towery, Arkansas State University, State University, Ark.

Brandi Russom, Green County Tech-Oak Grove Middle School, Paragould, Ark.

Use these hands-on activities to explore population pressures and the delicate balance of people, climate change, and natural resource use.

COSEE Session: New Views on Sand: Virtual Samples Bring the World's Beaches to Your Classroom —Science Content— **(Gen)***(General)**Regent, New Orleans Marriott***Carol Hopper Brill** (*chopper@vims.edu*), Virginia Institute of Marine Science, Gloucester Point

Combining web-based sand images with real sand samples expands the scope of lab activities and facilitates inquiry learning in earth science, ocean processes, and geography.

Science and Snowflakes: Join the Global Snowflake Network! —Professional Development— **(Earth)***(Informal Education)**Bayside C, Sheraton***Tim McCollum** (*tmccollum@eiu.edu*), Charleston Middle School, Charleston, Ill.

Learn how to identify snowflakes and be a part of this legacy IPY project supporting weather and climate science.

Scaling the Human Body —Science Content— **(Bio)***(Middle Level—College)**Borgne, Sheraton***Melanie Hester** (*mhester@fsu.edu*) and **Cory Cloud** (*pcc02c@fsu.edu*), Florida State University School, Tallahassee

Learn how students use geometry to build a scale model of the human skeleton with muscles.

Logical Chemistry Puzzles —Assessment— **(Chem)***(Middle Level—High School)**Maurepas, Sheraton***Carlos M. Castro-Acuña** (*castroacuna02@yahoo.com*) and **Ramiro E. Domínguez-Danache** (*ramirodominguez@gmail.com*), National Autonomous University of Mexico, Mexico City

Presider: Carlos M. Castro-Acuña

Learn how to solve and create puzzles using chemistry knowledge and logic. These puzzles can be used in your classroom immediately.

Using 5E to Teach Ecology —Science Content— **(Bio)***(Middle Level—High School)**Napoleon B1, Sheraton***Lori D. Dunklin** (*ldunklin@houstonisd.org*), Contemporary Learning Center, Houston, Tex.**Roderick Jones** (*rjones12@houstonisd.org*), Madison High School, Houston, Tex.**Carla L. Hoyer** (*choyer@houstonisd.org*), Waltrip High School, Houston, Tex.

Presider: Lori D. Dunklin

Look at ecology lessons written using the 5E lesson model and use manipulatives that were developed for the unit. CD will be provided.

Have Einstein, Curie, and Newton Visit Your Classroom: Embedding the History of Science into Your Teaching —Science Content— **(Chem)***(High School)**Napoleon B2, Sheraton***Christine V. Brown** (*cvbrown@edc.org*), Education Development Center, Inc., Newton, Mass.

Address national standards, deepen students' scientific understanding, AND engage students all at once! Embed the history of science into your lessons using free web resources.

Airplanes and the Atmosphere: A Weather and Climate Curriculum Module
—*Science Teaching*— **(Earth)**

(Middle Level–High School/Informal Education)

Napoleon C3, Sheraton

Katherine M. Brown (kbrown@schools.nyc.gov), **Megan Roberts**, **Kristen Stafferoni** (kstaffa@schools.nyc.gov), and **Peter Giles** (pgiles@schools.nyc.gov), New York City Center for Space Science Education, New York, N.Y.

Learn about a weather and climate curriculum that uses airplanes to study the atmosphere, weather, and climate...and their interrelationships. Experience and take home inquiry-based lessons.

Scale the Universe —*Science Content*— **(Earth)**

(Middle Level–High School)

Napoleon D1&2, Sheraton

Christine A. Royce (caroyce@aol.com), NSTA Director, District IV, and Shippensburg University, Shippensburg, Pa.

How big is big? How small is small? Let us scale the universe as we investigate the powers of 10.

What Color Do YOU See? —*Science Teaching*— **(Phys)**

(Middle Level–High School)

Salons 816 & 820, Sheraton

Dan F. Rosa (rosa@ahs.k12.wi.us), Arrowhead Union High School, Hartland, Wis.

Use simple tools to measure color perception. Take home techniques and tools that can help those challenged with color identification and color concepts.

Engage Their Minds on Day One —*Science Content*— **(Chem)**

(High School)

Salons 817 & 821, Sheraton

Ted Koehn (tkoehn@lps.org), Lincoln East High School, Lincoln, Neb.

I will share the labs I do on the first day of each semester to engage students.

DUPONT Session: The Use of Technology in the Middle School Weather Classroom —*Science Content*— **(Earth)**

(Middle Level)

Southdown, Sheraton

Sharon Densler (sdensler@doe.k12.de.us), Capital School District, Camden, Del.

Take a look at the Delaware-created eighth-grade weather unit. Students collect weather data, analyze the data, and make both short- and long-term weather predictions. We will focus on the use of technology to enhance the ability to make weather predictions.

11:00 AM–12 Noon **EXHIBITOR WORKSHOPS**

Immersive Space Science Curriculum: “Moon Phases” in a Full-dome Classroom **(Earth)**

(Grades K–12)

Booth No. 1133, Exhibit Hall, Convention Center

Sponsor: Spitz, Inc.

David H. Bradstreet (dbradstr@eastern.edu), Eastern University, St. Davids, Pa.

Scott Huggins (shuggins@spitzinc.com), Spitz, Inc., Chadds Ford, Pa.

Dr. David H. Bradstreet presents an immersive “Phases of the Moon” lesson using the dome environment to visualize motions of the Moon in a fun, engaging lesson. The *Spitz Full-dome Curriculum* uses original 3-D visualization as a completely new way to teach challenging space science concepts.

Teaching in the 21st Century

(Grades 6–8)

Sponsor: It’s About Time

Mary Lynn Jensen, It’s About Time, Armonk, N.Y.

Learn how to integrate a digital text with Project Based Inquiry Science. We’ll explore strategies you can use to enhance middle school science with the addition of digital resources to a PBIS curriculum.

(Bio)

Room 212, Convention Center

Introduction to ScienceA–Z.com

(Grades K–6)

Sponsor: Science A–Z.com (brought to you by Learning A–Z)

Bob Holl and **Elizabeth Ackerman**, Learning A–Z/Science A–Z, Tucson, Ariz.

Learning A–Z, creators of Reading A–Z, announce their new website, Science A–Z. Take a tour of this rich new website that allows you to access elementary science materials 24/7. Learn how to use the unit map to discover all the wonderful things included in each unit. Use the search function to find the materials you need to teach to your state’s standards. Receive free one of our multi-leveled *Science in the News*, a news piece that engages students through stories of current real-life applications in science. *Note:* This session will be repeated on Saturday at 8:00 AM (page 28) and 2:00 PM (page 106).

(Gen)

Room 213, Convention Center



Earn Your Ed.S. Online in Secondary Education Science Concentration!

Advance your certification, become more effective in the classroom, and learn techniques for becoming an effective leader in your field, through The University of Alabama’s web-based program. This 30-hour program allows you to pursue your degree your way through convenient online instruction.

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College of Education and
College of Continuing Studies

*AA Certification is only open to applicants who have prior Class A certification in Alabama in secondary science education. Those seeking licensure outside of Alabama must inquire with the certification agency in the state where Ed.S. level certification is sought. The Capstone College of Education is fully accredited by the National Council for Accreditation of Teacher Education (NCATE) and the Alabama State Board of Education, making program graduates eligible for reciprocal Certification Agreements in most of the United States.

www.BamaByDistance.ua.edu/science 1-800-467-0227

12 Noon–1:00 PM **PRESENTATION**

SESSION 1

Antarctica's Climate Secrets: Resources for Teaching Climate Change —Science Teaching— (Env)

(Elementary–High School)

Carondelet, New Orleans Marriott

Louise T. Huffman (lhuffman@andrill.org), ANDRILL, Naperville, Ill.

Sylvia Petersen (sylvia_petersen@ipsd.org), Crone Middle School, Naperville, Ill.

Anica Brown (abrown@lps.org), Pound Middle School, Lincoln, Neb.

Get some background information about cutting-edge climate change science and leave with hands-on inquiry materials ready for immediate classroom use.

12 Noon–1:30 PM **NSTA/SCST COLLEGE LUNCHEON**

Overcoming Student Resistance to Active Learning

(Tickets Required; \$55)

M-7

Orleans, JW Marriott



Speaker

Dee U. Silverthorn

Senior Lecturer

Integrative Biology

University of Texas at Austin

Austin, Tex.

silverthorn@mail.utexas.edu

Research supports the hypothesis that students learn best when actively engaged in the classroom. But what happens when you change your teaching to be more interactive and the students rebel because they just want you to lecture (i.e., tell them exactly what they need to know)? This talk will discuss the process students go through when first exposed to an interactive classroom and will suggest some ways to make the transition easier.

Dee Silverthorn teaches physiology at the University of Texas at Austin. Her bench research focuses on epithelial transport, but in recent years she has concentrated on strategies for incorporating active learning into traditional lecture classrooms and inquiry-student laboratories. She was an early adopter of “clickers” and uses them as one of many interactive teaching tools in her large lecture classes.

Dee has been the PI on three NSF-CCLI grants, two for laboratory teaching and one for developing classroom materials for student-centered teaching that turned into a study of why it is difficult to change how we teach. She has received many awards for her own teaching and for contributions to international physiology education, including the Arthur C. Guyton Educator of the Year and the Claude Bernard Distinguished Lectureship from the American Physiological Society (APS). She recently completed a six-year term as editor-in-chief of Advances in Physiology Education, and she is also the author of the award-winning Human Physiology: An Integrated Approach.

Tickets, if still available, must be purchased at the NSTA Registration Area before 3:00 PM on Friday.

12 Noon–1:30 PM **LUNCHEON****COSEE Luncheon: Natural Coastal Hazards and Their Impacts on the Human Condition —Professional Development— (Earth)***(Available First Come; First Served)**St. Charles (41st Floor), New Orleans Marriott*Speaker: **Isaac Ginis**, University of Rhode Island, Narragansett

Presider: Gail A. Scrowcroft, University of Rhode Island, Narragansett

Dr. Isaac Ginis, oceanographer at the University of Rhode Island Graduate School of Oceanography and national leader in hurricane research, will discuss his research, advances in hurricane predictions, and coastal impacts.

Dr. Isaac Ginis, professor of oceanography at the University of Rhode Island, has an international reputation as a leading expert in numerical modeling and forecasting of air-sea interaction during hurricanes. Dr. Ginis is actively involved in both the U.S. and international tropical cyclone research and forecast communities. He has published over 70 papers in scientific journals and books on this topic and authored a chapter on hurricane-ocean interaction for the book Global Perspectives on Tropical Cyclones published by the World Meteorological Organization, Geneva, Switzerland, in 1995. His groundbreaking work in developing a coupled hurricane-ocean interaction model has led to significant improvement in hurricane forecasting.

12 Noon–1:30 PM **EXHIBITOR WORKSHOPS****Using Dinah Zike's Foldables to Teach Science More Effectively (Gen)***(Grades K–12)**Room 204/205, Convention Center*

Sponsor: Dinah-Might Adventures, LP

Dinah Zike (jeanne@dinah.com), Dinah-Might Adventures, LP, San Antonio, Tex.

Transform basic classroom materials into memorable and useful 3-D interactive graphic organizers. Learn from Dinah Zike, the creator of Foldables, as you make and take learning and assessment tools that are evidence based, kinesthetic, and integrative.

Optics with Light and Color —Science Content— (Bio)*(Grades 6–12)**Room 210, Convention Center*

Sponsor: CPO Science/School Specialty Science

Erik Benton, Patsy Eldridge, and Scott Eddleman, CPO Science/School Specialty Science, Peabody, Mass.

Join us for an overview of the new CPO Light and Color kit. Participants will engage in a hands-on investigation of the concepts of optics, color mixing, and how the human eye works using our new LED lights, laser, and both convex and concave lenses.

Survival of the Fittest: Variation and Selection (Bio)*(Grades 7–College)**Room 214, Convention Center*

Sponsor: Howard Hughes Medical Institute

Mary Colvard (mcolvard@tds.net), Howard Hughes Medical Institute, Deposit, N.Y.

We will focus on selection, a central and difficult concept of evolution. Participants will work through hands-on activities that complement the HHMI DVD *Evolution: Constant Change and Common Threads*. The activities are designed to engage students in inquiry by encouraging them to formulate questions that can be answered through scientific investigation, data collection, and pattern recognition. Participants will receive the DVD and classroom-ready activities.

Creating Habitats in the Classroom

(Bio)

(Grades K–12)

Room 215, Convention Center

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

Use live organisms in the classroom for teaching hands-on science. Live animals draw the attention and curiosity of students. Invertebrate animals, such as insects and arthropods are hardy, easy to handle, simple to maintain in the classroom, harmless to people, available year-round, and provide interesting biology or behavior study specimens. Join us as we create simple-to-maintain classroom habitats. We'll discuss how National Science Education Standards for Content can be addressed.

Forensics for the Biology Lab

(Bio)

(Grades 9–12)

Room 216, Convention Center

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

Take a new approach with traditional biology labs—use forensics! Perform sample activities from the innovative *Forensics for the Biology Laboratory* manual and associated kits. These inquiry-based, cooperative learning activities offer real-world applications as participants collect forensic evidence and perform experiments to yield results for the courtroom.

The Zula Patrol®: Blast Off with Mixtures, Solutions, and Chemical Reactions

(Gen)

(Grades K–2)

Room 217, Convention Center

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

Zula Patrol, an educational show on PBS, now has an instructional program with hands-on explorations, multimedia, and teacher's guides to help teachers integrate language arts and math with science. Participants mix liquids, sift solids, and bubble up a chemical reaction from the Mixtures, Solutions, and Chemical Reactions unit.

Planet Diary: Web-based Science News and Activities Engage Students in Science —Science Teaching—

(Gen)

(Grades 6–8)

Room 220, Convention Center

Sponsor: Pearson

Jack Hankin, Pacifica, Calif.

Jack Hankin, creator of the beloved (and free!) PlanetDiary.com, will discuss how to use Earth's Journal, Earth's Calendar, and many of the site's other rich activities to increase student engagement and achievement in science. Jack will demonstrate how he uses Planet Diary in his classroom to introduce concepts and demonstrate student mastery in a way that both captivates and helps his students see the science in their everyday lives.

Stem Cell Biology: What's Really Happening and How Do We Teach It? (Bio)

(Bio)

(Grades 9–12)

Room 221, Convention Center

Sponsor: Pearson

Kenneth R. Miller, Brown University, Providence, R.I.

Rapid advances in stem cell research are changing both the scientific and the political climate surrounding this work. I will focus on ways in which new developments in stem cell research may be brought into the biology classroom, as well as how participants can deal with potential controversy.

Human Physiology with Vernier —Science Teaching—**(Bio)***(Grades 9–College)*

Room 222, Convention Center

Sponsor: Vernier Software & Technology

Mike Collins (info@vernier.com) and **Robyn Johnson** (info@vernier.com), Vernier Software & Technology, Beaverton, Ore.

Experiments such as EKG, human respiration, and grip strength comparison from our *Human Physiology with Vernier* lab book will be performed in this hands-on workshop. Use LabQuest as a stand-alone device and on a computer. Experiments are appropriate for introductory, AP, IB, and college courses.

Spectroscopy with Vernier —Science Teaching—**(Chem)***(Grades 9–College)*

Room 224, Convention Center

Sponsor: Vernier Software & Technology

Jack Randall (info@vernier.com), Vernier Software & Technology, Beaverton, Ore.

This presentation will feature SpectroVis, Vernier's new low-cost visible-array spectrophotometer. See a full spectrum in less than one second using either the Vernier LabQuest or a computer. Beer's law, kinetics, and emission spectra experiments will be demonstrated. Our higher resolution spectrophotometers, such as the Vernier Spectrometer and Ocean Optics spectrometers, will also be shown.

Hands-On Standards in Science**(Gen)***(Grades K–5)*

Room 225, Convention Center

Sponsor: ETA/Cuisenaire

Sara D. Moore (smoore@etacuisenaire.com), ETA/Cuisenaire, Vernon Hills, Ill.

Learn strategies for teaching scientific inquiry and process skills during hands-on lessons. Activities that connect rich science content to important science skills ensure student mastery of science in engaging and effective ways. Teacher support as well as student resources will be shared and discussed.

Understanding Mendelian and Non-Mendelian Inheritance**(Bio)***(Grades 6–8)*

Room 226, Convention Center

Sponsor: Lab-Aids, Inc.

Mark Koker, Lab-Aids, Inc., Ronkonkoma, N.Y.

Middle level students have many misconceptions associated with genetics-related concepts. What is a gene? How are genes expressed? What is the difference between dominant and recessive traits? How does incomplete or co-dominance differ from "simple" dominant/recessive patterns? In this hands-on workshop you will examine activities in which students build "critters" to understand principles of Mendelian and non-Mendelian inheritance. Take home materials to use in class next week!

Smithsonian Science: Dig It! The Secret of Soil —Science Content—**(Earth)***(Grades 6–8)*

Room 228, Convention Center

Sponsor: Smithsonian Institution

Barbara Stauffer, Smithsonian Natural History Museum, Washington, D.C.**J. Patrick Megonigal**, Smithsonian Environmental Research Center, Edgewater, Md.

Explore the living world of soils and its importance to the health of larger ecosystems with a Smithsonian scientist. Learn about the links between soils and the natural cycles of ecosystems around the globe. Receive Dig It! curriculum materials and learn how to connect with soil scientists nationwide.

Soil, Sand, and Density

(Grades 6–9)

(Earth)

Room 231, Convention Center

Sponsor: Adam Equipment Inc.

Penney Sconzo, Adam Equipment Inc., Danbury, Conn.

Learn about the composition of soil and sand through the use of the cubic centimeter unit of volume measurement and electronic balances. This activity incorporates measuring sand samples, collecting data, graphing results, and drawing conclusions.

Experience Digital Physics Curricula

(Grades 9–College)

(Phys)

Room 232, Convention Center

Sponsor: Kinetic Books

Mark Bretl (markb@kbooks.com), Kinetic Books, Seattle, Wash.

Learn how a fully integrated digital physics curriculum can aid your instruction. Application of multiple learning styles and inquiry-based learning in a self-paced package provides students with experimentation and involvement. Join us for an overview of the design and use of our products along with many subject highlights.

The Case of the Kidnapped Tamarin Monkey: Did You Do It? —Science Content—

(Grades 9–12)

(Gen)

Room 235, Convention Center

Sponsor: CORD Communications

Karen McDowell (mcdowell@cord.org), CORD Communications, Waco, Tex.

Carolyn Ulmer and **J. Greg Ulmer** (gregulmer@centurytel.net), Fort Zumwalt South High School, St. Peters, Mo.

Join us for this interactive forensic science mystery. Use popular forensic science and applied biology/chemistry skills to solve the case of the teacher's kidnapped pet—a Tamarin monkey from the Amazon. Participants will be randomly assigned a character—will you be a suspect? Complete hands-on forensic science analysis tasks to catch the kidnapper!

The Games Kids Play: How to Manage a Successful School Gaming Club (Gen)

(Grades 9–College)

Room 236, Convention Center

Sponsor: Wizards of the Coast LLC

Jason Ness, Bow Valley High School, Cochrane, Alta., Canada

Games can be a great motivator for the student who struggles with focus and/or motivation. In addition to being fun, games develop numeracy, problem-solving skills, and analytical reasoning—all useful skills in the classroom. Find out how to organize a successful gaming program for your school and learn about resources available to help you do so through the Wizards Play Network (WPN).

12 Noon–2:00 PM AEROSPACE EDUCATORS LUNCHEON

The Role of Inspiration in Education*(Tickets Required; \$55)***M-8***Gallery Ballroom, Sheraton*

Speaker

Don Thomas

Director, Hackerman Academy of
Mathematics and Science
Towson University
Towson, Md.
dathomas@towson.edu

When Don Thomas was in kindergarten, all students at his school were brought to the gymnasium to watch the launch of America's first astronaut on May 5, 1961. This single event lit a fire inside him and provided the motivation for him to work

hard in school with the dream of flying in space himself some day. A veteran of four Space Shuttle missions, he will discuss the road he took to become an astronaut and will share his experiences in space. He will also discuss his latest mission, developing K–12 outreach programs for Towson University in Maryland, helping to prepare our next generation of explorers for their missions in the future.

Don Thomas holds a doctorate in materials science from Cornell University. From 1982 to 1987, he was a senior member of the technical staff at Bell Laboratories in Princeton, New Jersey. From there Dr. Thomas went on to work for NASA at the NASA Johnson Space Center in Houston, Texas. In 1990 he was selected as a NASA astronaut. During his career at NASA, he flew as a mission specialist on four different Space Shuttle missions, completing nearly 700 orbits of Earth and traveling some 17 million miles. From 2003 to 2006, Dr. Thomas was the International Space Station (ISS) Program scientist and was responsible for the planning and scheduling of science activities aboard the ISS.

In August 2007 Dr. Thomas joined Towson University where he is the director of the newly formed Hackerman Academy of Mathematics and Science, an outreach program targeting elementary, middle, and high school students across Maryland to get them more interested in careers in math and science.

Tickets, if still available, must be purchased at the NSTA Registration Area before 3:00 PM on Friday.

12 Noon–2:00 PM EXHIBITOR WORKSHOP

Connecting Brain Research with Effective Teaching: The Brain-Targeted Teaching Model**(Gen)***(Grades K–12)**Room 208, Convention Center*

Sponsor: Society for Neuroscience

Mariale Hardiman, The Johns Hopkins University, Washington, D.C.

Emerging research in the neurological and cognitive sciences continues to interest and challenge educators as they seek to apply findings on the science of learning to inform the teaching and learning process. We will share application of brain research by linking it with the Brain-Targeted Teaching Model, an instructional model based on the tenets of research-based effective instruction.

12 Noon–2:30 PM **CESI/NSTA ELEMENTARY SCIENCE LUNCHEON**

“Science” Is a Verb

(Tickets Required; \$55)

M-9

Rosedown, Hilton



Speaker

Larry Lowery

Professor Emeritus, Graduate School
of Education/Lawrence Hall of Science
University of California
Berkeley, Calif.

larry@biglittlebooks.com

Most people don't realize it, but they do science all the time—I science, you science, he/she sciences. When thought of as a verb, science is your “active” participation in gaining knowledge. This session will present practical examples of

how our natural, hard-wired capacity to inquire (to do science) leads to understandings of the universe in which we live and enhances our ability to reason clearly and to problem solve.

Lawrence Lowery is a professor emeritus at the University of California at Berkeley. He was the principal investigator for both the EQUALS math program and FAMILY MATH at the Lawrence Hall of Science. He remains active as the principal investigator for the Full Option Science System (FOSS), a science curriculum for grades K–8 developed at the Lawrence Hall of Science. He continues to publish and edit articles and books, among them The Kingfisher Science Encyclopaedia (New York and London, 1993), Pathways—Guidelines to Implementing the Science Standards (NSTA publication, 1997), The Biological Basis for Thinking and Learning (Lawrence Hall of Science Monograph, 1998), and The Nature of Inquiry (National Research Council, Science, Technology, and Children, 2002).

Tickets, if still available, must be purchased at the NSTA Registration Area before 3:00 PM on Friday.

12:30–1:00 PM PRESENTATION

SESSION 1

Why Your Students Misunderstand the Atom and What to Do About It—Science Content—(Chem)

(Middle Level—College)

Napoleon CI, Sheraton

Rudolf V. Kraus (*rkraus@ric.edu*), Rhode Island College, Providence

Student misconceptions about the atom are common. Learn research-based strategies to help your students overcome these difficulties.

12:30–1:30 PM LUNCHEON

Paul F-Brandwein Annual Luncheon

(By Invitation Only)

Newberry, Hilton

For additional information, visit www.brandwein.org.

12:30–1:30 PM SPECIAL SESSION

NESTA Session: Coastal Louisiana in a World of Global Change —Science Content— (Earth)*(Elementary–High School)**Bissonet, New Orleans Marriott*Speaker: **Torbjörn E. Törnqvist**, Tulane University, New Orleans, La.Presider: Roberta M. Johnson (*rmjohnsn@ucar.edu*), University Corporation for Atmospheric Research, Boulder, Colo.

This presentation will briefly outline the basic principles of global warming, then zoom in specifically on the role of accelerated sea-level rise and illustrate its impact on the highly vulnerable U.S. Gulf Coast in general, and Louisiana in particular.

Torbjörn Törnqvist received his MS and PhD degrees in physical geography from Utrecht University, followed by a series of postdoctoral research appointments based in The Netherlands and at LSU. In 1999 he accepted a position in earth and environmental sciences at the University of Illinois at Chicago.

Dr. Törnqvist's research interests revolve around the evolution of rivers, deltas, and shallow oceans in response to climate and sea-level change. His fieldwork activities are currently focused on the Mississippi Delta and adjacent regions, and a premier objective is to reconstruct sea-level rise during the past millennia in order to assess its potential future threat for low-lying coastal environments.

12:30–1:30 PM PRESENTATIONS

**SESSION 1****Hurricane Cycles and Global Warming —Science Content— (Earth)***(General)**Room 239, Convention Center*Speaker: **Kenneth J. Harasty** (*kenharasty@yahoo.com*), Clarksville, Pa.

Examine the historical record of hurricanes and learn what it tells us about global warming.

**SESSION 2****Online Science Professional Development—Formula for Success —Professional Development— (Gen)***(Elementary–High School)**Room 240/241, Convention Center*Speaker: **Carolyn Jacobs** (*carolyn_jacobs@wgbh.org*), WGBH Teachers' Domain, Boston, Mass.Speaker: **Nick Micozzi** (*micozzin@randolph.k12.ma.us*), Randolph (Mass.) Public SchoolsSpeaker: **Bruce Frana** (*bfrana@gwaea.org*), Grant Wood Area Education Agency, Cedar Rapids, Iowa

Presider: Carolyn Jacobs

Seasoned online professional development facilitators report what works and what doesn't. Learn from a case study of a district's first foray into the world of online professional development.

SESSION 3**NOAA Symposium Follow-Up Session: Inspiring Ocean Literacy by Bringing Coral Reefs into Your Classroom —Science Content— (Bio)***(General)**Room 256, Convention Center*Speaker: **Kelly Drinnen** (*kelly.drinnen@noaa.gov*), Flower Garden Banks National Marine Sanctuary, Galveston, Tex.Speaker: **Jonathan Shannon** (*jonathan.shannon@noaa.gov*), NOAA, Silver Spring, Md.

Explore coral reefs and increase ocean literacy with free NOAA lessons, videos, and online content.

SESSION 4

Starting Early: Scientific Literacy for PreK Students —Science Teaching— (Gen)

(Preschool/Elementary)

Room R04, Convention Center

Maria Alanis, Austin (Tex.) Independent School District

With science as a goal for young learners, an urban school district provided resources and support in creating a learning facility for preK students.

SESSION 5

Podcasting on Planet Earth —Science Teaching— (Bio)

(Elementary–Middle Level)

Room R06, Convention Center

Louise M. Prejean (lprejean@louisiana.edu), University of Louisiana at Lafayette

Andre Prejean (andre.prejean@gmail.com), Fugro GeoServices, Inc., Lafayette, La.

See podcasts created by sixth-grade students exploring our planet. Science content, images, sounds, and voice are used to communicate with digital voices.

SESSION 6

Providing a Valuable Purpose for Learning —Science Teaching— (Gen)

(General)

Belle Chasse, Hilton

Nicole McRee (nicole_n52@hotmail.com) and **Tracy M. Bratzke**, Grayslake Middle School, Grayslake, Ill.

Providing students an arena to seek solutions to real-world problems is a challenge. We will share ideas for incorporating cross-curricular lessons and units into your current curriculum. This technique promotes experiential, authentic learning where students are encouraged to think critically and analytically.

SESSION 7

Lights, Camera, Science! —Professional Development— (Gen)

(Elementary–High School)

Elmwood, Hilton

Anthony E. Grisillo, Glenwood Elementary School and Indian Lane Elementary School, Media, Pa.

Presider: Judy Williams, Price Elementary School, Anaheim, Calif.

Use videography to teach and assess science and put the science into science fiction. Make your own documentaries!

SESSION 8

Publishing Your Chemical Education Ideas: What, How, When, Where, and Why —Professional Development— (Gen)

(Middle Level–College)

Magnolia, Hilton

Kevin D. Cunningham (kdcunningham@wisc.edu), University of Wisconsin-Madison

Patrice Pages (p_pages@acs.org), American Chemical Society, Washington, D.C.

Have a great idea from your classroom that you'd like to publish in a professional journal? We'll share information on why you might be interested in getting published, provide tips to get you started, and discuss common fears and obstacles.

SESSION 9**Order in the (Science) Court: Using Mock Trials to Explore Scientific Controversies and Issues —Science Content— (Gen)***(Middle Level–College)**Windsor, Hilton*

Allan Jay Dinglasan (allanjay.dinglasan@ycdsb.ca), Brother Andre Catholic High School, Markham, Ont., Canada

Explore a more creative way to examine the most controversial scientific issues confronting our society today. Learn how to stage genuine courtroom drama in your chemistry, biology, or physics classroom.

SESSION 10**NARST Session: A Project-based Biology Curriculum Impacts Minority Students' Achievement and Attitudes via Teacher Knowledge and Practice —Science Teaching— (Bio)***(Middle Level–College)**Rosalie, JW Marriott*

David Kanter (dkanter@temple.edu), Temple University, Philadelphia, Pa.

Improve minority student achievement with a project-based biology curriculum correlated with increased teacher content and pedagogical content knowledge. Improved student attitudes are correlated with teachers using inquiry.

SESSION 11**Student Provocateurs: High-Interest, Collaborative Learning, Digital Action! —Science Teaching— (Env)***(General)**Bonaparte, New Orleans Marriott*

Bradford Davey (brad@techforlearning.org), Pepperdine University/TLC, Inc., North Kingstown, R.I.

Student Provocateurs combines 21st-century skills with technology while offering students the opportunity to combine genuine interest and personal identification with a course of action.

SESSION 12**GE Foundation's Developing Futures: Learning Together —Science Education Program— (Phys)***(Supervision/Administration)**Jackson, New Orleans Marriott*

Kelli Wells, GE Foundation, Fairfield, Conn.

Ann M. Delehant (adelehant@aol.com), The Dolan Group, Pittsford, N.Y.

James G. Rutkowski (jrutkowski@eriesd.org), Erie (Pa.) School District

With support from the GE Foundation, schools/districts are developing best practice models grounded in a collaborative culture. Learn ways to develop a world-class science program.

SESSION 13 (two presentations)*(Middle Level–High School)**Edgewood A/B, Sheraton***The Pete Conrad Spirit of Innovation Award: Combining STEM and Entrepreneurship —Science Education Program— (Gen)**

Joshua Neubert (joshua.neubert@conradfoundation.org), Conrad Foundation, Las Cruces, N.Mex.

We will review the Conrad Award and look at the benefits of combining STEM education and entrepreneurship.

Dynamic Lab Report —Science Teaching— **(Gen)**

Hilary A. Ritt (*hilaryritt@hotmail.com*) and **Randy L. Bell** (*randybell@virginia.edu*), University of Virginia, Charlottesville

We will describe the use of MovieMaker as a means of generating dynamic lab reports for investigations conducive to the use of digital images.

SESSION 14

Guess What? You're Teaching Chemistry! —Science Teaching— **(Chem)**

(High School)

Gallier A/B, Sheraton

James S. Kopchains (*j.kopchains@lycos.com*), Flushing High School, New York, N.Y.

Amy R. Kopchains (*j.kopchains@lycos.com*), P.S. 171 Patrick Henry, New York, N.Y.

Often, teachers receive a surprise when they come back to school in September—the assignment to teach chemistry. We will address the first few weeks of chemistry class, which can also be the most important weeks of the school year. Here are some ideas to get you started in a subject you may not have expected you would have to teach.

SESSION 15

Zap! It's Electrifying! —Science Content—

(Phys)

(Middle Level–High School)

Napoleon A1&2, Sheraton

Alfred W. Guenther, Retired Educator, Palos Verdes Estates, Calif.

Experience an hour of amazing electrical and electromagnetic demonstrations designed to grab attention, stimulate inquiry, and construct concepts. Detailed handouts explain the phenomena and describe how to do the demonstrations in your own classroom.

SESSION 16

Sharing Successful Teaching Strategies/Activities for Secondary Science Students —Professional Development— **(Bio)**

(Middle Level–High School)

Napoleon A3, Sheraton

Pamela M. Foster (*fosterp@carliseschools.org*), Carlisle (Pa.) Area School District

Come learn and share a variety of effective teaching strategies and review activities geared toward students in grades 6–12. These strategies include graphic organizers/foldables, creating plays or characters to introduce scientific concepts or organisms in vivid and fun ways, engaging lab activities, effective group projects and rubrics, and student-centered review games (like modified board games). Handouts and examples provided.

SESSION 17

Minds On vs. Hands On in Science Education —Professional Development—

(Earth)

(Middle Level–College)

Napoleon B3, Sheraton

Peter P. Chang (*peterpchang@hotmail.com*), Jackson State University, Jackson, Miss.

Minds-on-based, multidimensional, concept-based, and solid science teaching/learning may demonstrate better end results in science learning than inquiry-based, concept-excluded, hands-on-only pedagogy.

SESSION 18

Science and Literacy Strategy Harvest 7–12 —Science Teaching—

(Gen)

(Middle Level–High School)

Napoleon D3, Sheraton

Mary Dunn, Maine Mathematics and Science Alliance, Augusta

Experience authentic science-literacy strategies that model how reading, writing, drawing, and speaking are used to construct understanding of science concepts.

12:30–1:30 PM WORKSHOPS

**Biotechnology in the Classroom —Science Content—** (Chem)*(Middle Level–High School)*

Room 242, Convention Center

Jimmy F. Lettieri (jlettier@polytech.k12.de.us), Polytech High School, Woodside, Del.

Explore the use of biotechnology in the middle or high school science classroom with a focus on gel electrophoresis techniques and lab activities.

NMLSTA Session: Seeing Things in a Different Light —Science Teaching—

(Phys)

(Elementary–High School)

Room 353, Convention Center

Mildred E. Chamblee (cchamblee@mindspring.com), G.P. Babb Middle School, Forest Park, Ga.

Learn how to use the Electromagnetic Spectrum to understand our natural and real world.

Using Scientific Data to Generate Scientific Ideas in K–6 Teacher Professional Development —Science Teaching— (Gen)*(Elementary–Middle Level)*

Room 354, Convention Center

Hubert M. Dyasi (hdyasi@aol.com), The City College of New York, N.Y.**Rebecca E. Dyasi**, Long Island University, Brooklyn, N.Y.

Scientific evidence and understandings from inquiry-based science learning activities are linked to standards of scientific evidence and reasoning for acquisition of significant science concepts.

Favorite Project-based Environmental Activities That Teach Student Awareness from Mississippi Science Teachers —Science Teaching— (Env)*(Elementary–Middle Level)*

Room 357, Convention Center

Gloria W. Lewis (gwlewis@aol.com; glewis@jackson.k12.ms.us), Whitten Middle School, Jackson, Miss.**Janice S. Kennebrew** (jkennebrew@jackson.k12.ms.us), Blackburn Middle School, Jackson, Miss.**Sandra E. Hardy** (shardy@jackson.k12.ms.us), Powell Middle School, Jackson, Miss.**Edna G. White** (ewhite@jackson.k12.ms.us), Siwell Middle School, Jackson, Miss.

Presider: Gloria W. Lewis

Mississippi teachers share some of their favorite projects, games, and activities that follow the national standards for middle school students incorporating technology. Students discover hazards to the environment that impact life and are encouraged to become good stewards of Earth. Handouts and door prizes!

The Human Body Inside and Out —Science Teaching— (Bio)*(Preschool)*

Room R01, Convention Center

Ellen Vigil (ellen_vigil@rush.edu) and **Angel Ramey**, RUSH University Medical Center, Chicago, Ill.

Experience how children learn about health and the human body through interactive simulations, field trips, and visits from medical center employees. We'll share photographs, materials, and curricula.

Engineering Science into Your Classroom —Science Teaching— (Earth)
(Elementary) *Room R02, Convention Center*

Martha N. Smith (*martha_smith@ccpsnet.net*), J.B. Watkins Elementary School, Midlothian, Va.

Cindy M. Jones (*cindy_jones@ccpsnet.net*), Clover Hill Elementary School, Midlothian, Va.

Learn to integrate children's engineering into your science classroom. Follow a design brief to complete a project and take home design briefs you can use!

Using Toys to Understand Energy Transfers —Science Content— (Phys)
(Elementary) *Room R03, Convention Center*

Lance Campbell (*lancecampbell@sciencecompanion.com*), Educational Consultant, Seattle, Wash.

You'll be amazed how simple toys can be used to teach the challenging concept of energy transfers.

Children as Urban Ecologists: A Model for Inquiry—Preschool Through Pre-service —Science Teaching— (Gen)

(Elementary/College) *Room R05, Convention Center*

Katelyn E. Marazita, Karen L. Anderson (*karenanderson@stonehill.edu*), and **Susan Mooney** (*smooney@stonehill.edu*), Stonehill College, Easton, Mass.

Explore ways to connect inquiry and project-based learning to create meaningful science experiences for young children.

CESI Session: Cycles of Life—Beyond Frogs and Butterflies —Science Content— (Bio)

(Elementary–Middle Level) *Room R07, Convention Center*

Dee Goldston and **Sabrina D. Stanley** (*sdstanley@bama.ua.edu*), The University of Alabama, Tuscaloosa

Presenter: Dee Goldston

Join us and step into a simulation—a journey filled with environmental hazards that determine the organism's survival. Interdisciplinary explorations include geography, mathematics, life cycles, and literature connections.

Sun-Earth Elementary Share-a-Thon —Science Content— (Earth)
(Elementary) *Room R08/R09, Convention Center*

N. Eric Heiselt (*nericheiselt@bagley.msstate.edu*), Mississippi State University, Mississippi State, Miss.

Mary C. Allen, Springfield College, Springfield, Mass.

Master teachers from the NASA Heliophysics Division share successful lessons and activities that reinforce earth science concepts at the elementary level.

What's This All About? Uncovering Students' Misconceptions —Science Teaching— (Gen)

(General) *Jasperwood, Hilton*

Barbara Biglan (*biglan@chatham.edu*) and **Christy Heid** (*cheid@chatham.edu*), Chatham University, Pittsburgh, Pa.

Participate in frequently misunderstood science demonstrations and experiments as we explore common misconceptions and alternative conclusions from our experiences in science methods classes.

Stoichiometry in Two Steps —Science Content—**(Chem)***(High School–College)**Ile de France I, JW Marriott***Melanie H. Monistere** (*melanie.monistere@tangischools.org*), Ponchatoula High School, Ponchatoula, La.

Presider: Rebecka Rocquin, Ponchatoula High School, Ponchatoula, La.

Stoichiometry can be completed in two easy steps without dimensional analysis. This method is designed to meet the interest and abilities of today's students.

Engage Learners from Day One with Science Olympiad! —Science Teaching—**(Gen)***(Elementary–High School)**Ile de France II, JW Marriott***Kelly R. Price** (*price_kel@yahoo.com*), NSTA Director, District V, and Forsyth County Schools, Cumming, Ga.**Jeannine Foucault** (*jfoucault@comcast.net*), Lewisburg Middle/High School, Olive Branch, Miss.

Begin the year by engaging your students like never before. Science Olympiad activities offer instructional strategies that are applicable to any classroom. Hook 'em from the start!

Professional Development for When You KNOW What You Don't Know —Professional Development—**(Gen)***(General)**Ile de France III, JW Marriott***John Settlage** (*john.settlage@uconn.edu*) and **Rob Ceglie** (*robert.ceglie@uconn.edu*), University of Connecticut, Storrs**Adam Johnston** (*ajohnston@weber.edu*), Weber State University, Ogden, Utah**Heather K. Harkins** (*hharkins@ctsciencecenter.org*), Connecticut Science Center, Hartford

Professional development rarely starts with participants identifying their needs and building upon them. We offer a “Vexations and Ventures” model tailored to individual professional goals.

The Little Things That Run the World —Science Content—**(Env)***(Middle Level–High School)**La Galerie 5, New Orleans Marriott***David L. Brock** (*brockda@rpcs.org*), Roland Park Country School, Baltimore, Md.

Discover the realm of the amoeba. Learn how to engage your students in field studies exploring the ecology of the microscopic world.

Volcanoes: A Monitoring Simulation and 3-D Models —Science Content—**(Earth)***(Middle Level–High School)**Bayside C, Sheraton***Christine V. McLelland** (*cmcllland@geosociety.org*), Geological Society of America, Boulder, Colo.

Experience a high-energy volcano activity that simulates real-time monitoring of a volcanic island about to erupt. Take home a CD with activities and 3-D volcano models.

Smithsonian Science: Invasive Species and Society—Tools to Understand and Protect Our Local Environment —Science Content—**(Bio)***(Elementary–High School)**Borgne, Sheraton***Shawna Behling** (*behlings@si.edu*) and **Hannah Koppelerger** (*koppelergerh@si.edu*), Smithsonian Conservation & Research Center, Front Royal, Va.

Presider: Maureen Kerr, Smithsonian National Air and Space Museum, Washington, D.C.

Learn about a Smithsonian ecologist who works with citizens to monitor invasive plant species and explore outdoor activities that involve students in local ecology studies.

Using and Assessing Differentiated Instruction Strategies in a Biotechnology Classroom —Science Teaching— (Bio)

(High School)

Napoleon B1, Sheraton

Tracy Greeley (greelet@cps-k12.org), Woodward Career Technical High School, Cincinnati, Ohio

Presider: Travis Hurst (hurst@frontierok.com), Frontier High School, Red Rock, Okla.

Pick up discussion strategies for setting and assessing high expectations for all students, even if you teach classes with ESL, honors, gifted, and students with IEPs—all in the same room.

NanoScale PlanetWalk —Science Content— (Earth)

(General)

Napoleon C2, Sheraton

Robert E. Strong (strongro@westliberty.edu), **Elizabeth A. Strong** (strongli@westliberty.edu), and **Richard J. Pollack** (energy@smartcenter.org), West Liberty State College, Wheeling, W.Va.

Presider: Elizabeth A. Strong

Discover the size and scale of the solar system using a one-billionth-scale planet walk that assists student understanding of the nanoscale.

One Coral, Two Coral, Shallow Coral, Deep Coral —Science Content— (Earth)

(Middle Level–High School)

Napoleon C3, Sheraton

Beth Biegler Hines (hinesb@mtnbrook.k12.al.us), Mountain Brook High School, Birmingham, Ala.

Let me introduce you to NOAA Cayman Island Twilight Zone research data that has been adapted for the classroom using modified field research methods. Data includes coral and sponge biodiversity, comparison of shallow versus deep reef, marine habitat connectivity, and deep SCUBA diving.

Teaching Core Physics Concepts Through the Lens of Seismology —Professional Development— (Phys)

(High School)

Salons 816 & 820, Sheraton

Michael Hubenthal (hubenth@iris.edu) and **John Taber** (taber@iris.edu), IRIS Consortium, Washington, D.C.

Looking to add relevance to physics topics like resonance, frequency, period, amplitude, and vectors? The lens of seismology provides many opportunities to enrich current instructional strategies.

NASA: Exploring Magnetism in Solar Flares with the RHESSI Mission —Science Content— (Earth)

(Middle Level–College)

Salons 817 & 821, Sheraton

Bryan J. Mendez (bmendez@ssl.berkeley.edu) and **Greg Schultz**, University of California, Berkeley

Explore the nature and cause of the solar system's largest explosions—solar flares. We'll share classroom activities involving physical science, reading, and math standards.

12:30–1:30 PM EXHIBITOR WORKSHOPS

Physics for Everyday Thinking (PET) and Physical Science for Everyday Thinking (PSET) (Phys)

(College)

Room 212, Convention Center

Sponsor: It's About Time

Robert H. Poel, Western Michigan University, Kalamazoo

PET and PSET are one-semester guided inquiry courses for prospective and practicing elementary and middle school teachers and general education college students. These courses focus on the themes of interactions, conservation of energy, Newton's Law, and (for PSET) atomic-molecular theory. They include Learning About Learning activities, where students either reflect on their own learning, the learning of younger children (using elementary classroom videos), or the learning of scientists (the history and nature of science).

Closer Look at a Unit (Gen)

(Grades K–6)

Room 213, Convention Center

Sponsor: Science A–Z.com (brought to you by Learning A–Z)

Bob Holl and Elizabeth Ackerman, Learning A–Z/Science A–Z, Tucson, Ariz.

Learn the ins and outs of a Science A–Z lesson as you make a leveled science reader, use multi-leveled Quick Reads to assess comprehension, play science games, watch a slideshow, engage in a leveled discussion of key science concepts, and have fun!



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12:30–2:30 PM **WORKSHOP**



**Planning Safe, Sustainable, and Flexible Facilities for Inquiry-based Science
—Science Education Program— (Gen)**

(General)

Room 238, Convention Center

LaMoine L. Motz (*lamoine.motz@oakland.k12.mi.us*), 1988–1989 NSTA President, and Oakland County Schools, Waterford, Mich.

Juliana Texley, Palm Beach Community College, Boca Raton, Fla.

Presider: LaMoine L. Motz

Join the authors of the NEW *NSTA Guide to Planning School Science Facilities* (2nd Edition, 2007) and learn how the latest research on effective teaching provides you with a guide to what makes effective, flexible, and safe teaching spaces for science instruction, and how YOUR input CAN influence the planning and designing of effective facilities.

12:30–3:00 PM **WORKSHOP**

NSTA Multicultural/Equity in Science Education Division: Support for Secondary Science Students —Science Teaching— (Gen)

(High School)

Ascot, Hilton

Vanessa Westbrook (*vwestbrook@mail.utexas.edu*), NSTA Director, Multicultural/Equity in Science Education, and The University of Texas at Austin

James W. Collins and **Tracey Ramirez** (*tramirez@mail.utexas.edu*), The University of Texas at Austin

What happens when high-stakes assessments hinders students? What is the plan to support these students? The discussion will revolve around these questions and more. Come join in on the conversation!

12:30–3:00 PM **EXHIBITOR WORKSHOP**

Explore Weather and Water with FOSS Middle School —Science Education Program— (Earth)

(Grades 5–8)

Room 209, Convention Center

Sponsor: Delta Education/School Specialty Science-FOSS

Sue Jagoda and **Jessica Penchos**, Lawrence Hall of Science, University of California, Berkeley

Join us for an introduction to Earth's atmosphere, weather, and water. Experience how middle school students grapple with heat and energy concepts as they begin to consider the big ideas in earth science that are so important to life on this planet. Student books and course CD-ROMs will be distributed.

1:00–4:00 PM **SHORT COURSE**



International Year of Astronomy: Observe, Question, and Explore Our Solar System (SC-22)

(Elementary–Middle Level)

Tickets Required; \$20

Imperial, Westin

Christine Shupla (*shupla@ipi.usra.edu*), Lunar and Planetary Institute, Houston, Tex.

Jaclyn Allen (*jaclyn.allen-1@nasa.gov*), NASA Johnson Space Center, Houston, Tex.

For description, see Volume 1, page 88.

1:00–5:00 PM **SHORT COURSE**

NSELA: Shifting, Melting, Flowing...Investigating Glacier Dynamics Using Real Data in the Classroom (SC-23)

(Middle Level–High School) **Tickets Required: \$19** River Room I/II, Westin

Shelley Olds (educationandoutreach@unavco.org) UNAVCO, Boulder, Colo.

For description, see Volume 1, page 89.

1:30–2:30 PM **MEETING**

Development Advisory Board Meeting

(By Invitation Only)

Evergreen, Sheraton

1:30–3:00 PM **SHELL SCIENCE SEMINAR**

The Science of Art—The Teaching of Optics

(Gen)

(General)

Room 243, Convention Center



Speaker

Charles M. Falco

UA Chair of Condensed Matter Physics, and

Professor of Optical Sciences

University of Arizona

Tucson, Ariz.

falco@u.arizona.edu

President: Mitch Robinson (jmr2424@slp.k12.la.us), LSTA Board Member, and St Landry Parish School System, Opelousas, La.

In 2001 artist David Hockney and scientist Charles M. Falco discovered that Renaissance masters of such repute as van Eyck, Holbein, and Caravaggio used optics to assist them in the creative process. This information provides science educators with the opportunity to teach fundamental principles of optics, some of which date to the 11th-century polymath Ibn al-Haytham, using art as a creative catalyst for learning. Dr. Falco will describe his collaboration with Hockney, share relevant lessons learned from this renowned visual artist, and discuss implications their findings have for interdisciplinary and cross-cultural approaches to science education at the K–12 level and in higher education.

Charles M. Falco, PhD, is a professor of optical sciences at the University of Arizona, where he holds the UA Chair of Condensed Matter Physics. He is a fellow of the American Physical Society, the Institute of Electrical and Electronics Engineers, and the Optical Society of America. He has published and lectured extensively in the fields of optical science and experimental physics, with more than 250 scientific manuscripts and 300 invited talks at conferences and research institutions around the world. He also holds seven U.S. patents.

In addition to his scientific research, Dr. Falco was co-curator of the Solomon R. Guggenheim Museum's exhibit "The Art of the Motorcycle," which, with over two million visitors in New York, Chicago, Bilbao, and the Guggenheim Las Vegas, was by far the most successful exhibition of industrial design ever assembled.

1:30–3:00 PM WORKSHOP

COSEE Session: The Oceans They Are a-Changin’...How Might This Change You? —Science Content— (Earth)

(Middle Level–High School)

Regent, New Orleans Marriott

Liesl Hotaling (lhotaling@thebeaconinstitute.org), The Beacon Institute, Beacon, N.Y.

Janice McDonnell (mcdonnel@marine.rutgers.edu), Rutgers University, New Brunswick, N.J.

Annette deCharon (annette.decharon@maine.edu), University of Maine, Walpole

Interact with scientists and educators and discover how science and technology can frame the impact of climate change on coasts, ecosystems, and human activities.

1:30–3:00 PM EXHIBITOR WORKSHOP

PCR Made Easy

(Bio)

(Grades 7–12)

Room 211, Convention Center

Sponsor: Fisher Scientific Education

Presenter to be announced

PCR, or the polymerase chain reaction, is the foundation for any biotechnology laboratory procedure. Learn more about this groundbreaking biotechnology breakthrough discovered by Kary Mullis. After a brief overview of PCR, you’ll learn how you can incorporate PCR into your classroom. Discover how to utilize PCR using the EdvoCycler to make single lab session PCR experiments possible that will not break your budget! This workshop is presented by EDVOTEK.

1:30–6:00 PM NSTA SYMPOSIUM



NSTA Symposium: Energy: Stop Faking It! (SYM-5)

(Grades 3–8)

Tickets Required; \$54

Room 255, Convention Center

Bill Robertson (wrobert9@ix.netcom.com), NSTA Press Author, Woodland Park, Colo.

For description, see Volume 1, page 79.

2:00–3:00 PM **NSTA/ASE HONORS EXCHANGE LECTURE**

Toward a Science of Science Teaching

(Gen)

(General)

Room 352, Convention Center



Speaker

Carolyn Yates

Chair, The Association for Science Education, and
Director of Cognitive Acceleration Programmes
Hertfordshire, U.K.

In the 21st century, both the United States and the United Kingdom need more citizens who are scientifically literate and more young people prepared to apply themselves to the rigors of training to be scientists. Do science educators need to look to neuroscience and cognitive psychology to find more effective ways to grow young minds?

Originally trained as a teacher, Carolyn Yates left the classroom in the late 1970s to join professors Michael Shayer and Philip Adey at King's College London, where together they developed the Cognitive Acceleration model. She has worked in Palestine, Jordan, and Pakistan on behalf of the Department for International Development and nongovernment organizations, building capacity to manage education reform.

2:00–3:00 PM **MEETING**

Science Matters – Building a Presence: Building the Community Meeting

Bacchus, New Orleans Marriott

To those states that are not within the Building a Presence community, please join us for an informal conversation regarding the advantages and procedures in becoming a member of this distinguished community.

2:00–3:00 PM **SPECIAL SESSION**

NESTA Session: Geologic Processes of Coastal Louisiana and the Impacts of Hurricanes: Can New Orleans Survive? —Science Content— **(Earth)**

(Elementary–High School)

Bissonet, New Orleans Marriott

Speaker: **Randolph A. McBride**, George Mason University, Fairfax, Va.

Presider: Roberta M. Johnson (rmjohnsn@ucar.edu), University Corporation for Atmospheric Research, Boulder, Colo.

This presentation will focus on the overall geologic development of coastal Louisiana, and especially on understanding the Holocene geomorphology of the delta and chenier plains. In other words, it will be a big picture overview of why coastal Louisiana looks the way it does from a geologic perspective. Dr. McBride will discuss oceanographic processes and their role in the development of major hurricanes and the resulting storm surge impacts.

Dr. McBride is an associate professor of geology at George Mason University. Prior to joining George Mason University, Dr. McBride spent 14 years in Louisiana working at the Louisiana Geological Survey, Coastal Geology Section, in Baton Rouge, and at the Coastal Studies Institute at Louisiana State University. He also worked as a geological consultant on the Exxon Valdez oil spill in Alaska in 1989 and 1990. He earned his PhD in 1997 from Louisiana State University in oceanography and marine geology.

2:00–3:00 PM PRESENTATIONS

SESSION 1

Toyota TAPESTRY Grants for Science Teachers = \$\$\$ for Your School (Gen)

(Elementary–High School)

Room 237, Convention Center

Eric V. Crossley (*ecrossley@nsta.org*), Assistant Director, Corporate Partnerships/Toyota TAPESTRY Grants for Science Education, NSTA, Arlington, Va.

James Calaway (*jcalaway@lcisp.com*), Lawton (Okla.) Public Schools

Find out how to increase your chances of winning a Toyota TAPESTRY grant of up to \$10,000!

SESSION 2



What Research Says to the Science Teacher About Effective Professional Development —Professional Development— (Gen)

(General)

Room 240/241, Convention Center

Michele H. Lee, University of Missouri, Columbia

Joel D. Donna (*donna010@umn.edu*), University of Minnesota, Minneapolis

Be a savvy professional development consumer/designer by familiarizing yourself with research-based information on what can make science teacher learning opportunities meaningful. Resource/reference list provided.

SESSION 3



Technology Infusion in the Elementary Science Classroom —Science Teaching— (Gen)

(Elementary)

Room 242, Convention Center

Randi K. Dalton (*randi.dalton@pac.dodea.edu*), Sullivans Elementary School, Yokosuka, Japan

Join me for elementary technology integration projects, assessments, and rubrics, including silkworm journals, graphic organizers, PowerPoint projects, digital microscope movies, and more. Gifted, SPED, and ESL modifications included.

SESSION 4

NOAA Symposium Follow-Up Session: Discovering Deep Sea Coral Communities —Science Content— (Env)

(Middle Level–High School)

Room 256, Convention Center

Marci Wulff and **Paulo Maurin** (*paulo.maurin@noaa.gov*), NOAA, Silver Spring, Md.

Explore deep sea coral communities with NOAA scientists and educators. Learn how to teach your students about this fascinating habitat deep in the sea where darkness is all-encompassing and temperatures are cold! Free lesson plans.

SESSION 5

Beyond Webquests: Effective Technology Practices to Increase Student Achievement —Science Teaching— (Gen)

(Middle Level)

Room 351, Convention Center

Sheri A. Cheng (*scheng@roxburyprep.org*), Roxbury Preparatory Charter School, Roxbury, Mass.

Presenter: Terri Hansen, New Mexico State University, Las Cruces

In this data-driven school, both students and teachers use a variety of technology tools to enhance learning. Effective implementation strategies allow these innovations to become a true medium for student mastery of standards.

SESSION 6**Long-Term Science Investigations: Beyond the Science Fair —Science Teaching— (Gen)***(Middle Level)**Room 355, Convention Center***Mitch Goodkin** (*drgoodkin@aol.com*), J.H.S. 190 Russell Sage, Queens, N.Y.**C. Rajeshwari Menon** (*rajimenon@aol.com*), I.S. 195 Roberto Clemente School, New York, N.Y.**Christine Kola** (*ckola@schools.nyc.gov*), J.H.S. 45 Thomas C. Giordano School, Bronx, N.Y.

We'll look at long-term science investigations to create the controlled experiment, behavioral research, design projects, or secondary research in life, earth, and physical science.

SESSION 7**A Chain Is Only as Strong as Its Weakest Link: One District's Approach to Building a Strong Chain in Elementary Science Education —Science Teaching— (Gen)***(Elementary)**Room R04, Convention Center***Edward P. Short** (*shorte@brevardschools.org*), Brevard Public Schools, Viera, Fla.**Michelle J. Ferro** (*ferro.michelle@brevardschools.org*), West Melbourne School for Science, West Melbourne, Fla.**Nancy G. Rehwoldt** (*rehwoldt.nancy@brevardschools.org*), Surfside Elementary School, Satellite Beach, Fla.**Cheryl Surrett** (*surrett.cheryl@brevardschool.com*), Audubon Elementary School, Merritt Island, Fla.**Elizabeth J. Faulkner** (*efaulkner@cfl.rr.com*), Apollo Elementary School, Titusville, Fla.**Wendy J. Sheldon** (*shelden.wendy@brevardschools.org*), Ralph Williams Elementary School, Viera, Fla.

Presider: Edward P. Short

Our district became the state's top performer using a training model of collaboration to connect standards to improved student performance by using all links in between (state, district, and classroom teacher).

SESSION 8**Science Notebooks: Assessing for Learning —Assessment— (Gen)***(Elementary)**Room R05, Convention Center***Barney Peterson, NBCT** (*bpeterson@everettsd.org*), James Monroe Elementary School, Everett, Wash.

Experience how science notebook assessments guide student learning and inform teacher instruction. Using a variety of scoring rubrics and guidelines, participants will learn to analyze student writing, provide critical feedback to students, and discuss instructional implications.

SESSION 9**We're All in This Together—Watersheds and You! —Science Teaching— (Env)***(Elementary–Middle Level/Informal Education)**Room R07, Convention Center***Carl J. Carranza** (*carl.carranza@lacity.org*), Cabrillo Marine Aquarium, San Pedro, Calif.

Learn some easy and fun activities that you can use to help your students understand and care about how their choices can affect the environment.

SESSION 10

Using Science Skills to Become an Asset to Your Community —Professional Development— (Gen)

(General)

Belle Chasse, Hilton

Mark A. Peacock (*maxviking1@yahoo.com*), Cheyenne-Eagle Butte Junior High School, Eagle Butte, S.Dak.

Presider: Marie Scearce (*mscearce@mac.com*), Lambertson High School, Philadelphia, Pa.

Leverage your science skills to provide “gee whiz” opportunities for your students while enhancing your school, community, and résumé.

SESSION 11

Project-based Technology Projects Your Students Will Love! —Science Teaching— (Gen)

(General)

Elmwood, Hilton

Ruth D. Kermish-Allen and **Shey Conover** (*sconover@islandinstitute.org*), Island Institute, Rockland, Maine

How can we get kids excited about STEM content and careers? Come learn and share methods for integrating technology in a place-based educational context.

SESSION 12 (two presentations)

(General)

Norwich, Hilton

Navigating Out of the Doldrums: Enlivening Your Career Through Experiences in the Scientific Field —Professional Development— (Gen)

Lynne Pacunas Shaver (*lpacunas@aol.com*), Deep Earth Academy, Washington, D.C.

Discover professional development opportunities that include active field and organizational work in the sciences.

Career Changers—From Lab to Classroom: Successfully Recruiting and Training Scientists to Become Science Teachers —Science Education System— (Gen)

Russell G. Wright (*russell_g_wright@mcpsmd.org*), Montgomery County Public Schools, Rockville, Md.

Young career-changing scientists are now teaching in Montgomery County, Maryland, because of Transition from Lab to Classroom. What worked? Can you do it, too?

SESSION 13

Great Science for Girls! —Professional Development— (Gen)

(Informal Education)

Windsor, Hilton

Maryann Stimmer (*mstimmer@aed.org*) and **Linda Colón** (*lcolon@aed.org*), Educational Equity Center at AED, New York, N.Y.

Great Science for Girls Extension Services (GSG) is an NSF-funded program that infuses gender equity and builds capacity in informal and formal science education.

SESSION 14

Eating for Healthy Cells —Professional Development— (Bio)

(High School–College)

Maurepas, JW Marriott

Paula L. Davis (*pdavis@waynesville.k12.mo.us*), Waynesville High School, Waynesville, Mo.

Jeff Davis (*jdavis@waynesville.k12.mo.us*), Waynesville R-6 Schools, Waynesville, Mo.

Help your students understand the significant function of antioxidants in cellular metabolism. This activity clearly demonstrates how diet impacts antioxidant levels.

SESSION 15

Growing Spectacular Science Students Through Service Learning —Science Content— (Env)*(Elementary–High School)**Bonaparte, New Orleans Marriott*

Polly K. Vanasse (pvanasse@nbsc.org) and **Kim Birge-Liberman** (kim@nbsc.org), Nashoba Brooks School, Concord, Mass.

How do meaningful service projects enhance students' conceptual understanding? See examples from our school and learn how to create a memorable experience for your students.

SESSION 16

The Role of Computer Simulations and Visualization in STEM Education —Science Teaching— (Phys)*(Middle Level–College/Supervision)**Jackson, New Orleans Marriott*

Joseph J. Molitoris (mhmolitor@aol.com), Georgian Court University, Lakewood, N.J.

Barbara Selin, Lab-Volt, Farmingdale, N.J.

The availability of computers and numerical software (e.g., spreadsheets) allows teachers and students to simulate and visualize mathematical, scientific, and technical ideas in ways that were not possible before.

SESSION 17

The Role of Hands-On Science and Research Curricula in the Formation of Science Opinions in Middle School Students —Science Content— (Bio)*(Middle Level–High School)**Bayside A, Sheraton*

Karen Clark, Immaculata Catholic School, Durham, N.C.

Beth Hollister, Piedmont Research Center, Morrisville, N.C.

Explore the benefits of exposing students to industry-based research labs. Interaction with research scientists impacts a learner's view of science in the modern world.

SESSION 18

Multiple Types of Journals Used to Enhance the Whole-Class Inquiry Setting —Science Teaching— (Gen)*(Middle Level–High School)**Edgewood A/B, Sheraton*

Joan A. Gallagher-Bolos (jgallagher-bolos@glenbrook.k12.il.us), Glenbrook North High School, Northbrook, Ill.

Dennis Smithenry (dsmithenry@scu.edu), Santa Clara University, Santa Clara, Calif.

We will share a number of different types of journals that promote a whole-class inquiry setting, including composition books, blogs, wikis, and digital storytelling. We'll also look at how these journals compare with authentic journals used by scientists in industry/research.

SESSION 19

The Coastal Classroom: Connecting Students with Real-World Science —Science Teaching— (Env)*(Elementary–High School)**Maurepas, Sheraton*

Dinah F. Maygarden (dmaygard@uno.edu) and **Heather L. Egger** (hlgordon@uno.edu), University of New Orleans, La.

We will showcase the successes of a decade of coastal wetland field-based education, including canoe trips and summer programs infused with real-world science.

SESSION 20

“Old” Demos for “New” Teachers —Science Teaching— (Phys)

(Middle Level–High School)

Napoleon A1&2, Sheraton

Peter Hopkinson (phopkinson@shaw.ca), Vancouver Community College, Vancouver, B.C., Canada

Expand your repertoire with these high-energy, low-cost, interactive demos. Turn Einstein inside out...see Vanna White turn ugly...play in the palm pipe band!

SESSION 21

Genes and Proteins and Traits: Strategies for Teaching Molecular Genetics —Science Content— (Bio)

(High School)

Napoleon A3, Sheraton

Jennifer Eklund (jleklund@umich.edu) and **Nonye Alozie** (cinny@umich.edu), University of Michigan, Ann Arbor

Explore a newly developed molecular genetics unit and the strategies it uses to promote student learning and engagement.

SESSION 22

A Wide Spectrum of Solar Science for After-School Astronomy Clubs —Science Teaching— (Earth)

(Middle Level–High School)

Napoleon B3, Sheraton

Jim R. Thieman and **Louis A. Mayo** (louis.a.mayo@nasa.gov), NASA Goddard Space Flight Center, Silver Spring, Md.

Learn how in-school or after-school astronomy students can view and learn about the Sun with both optical and radio telescopes.

SESSION 23

Using Copy Change to Teach Earth Science: An Integrated Approach to Teaching Science and Literacy —Science Teaching— (Earth)

(General)

Napoleon C1, Sheraton

Pamela L. Wright (pam.wright@paducah.kyschools.us), Paducah (Ky.) Independent Schools

William P. Bintz, Kent State University, Kent, Ohio

Julie Sheffer (julie.sheffer@paducah.kyschools.us), Clark Elementary School, Paducah, Ky.

Learn to use the strategy Copy Change with standards-driven and literature-based instruction to integrate science, literacy, and literature.

SESSION 24

Enhancing Diversity in Geosciences in Alaska Through an Introduction of Geospatial Education and Digital Storytelling —Science Education Program— (Earth)

(General)

Napoleon C2, Sheraton

Anupma Prakash (prakash@gi.alaska.edu) and **Jason Ohler**, University of Alaska, Juneau

Cathy Connor, University of Alaska Southeast, Juneau

With NSF and NASA funding, we introduced place-based geosciences studies in Alaska. We present lessons learned from training teachers in geospatial and digital storytelling technology.

SESSION 25

Teacher-Ranger-Teacher: Nurturing a Student's Love for Learning by Using the Natural Classrooms of the National Parks —Science Teaching— (Gen)*(Middle Level–High School)**Napoleon D3, Sheraton***Michael P. Marlow** (*mike.marlow@cudenver.edu*), University of Colorado Denver

Teacher Rangers who spent a summer in several national parks were afforded the unique opportunity to expose students to inquiry-based curricula in their native parks.

SESSION 26

Sixty Labs You Can Do with Little or No Budget —Science Content— (Chem)*(High School)**Salons 817 & 821, Sheraton***Ted Koehn** (*tkoehn@lps.org*), Lincoln East High School, Lincoln, Neb.

I will share more than 60 chemistry/physics labs that can be done with low-cost or home-made equipment.

SESSION 27

DUPONT Session: DuPont Presents—Safety in the Science Classroom and Lab (Gen)*(Elementary–High School)**Southdown, Sheraton***Peggy Vavalla** and **Karen McDermott**, DuPont, Wilmington, Del.

Safety procedures and policies for science classes and labs are lacking in many school districts. This session will provide a template for writing a safety plan for your school district and helping you engage your colleagues to create a safe science classroom environment.

2:00–3:00 PM WORKSHOPS**Questions...Questions...and More Questions! —Science Teaching— (Gen)***(Elementary–Middle Level)**Room 354, Convention Center***Gail G. Hall**, Vermont Dept. of Education, Montpelier**Trudy Fadden** (*trudy.fadden@bmschool.org*), Blue Mountain Union School, Wells River, Vt.**Dorothy Finlay**, Eden Central School, Eden, Vt.**Laurie Edson** (*edsonl@ludlowelementary.org*), Ludlow Elementary School, Ludlow, Vt.

Presider: Laurie Edson

Join us and practice questioning techniques that facilitate inquiry experiences and support ongoing formative assessment.

Keeping Things in Motion: Using Newton's Laws to Understand the Universe —Science Content— (Earth)*(Preschool–Middle Level)**Room 356, Convention Center***Linda Smith** (*lsmith@paulsboro.k12.nj.us*), NASA EPO, Paulsboro (N.J.) Public Schools

Use NASA space science to spice up your classes, excite your students, and teach about Newton's laws of motion at the same time. NASA poster handouts!

Science + Writing = Learning —Science Teaching— (Gen)*(Elementary–Middle Level)**Room 357, Convention Center***Julie A. Alexander** (*jualexan@columbia.k12.mo.us*), Columbia (Mo.) Public Schools

Learn notebook components, math integration, data supporting the use of science notebooks, and assessment strategies. Design and conduct an experiment using notebooks.

Dig Dirt? Inquiry in Early Childhood —Science Content— **(Bio)**

(Preschool/Elementary)

Room R01, Convention Center

Karen L. Anderson (karenanderson@stonehill.edu), Stonehill College, Easton, Mass.

Lindsay A. Daigneault (ladaigneault@gmail.com), CAPIC Head Start, Brighton, Mass.

Isabelle M. DeBarros (isabellemdebarros@gmail.com), Taunton, Mass.

Dig dirt? Explore the many elements of soil. Discover how inquiry transfers to early childhood classrooms, as well as how it's assessed.

PLT's Exploring Environmental Issues: Places We Live —Professional Development— **(Env)**

(General)

Room R02, Convention Center

Al Stenstrup (astenstrup@forestfoundation.org) and **Kathy McGlauflin**, American Forest Foundation, Washington, D.C.

What environmental issues are impacting your community? Project Learning Tree's Exploring Environmental Issues: Places We Live secondary module is a set of activities where students examine how their community is changing. Each participant will receive the module.

Walking Through Mitosis —Professional Development— **(Bio)**

(Middle Level)

Room R06, Convention Center

Angela Shoemate, Newman Middle School, Skiatook, Okla.

Teaching cell division becomes a walk in the park when students become physically involved. Come "get involved" in learning the phases of cell division.

Orienteering for Multiple Science Curricula to Meet the Need of Diverse Student Populations —Science Teaching— **(Gen)**

(General)

Oak Alley, Hilton

Jerry L. Fetter (jfetter@crsd.org) and **Tom B. Hegedus** (theg@comcast.net), Council Rock High School South, Holland, Pa.

Learn how to incorporate orienteering into multiple science curricula. You'll be guided through lessons and finish with an experiential activity.

Discovery of Sound in the Sea: An Online Resource for Teachers and Students —Science Teaching— **(Phys)**

(High School–College/Informal Education)

Ile de France I, JW Marriott

Gail Scowcroft, University of Rhode Island, Narragansett

Kathleen Couchon (kcouchon@narragansett.k12.ri.us), Narragansett High School, Narragansett, R.I.

We will introduce you to a classroom case study activity built on the Discovery of Sound in the Sea, an interactive, comprehensive marine acoustics online resource.

Infusing Content with Best Practices Using the 5E Model —Professional Development— **(Gen)**

(General)

Ile de France II, JW Marriott

Donna J. Barrett (donna.barrett@mresa.org), Metropolitan Regional Educational Service Agency, Smyrna, Ga.

Learn more about using the 5E inquiry model to plan professional development workshops for teachers and as a tool to develop teaching units.

The Nature of Science: Personal Experience That Can Lead to Informed Teaching —Science Teaching— (Gen)*(General)**Ile de France III, JW Marriott***Mike G. Rivas**, California State University, Northridge

Engage in a reproducible activity specifically designed to enhance the understanding of salient tenets of the nature of science.

Exploring Energy and Environment: How to Navigate a Science Adventure —Science Content— (Env)*(Middle Level–High School)**La Galerie 5, New Orleans Marriott***Corey P. Gallegos** (cpgallegos@aps.k12.co.us), Aurora Hills Middle School, Aurora, Colo.

Today there is an increased need to write to learn in the science classroom. Enhance inquiry by learning how to navigate your own science adventure.

Using Soil Science in the Classroom —Science Content— (Env)*(Elementary–High School)**La Galerie 6, New Orleans Marriott***Sherry S. Fulk-Bringman** (sherryfb@purdue.edu), Purdue University, West Lafayette, Ind.

Soil science is an easy and inexpensive medium to teach elementary, middle, and high school students the basic sciences and math.

ISS Toys in Space: Science on the Station —Professional Development— (Earth)*(Informal Education)**Bayside C, Sheraton***Jennifer Becerra** (jennifer.becerra-1@nasa.gov), NASA Johnson Space Center, Houston, Tex.

Scientific investigation—put physics principles to the test in space. How will international toys work on the Space Station? Make your own toy.

Detecting the Vitamin C of Fruit —Science Teaching— (Bio)*(Middle Level–College)**Borgne, Sheraton***Minsu Ha** (mortar2839@nate.com), **Heeyoung Cha** (hycha@knue.ac.kr), and **Hyerim Lee** (rlqma20@hanamil.net), Korea National University of Education, Cheongwongun, Choongbuk, Korea

Discover a new and interesting vitamin C titration experiment that uses iodine, disinfectant, starch, and injectors.

Teaching Global Responsibility Through Calculator Data Collection Technology —Science Teaching— (Bio)*(Middle Level–High School)**Napoleon B1, Sheraton***Chris S. Coker** (chemcoachcf@yahoo.com) and **Pam C. Vaughan** (pvaughan@cfsd.k12.ar.us), Camden Fairview High School, Camden, Ark.

Encourage your students to become responsible global citizens—conduct an inquiry-based study of acid rain. We'll use calculators and pH probes to collect and analyze acid rain data.

Bowling for Density: Teaching Chemistry Using Discrepant Events —Science Teaching— (Chem)*(Middle Level–High School)**Napoleon B2, Sheraton***Kathleen Holley** (tigger@swbell.net), University of North Texas, Arlington

Golf balls sink and bowling balls...float? Learn to use discrepant events to clarify concepts and dispel misconceptions for students. Brainstorm ideas, too!

Using Digital Imagery to Enhance Environmental Literacy —Professional Development— (Env)

(Informal Education)

Napoleon D1&2, Sheraton

Melinda S. Wilder (*melinda.wilder@eku.edu*) and **Billy C. Bennett** (*william.bennett@eku.edu*), Eastern Kentucky University, Richmond

In our digital age, teachers are challenged to find compatible methodology that integrates technology and environmental education. Using digital imagery for this purpose will be demonstrated.

Let's Get Movin': Enrich Students' Understanding with Kinesthetic Models in Which Students "Become" a Science Concept —Science Teaching— (Phys)

(Middle Level–High School)

Salons 816 & 820, Sheraton

Kristin Newton (*knewton@cpsd.us*) and **Desiree Phillips** (*dphillips@cpsd.us*), Cambridge Rindge and Latin School, Cambridge, Mass.

Experience the ways we use our students to embody physical models and then design a student-centered model for your own science subject.

2:00–3:00 PM EXHIBITOR WORKSHOPS

Investigations in Environmental Science: A Case-based Approach (Env)

(Grades 6–8)

Room 212, Convention Center

Sponsor: It's About Time

Vicki James, It's About Time, Armonk, N.Y.

Learn how to incorporate case-based units into your curriculum, support students in making environmental decisions, and identify the key components to a case-based unit. Leave with a practical hands-on activity that you can do in your classroom. Hear from teachers who have used the program and find out how it's working with their students.

Introduction to Science A–Z.com (Gen)

(Grades K–6)

Room 213, Convention Center

Sponsor: Science A–Z.com (brought to you by Learning A–Z)

Bob Holl and **Elizabeth Ackerman**, Learning A–Z/Science A–Z, Tucson, Ariz.

Learning A–Z, creators of Reading A–Z, announce their new website, Science A–Z. Take a tour of this rich new website that allows you to access elementary science materials 24/7. Learn how to use the unit map to discover all the wonderful things included in each unit. Use the search function to find the materials you need to teach to your state's standards. Receive free one of our multi-leveled *Science in the News*, a news piece that engages students through stories of current real-life applications in science. *Note:* This session will be repeated on Saturday at 8:00 AM (page 28) and 11:00 AM (page 77).

2:00–3:30 PM EXHIBITOR WORKSHOPS

Chemistry and the Data Collector —Science Content— (Chem)

(Grades 5–12)

Room 210, Convention Center

Sponsor: CPO Science/School Specialty Science

Erik Benton, Patsy Eldridge, and Scott Eddleman, CPO Science/School Specialty Science, Peabody, Mass.

Use CPO's new data collector with temperature and pressure probes to investigate Boyle's law in a hands-on activity. Digitally log temperature change and watch the data collector graph your data in real time to pinpoint the exact freezing point of a delicious treat as it experiences a dramatic phase change.

Mechanisms of Evolution: Genetic Switches and Natural Selection (Bio)

(Grades 9–College)

Room 214, Convention Center

Sponsor: Howard Hughes Medical Institute

Mary Colvard (mcolvard@tds.net), Howard Hughes Medical Institute, Deposit, N.Y.

Participate in two hands-on activities that complement the HHMI DVD *Evolution: Constant Change and Common Threads*. With selection as the core concept, students are engaged in data collection and pattern recognition. Students move beyond the basics by modeling evolution through an Excel spreadsheet application of the Hardy-Weinberg equation. The role of genetic switches, an important molecular mechanism for evolution, is also introduced. Participants will receive the DVD and classroom-ready activities.

Comparative Mammalian Organ Dissection with Carolina's Perfect Solution® Specimens (Bio)

(Grades 6–12)

Room 215, Convention Center

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

Experience a far superior and safer alternative to formaldehyde with Carolina's Perfect Solution® specimens. Dissect a sheep brain, cow eye, pig heart, and pig kidney and observe major internal and external structures to gain a better understanding of these mammalian organs. An excellent comparative dissection with Carolina's best specimens!

Introduction to Protozoa (Bio)

(Grades 9–12)

Room 216, Convention Center

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

Meet the dynamic trio of paramecia, euglena, and amoeba, as well as lesser known protozoa. Easy to maintain, protozoa are excellent for open-ended exploration by students.

Math Out of the Box®: Developing Geometric Logic (Gen)

(Grades K–5)

Room 217, Convention Center

Sponsor: Carolina Biological Supply Co.

Carolina Teaching Partner

Math comes to life through the exploration of two- and three-dimensional shapes in Math Out of the Box®, an inquiry-based math curriculum developed at Clemson University. Experience interactive lessons from the program's Developing Geometric Logic strand and explore the vertical articulation of concepts and standards across grades K–5.

K–8 Science with Vernier —Science Teaching— (Gen)

(Grades K–8)

Room 222, Convention Center

Sponsor: Vernier Software & Technology

David Carter (info@vernier.com) and **Don Volz** (info@vernier.com), Vernier Software & Technology, Beaverton, Ore.

Learn how easy it is for your students to collect temperature data, heart rates, magnetic

field data, and more. Try experiments from our popular *Elementary Science with Vernier* and *Middle School Science with Vernier* lab books using LabQuest or our low-cost line of Go! products on a computer.

Advanced Logger Pro and LabQuest —Science Teaching— (Gen)

(Grades 9–12)

Room 224, Convention Center

Sponsor: Vernier Software & Technology

Robyn Johnson (info@vernier.com) and **Dan Holmquist** (info@vernier.com), Vernier Software & Technology, Beaverton, Ore.

If you already use Vernier's Logger Pro or LabQuest software with your students, you might be ready for some new tips and tricks. Learn how to insert pictures and movies, create a multiple-page lab report, plot your data along with GPS sensor readings on a Google map, and much more.

Just Released! New IIHS Car Crash Video—Perfect for Integrating the Sciences —Science Teaching— (Gen)

(Grades 9–12)

Room 225, Convention Center

Sponsor: Insurance Institute for Highway Safety

Griff Jones (gjones@coe.ufl.edu), University of Florida, Gainesville

Pini Kalnite, Insurance Institute for Highway Safety, Arlington, Va.

Award-winning teacher Griff Jones goes behind the scenes of the new IIHS video *Understanding Car Crashes: When Physics Meets Biology*. Learn how crash test footage, crash dummies, and egg-carrying paper cars can teach students about the vital connections between biology, physics, medicine, and engineering. Handouts and DVD prizes.

Teaching About the Rock Cycle and Earth Time (Earth)

(Grades 6–8)

Room 226, Convention Center

Sponsor: Lab-Aids, Inc.

Mark Koker, Lab-Aids, Inc., Ronkonkoma, N.Y.

Do your middle level students have trouble with complex concepts like the rock cycle and geologic time? Maybe it has something to do with understanding small, incremental changes over millions of years. Experience motivating, hands-on techniques and strategies for learning about these and related topics, like plate tectonics and continental drift. Support for literacy and technology will be addressed.

Smithsonian Science: Design Your Own Plankton Competition —Science Content— (Bio)

(Grades 3–8)

Room 228, Convention Center

Sponsor: Smithsonian Institution

A. Mark Haddon and **Karen McDonald**, Smithsonian Environmental Research Center, Edgewater, Md.

This interactive program gets you thinking about what it takes to survive in the plankton world. Learn about the basic body structures that allow plankton to remain neutrally buoyant and suspended in water for photosynthesis. Design your own plankton and test its buoyancy. Handouts.

BIOPAC Science Lab Physiology Monitor with Lessons (Bio)

(Grades 9–College)

Room 236, Convention Center

Sponsor: BIOPAC Systems, Inc.

Mandy Ramsum (mandyr@biopac.com), BIOPAC Systems, Inc., Goleta, Calif.

Discover a new, inexpensive physiology system to explore the inner workings of the human body. Practical experiments guide students to record, display, and analyze data from their own bodies (heart, brain, muscle, eye, respiration, biofeedback, aerobic exercise, and reaction time). This hands-on system engages students and promotes scientific inquiry.

2:00–5:00 PM SHORT COURSE



Science of Energy (SC-24)

(Elementary–High School)

Tickets Required; \$12

Ballroom II, Westin

Keith Etheridge (*ketheridge@need.org*), The NEED Project, East Lansing, Mich.

For description, see Volume 1, page 89.

2:30–4:00 PM MEETING

Alliance of Affiliates (AoA) Meeting

Estherwood, Sheraton

3:00–4:00 PM WORKSHOP

COSEE Session: Sediment—It Ain't Just Dirt —Professional Development—

(Earth)

(Informal Education)

Regent, New Orleans Marriott

Jessie Kastler (*jessica.kastler@usm.edu*), University of Southern Mississippi, Ocean Springs

Tina Savoie (*tina.savoie@camsch.org*), South Cameron High School, Lake Charles, La.

Explore the importance of sediment as a valuable commodity for restoring coastal habitat. Conduct analyses to distinguish sand, silt, and clay. Size really does matter.

3:00–4:00 PM EXHIBITOR WORKSHOP

Visualizing Our Universe in a Full-dome Classroom: Teaching Simulations

(Earth)

(Grades K–12)

Booth No. 1133, Exhibit Hall, Convention Center

Sponsor: Spitz, Inc.

David H. Bradstreet (*dbradstr@eastern.edu*), Eastern University, St. Davids, Pa.

Scott Huggins (*shuggins@spitzinc.com*), Spitz, Inc., Chadds Ford, Pa.

Dr. David H. Bradstreet tours the virtual universe and demonstrates new methods for visualizing space science. Ancient observations, comets, constellations, and other astronomy simulations will be shown. The *Spitz Full-dome Curriculum* uses original 3-D visualization as a completely new way to teach challenging space science concepts.

3:30–4:30 PM ROBERT KARPLUS LECTURE

Why I Teach

(General)

(Gen)

Room 352, Convention Center



Speaker

Sakhalin Finnie

Science Teacher

Harbor Teacher Preparation Academy

Wilmington, Calif.

sagiafinnie@yahoo.com

Presider: Ann Wilson (*ann.wilson@la.gov*), Louisiana Science Program Coordinator, Baton Rouge

I became a teacher for several reasons, but the one that was the most important was that teaching provided me with the time I needed at home to be with my son. I knew there would be a lot of work changing professions (from engineering to teaching), but for my son I would do anything. I started the long arduous task of becoming a teacher and realized during the process that I didn't want to just provide guidance and emotional support for my son but for other children as well. I could provide children with the necessary support to become good citizens. I could teach students the skills necessary to be good students and eventually hard workers. I could show students that life is hard, but with support and guidance they will be successful. Students just need to believe... I can show the path.

Sakhalin Finnie is a science teacher, integrated coordinated science (ICS) coordinator, senior activities advisor, career path coordinator, and chemical safety coordinator. Through her role as a NASA/MASTAP (Minority University Math, Science and Technology Awards for Teacher and Curriculum Enhancement Program) Science Ambassador, Sakhalin can access NASA's educational resources to better teach her students. The MASTAP seeks to increase the number of certified mathematics, science, and technology teachers who are employed and retained in high-need schools.

3:30–4:30 PM **FEATURED PRESENTATION****America's Energy Coast: An Introduction***(General)***(Env)**

Room 243, Convention Center



Speaker

R. King Milling

Chairman, America's WETLAND Foundation;
Chairman, Governor's Advisory Commission on
Coastal Restoration and Conservation; and
Vice Chairman, Whitney National Bank
New Orleans, La.

Presider: Charlotte Bihm (*bihm8@aol.com*), LSTA President,
and St Landry Parish School System, Opelousas, La.

The America's Energy Coast Initiative brings together leaders in industry, the national environmental and conservation community, academia, and major coastal interests of the four energy-producing states of Texas, Louisiana, Mississippi, and Alabama. The purpose of the initiative is to develop common solutions to ensure a sustainable coastal environment and the activities that take place there, so critical to the energy and economic security of the United States. The uniqueness of this region cannot be overstated. Host to almost 90% of America's offshore oil and gas supply and a third of all oil and gas consumed in this country, both foreign and domestic, the region is connected to 50% of the nation's refining capacity.

R. King Milling is a staunch advocate for restoration of Gulf Coast wetlands. Long before Hurricane Katrina propelled the issue into the nation's headlines, Milling was championing the protection of the marshes and estuaries along Texas, Louisiana, Mississippi, and Alabama—an area known as America's Energy Coast. Milling's leadership coastal protection efforts have been invaluable. As chairman of Governor Jindal's Advisory Commission on Coastal Protection and Restoration and chairman of the board for the America's WETLAND Foundation, he has led the charge for a sustainable Gulf Coast. Mr. Milling, through his leadership of the America's WETLAND Foundation and its initiatives, has been raising awareness about how America's Energy Coast is critical to the nation's energy and economic security.

3:30–4:30 PM **PRESENTATIONS****SESSION 1****The Human Spirit, Function, and Artificial Consciousness —Science Teaching—****(Chem)***(General)*

Room 238, Convention Center

Teresa A. Le Sage (*lesaget@uhv.edu*) and **Jane Devick Fry** (*fryj@uhv.edu*), University of Houston, Victoria, Tex.

This session explores the positive and negative futuristic human response(s) to a virtual universal intelligence consciousness, nano life-forms, and robots performing human functions.



SESSION 2

School Science Leaders: Professional Learning Communities That Work! —*Professional Development*— (Gen)

(General)

Room 240/241, Convention Center

Hyacinth Schaeffer (hyacinths@sciencealberta.org), Science Alberta Foundation, Calgary, Alta., Canada

Effective professional learning communities grow teacher leaders. Learn about the School Science Leaders program in Alberta, Canada, which provides a model of continuous professional learning for teachers.



SESSION 3

Supporting Science Literacy with 21st-Century Tools —*Science Teaching*— (Gen)

(Elementary–High School)

Room 242, Convention Center

Eric D. LeMoine (eric_lemoine@beavton.k12.or.us), Beavton (Ore.) School District

Explore digital tools to engage students with science content. See how digital concept mapping, clicker technology, document cameras, and interactive whiteboards can invigorate your teaching!

SESSION 4

NOAA Symposium Follow-Up Session: Free Coral Resources for the Classroom and Teacher Professional Development from NOAA and NSTA —*Science Education Program*— (Bio)

(Elementary–High School)

Room 256, Convention Center

Paulo Maurin (paulo.maurin@noaa.gov), NOAA, Silver Spring, Md.

Bruce Moravchik (bruce.moravchik@noaa.gov), NOAA National Ocean Service, Silver Spring, Md.

Explore coral-based educational materials developed for students and teachers. We will highlight the many free NOAA and NSTA online corals resources, including tutorials, lesson plans using real-time data, and professional development materials. Everyone will receive over 50 lesson plans centered on coral reefs, access to online NSTA materials, and engaging student activities.

SESSION 5

Shampoo or Soy Sauce? Middle-Level Density Activities —*Science Content*— (Chem)

(Middle Level)

Room 353, Convention Center

Rebecca Litherland (slitherland@pkwy.k12.mo.us), Parkway School District, St. Louis, Mo.

Meera Chandrasekhar, University of Missouri, Columbia

Hands-on activities develop concepts of density using household materials. We'll share problem solving, connections to everyday applications, and handouts.

SESSION 6

Simulating Science: Using Computer Simulations to Enhance Elementary and Middle School Science Instruction —*Science Content*— (Gen)

(Elementary–Middle Level)

Room 355, Convention Center

Lara Smetana (smetanall@southernct.edu), Southern Connecticut State University, New Haven

Randy L. Bell (randybell@virginia.edu), University of Virginia, Charlottesville

Ian C. Binns (ianbinns@lsu.edu), Louisiana State University, Baton Rouge
Learn how to use computer simulations to enhance science teaching and learning in grades 3–8. Receive a free CD containing inquiry-based lessons, links, and activities.

SESSION 7

Flower to Seed —Science Teaching— **(Bio)**
(Elementary) Room R02, Convention Center

Nancy Sableski (nancy_sableski@harvard.edu), Arnold Arboretum of Harvard University, Jamaica Plain, Mass.
Learn how to use indoor and outdoor classrooms to teach plant reproduction.

SESSION 8

Are Your Students Limited by the Context in Which You Teach? —Science Teaching— **(Gen)**
(Elementary) Room R05, Convention Center

Nancy Chesley and **Lynn C. Farrin**, Maine Mathematics and Science Alliance, Augusta
Can your students transfer their understanding of essential science concepts beyond the context in which they were taught? Learn how to open students' minds to the application of new knowledge.

SESSION 9

Physical Science Quickies —Professional Development— **(Phys)**
(Preschool–Middle Level) Room R07, Convention Center

Leon L. Ukens (ukens@towson.edu), Towson University, Towson, Md.
Dale Freeland, Portage Central High School, Portage, Mich.
Timothy Cooney (cooneyt@uni.edu), University of Northern Iowa, Cedar Falls
Arthur Hammon, NASA/Jet Propulsion Laboratory, Pasadena, Calif.
Karen L. Ostlund (klostlund@mail.utexas.edu), Retired Educator, Austin, Tex.
Robert H. Poel (bob.poel@wmich.edu), Western Michigan University, Kalamazoo
Wayne Snyder (wsnyder@caltech.edu), Claremont Graduate University, Claremont, Calif.
Presider: Leon L. Ukens

Presenters involved with Operation Physics and Operation Primary Physical Science will demonstrate several physical science activities aimed at elementary/middle school students.

SESSION 10

Engineer Your Life: Talking to High School Girls About Engineering —Science Teaching— **(Gen)**
(General) Belle Chasse, Hilton

Natalie A. Hebshie (natalie_hebshie@wgbh.org), WGBH Educational Foundation, Boston, Mass.
Want to inspire more girls to explore engineering? Learn about the research-based Engineer Your Life campaign and gain practical tips for communicating with girls about engineering.

SESSION 11

Science Education Professional Development Through Technology —*Science Teaching*— **(Gen)**

(General)

Elmwood, Hilton

Anthony F. Sky and **Elizabeth Niehaus** (*niehaus_p@msn.com*), Lawrence Technological University, South Lyon, Mich.

Paul J. Niehaus (*niehaus_p@msn.com*), Niehaus and Associates, Inc., South Lyon, Mich.

Carol L. Jones (*cjones@misd.net*), Macomb Intermediate School District, Clinton Township, Mich.

Over the last 12 years we have incorporated multiple types of technology in our professional development grants at Lawrence Technological University. We will share the types of technology our teachers use and the resources available to sustain the use of technology in the classroom.

SESSION 12 (two presentations)

(General)

Norwich, Hilton

Maria Montessori and the Inquiry Process —*Science Teaching*— **(Gen)**

Dan Carroll, Yorktown High School, Arlington, Va.

Learn to use the Montessori Method to engage your elementary, middle, or high school students in inquiry. Free stuff!

Supporting the Scientific Inquiry Process with UDL —*Science Teaching*—

(Gen)

Mindy Johnson (*mjohnson@cast.org*), **Jenna Wasson** (*jwasson@cast.org*), **Seoin Lim** (*slim@cast.org*), and **Gabrielle Rappolt-Schlichtmann** (*gschlichtmann@cast.org*), CAST, Inc., Wakefield, Mass.

Support scientific inquiry in your classroom by using technology and applying the principles of Universal Design for Learning (UDL).

SESSION 13

The New SAT Subject Test in Biology: A Tool for Assessing Both Biology Curriculum and Biology Students —*Assessment*— **(Bio)**

(High School–College)

Maurepas, JW Marriott

Israel Solon, Educational Testing Service, Princeton, N.J.

Nancy Ramos, Health Careers High School, San Antonio, Tex.

Learn how the SAT Subject Test in Biology is assembled and scored and proposed changes that will enhance its value for evaluating an introductory biology curriculum.

SESSION 14

Developing a Virtual Workshop About Climate Change —*Science Teaching*—

(Env)

(General)

Bacchus, New Orleans Marriott

Carol E. Landis, The Ohio State University, Columbus

I will present the development of a virtual course about climate change, aimed at teen through adult learners, and lessons learned in the process.

SESSION 15

Teaching About Evolution and Global Warming in Colorado —*Science Teaching*— **(Gen)**

(General)

Bonaparte, New Orleans Marriott

Sarah B. Wise (sarah.wise@colorado.edu) and **Susan M. Buhr**, University of Colorado at Boulder

Presider: Sarah B. Wise

A new study describes Colorado teachers' perspectives on and experience with teaching about evolution and global warming. Learn what this study suggests for teachers in the classroom.

SESSION 16

Grow Students NOT Grades —Assessment—

(Gen)

(Supervision/Administration)

Jackson, New Orleans Marriott

Julie Long (longj@guilderlandschools.org) and **Todd Hilgendorff** (hilgendorfft@guilderlandschools.org), Farnsworth Middle School, Guilderland, N.Y.

Link achievement targets with assessment methods. We'll share sample assessments and methods for communicating measurable student performance.

SESSION 17

C.H.O.I.C.E.S. (Choices Honoring Our Involved, Committed, and Engaged Students) —Science Teaching—

(Bio)

(High School)

Bayside A, Sheraton

Jacquelyn H. Bailey (jbailey@whitfield.k12.ga.us), Southeast Whitfield High School, Dalton, Ga.

Gregory L. Bailey (gbailey@whitfield.k12.ga.us), Whitfield County Schools, Dalton, Ga. C.H.O.I.C.E.S. is a bookless curriculum-delivery model designed to provide assignment choices for students. This instructional method is designed to correlate directly with state standards.

SESSION 18

One Hundred and One GREAT Internet Resources for Teaching Science —Science Teaching—

(Gen)

(Middle Level–High School)

Edgewood A/B, Sheraton

Patricia C. Duncan (duncanpatti@netzero.net), Wallenpaupack Area High School, Hawley, Pa.

The internet has opened a whole new world for educators. Come find out about 101 (and more!) great resources for making great science lessons.

SESSION 19

What Do Our Students Really Think About Weight, Volume, and Matter? —Science Content—

(Phys)

(General)

Napoleon A1&2, Sheraton

Sally Crissman, Education Development Center, Inc., Newton, Mass.

Learn about research into students' ideas about weight, volume, and matter and about third-grade curriculum, assessments, and teacher materials for a learning progression.

SESSION 21 (two presentations)

(General)

Napoleon A3, Sheraton

CDC's Science Ambassador Professional Development Program —Science Teaching—

(Bio)

Alice Boone and **Lynderia C. Cheevers**, Centers for Disease Control and Prevention, Atlanta, Ga.

The Centers for Disease Control and Prevention's Science Ambassador Program is a five-day

professional development opportunity for middle and high school science teachers. Teachers create public health–based lesson plans in collaboration with CDC scientists.

NIDA Goes Back to School: Science-based Information on Drug Abuse for Educators —*Science Teaching*— (Bio)

Brian Marquis (*bmarquis@nida.nih.gov*), National Institute on Drug Abuse, Bethesda, Md.

The NIDA Goes Back to School campaign offers educators science-based resources that explain the consequences of drug abuse and complement classroom curricula.

SESSION 22 (two presentations)

(*Middle Level–High School*)

Napoleon B3, Sheraton

Rainfall and Flash Floods: An Investigation —*Science Teaching*— (Earth)

Joshua D. Roberts (*joshua.roberts@dpsnc.net*) and **Sam Fuerst** (*sam.fuerst@dpsnc.net*), Northern High School, Durham, N.C.

By comparing local streamflow data from the USGS and rainfall data from your school’s rain gauge, students can understand how flash floods occur.

GLOBE’s Earth System Science Project: Watershed Dynamics —*Science Teaching*— (Earth)

Colleen K. Buzby (*c-buzby@northwestern.edu*), Northwestern University, Evanston, Ill.

David Smith (*dasmith@globe.gov*), University Corporation for Atmospheric Research, Boulder, Colo.

Learn how to use My World GIS to teach about water availability.

SESSION 23

An Easy Way to Use the Web to Create Student-oriented Projects —*Assessment*— (Earth)

(*Elementary–High School*)

Napoleon C1, Sheraton

Elizabeth A. Blanton (*eblanton@vdoh.org*), Villa Duchesne/Oak Hill School, St. Louis, Mo.

Presider: Pamela Blanton, Villa Duchesne/Oak Hill School, St. Louis, Mo.

I will introduce you to free, easy websites you can use to create web-based activities. Topics include gems, climate, and astronomy.

SESSION 24

Web-based Space Lessons Use Videos: Virtual Labs with Pizzazz —*Science Teaching*— (Earth)

(*Middle Level–High School*)

Napoleon C3, Sheraton

Kenneth L. Huff (*khuff@williamsvillek12.org*), Williamsville (N.Y.) Central School District

Beth McKnight (*beth@mcknightcommunications.com*), SpaceClass, Albany, Ore.

Engage students with web-based instructional videos featuring NASA astronauts, aerospace experts, and popular speakers like Dr. Neil deGrasse Tyson—followed by online quizzes, literacy segments, and virtual lab experiments on research actually being conducted for space exploration. Discover *www.spaceclass.org*, which offers a rich menu of lessons to help students learn and integrate STEM core content knowledge.

SESSION 25**Metrics Made Easy —Science Content—****(Gen)***(Middle Level–High School)**Napoleon D3, Sheraton*

Angela Shoemate (ashoemate@skiatook.k12.ok.us), **Sherrie Redding** (sredding@skiatook.k12.ok.us), and **Sherri Stuckey** ([sstuckey@skiatook.k12.ok.us](mailto:ssstuckey@skiatook.k12.ok.us)), Skiatook Newman Middle School, Skiatook, Okla.

All sciences measure in the metric system. Discover a simple way to teach metrics so all science students can learn easily. Lessons included.

SESSION 26**The Element Walk —Science Content—****(Chem)***(Informal Education)**Salons 817 & 821, Sheraton*

Dennis Smithenry (dsmithenry@scu.edu), Santa Clara University, Santa Clara, Calif.

Take your students on a walk and quickly teach them about the elements that exist in the world around them.

SESSION 27 (two presentations)*(Middle Level–College)**Salons 825 & 829, Sheraton***Enhancing Creative Productivity by Using the 4E-C Learning Model for Scientifically Gifted and Talented Students —Science Teaching—****(Phys)**

Sumalee Waiyarod (sumalee@mwit.ac.th), Mahidol Wittayanusorn School, Nakorn Pathom, Thailand

This new learning model was designed to improve gifted and talented students' creative productivity in science. The activities focus on independent inquiry and communication skills.

Reel In Your Students with Screencasts —Science Teaching—**(Phys)**

Allison B. Radtke, Central Catholic High School, Morgan City, La.

Eliminate the need to explain yourself over and over by creating screencasts of example problems. Best of all—it's free and easy to use.

3:30–4:30 PM WORKSHOPS**Lessons from the Ice —Science Content—****(Earth)***(Elementary–Middle Level/Informal Education)**Room 239, Convention Center*

Carolyn T. Sumners (csumners@hmns.org), Houston Museum of Natural Science, Houston, Tex.

Patricia Reiff (reiff@rice.edu), Rice University, Houston, Tex.

These hands-on lessons include Polar Update software for the classroom. Lessons span a century, from the sinking of the *RMS Titanic* to changes at the Poles today.

Human Footprint Activities for Young Learners —Science Content—**(Env)***(Elementary)**Room R01, Convention Center*

Carol Bliese (cbliese@popconnect.org), Population Connection, Washington, D.C.

Engage in memorable, interdisciplinary activities that help students understand the human ecological footprint and the challenges of sharing finite resources as our population grows. Free CD-ROM!

Creative Expressions in Science —Science Teaching— (Earth)
(Elementary) Room R03, Convention Center

Lollie Garay, Redd School, Houston, Tex.

Nancy Tashima (tashima@aloha.net), Onizuka Space Center, Kailua-Kona, Hawaii

Experience the elegant choreography of science, movement, art, and prose as you explore the properties of ice as matter.

Weaving the Science as Inquiry Tapestry in Grades K–3 —Science Teaching— (Gen)

(Elementary)

Room R04, Convention Center

J. Christine Paulsell (j.christine.paulsell@stpsb.org), St. Tammany Parish School, Covington, La.

Engage the K–3 learner in Science as Inquiry while weaving the characteristics of nonfiction literature to create Science as Inquiry literacy stations.

Dress Like the Frizz —Science Teaching— (Gen)

(Elementary)

Room R06, Convention Center

Nikki K. Allen, Hampton, Ga.

Sharlet L. Moore (sharletlmoore@yahoo.com), Fayette, Miss.

Tired of doing the same bulletin boards every year? Save your information—design clothes that show the lesson of the day.

Enriching Your Classroom Using Gold and Oil —Professional Development— (Gen)

(General)

Jasperwood, Hilton

Ruth E. Knight (rknight@cvinet.net), Valdez (Alaska) City School District

Engage in lessons on the relevancy and effects of gold and oil on the lives of people in Alaska, the nation, and the world.

D.I.Y. Forensics —Science Teaching— (Gen)

(General)

Oak Alley, Hilton

Jennifer M. Edginton (jennifer.edginton@msichicago.org) and **April Chancellor** (april.chancellor@msichicago.org), Museum of Science and Industry, Chicago, Ill.

Presider: Jennifer M. Edginton

With forensics in the media, teachers have started to bring forensics to the classroom. Learn how to develop forensic skills and activities on a budget.

Teach Chemistry with Hydrogen and Fuel Cells —Science Content— (Chem)

(High School–College)

Ile de France I, JW Marriott

Barbara Nagle (bnagle@berkeley.edu) and **John Howarth** (john_howarth@berkeley.edu), Lawrence Hall of Science, University of California, Berkeley

Try some classroom activities that teach hydrogen and fuel cells in the context of alternative energy issues and chemistry topics such as oxidation/reduction reactions.

Science Compacting —Science Teaching— (Gen)

(General)

Ile de France III, JW Marriott

Robert B. Shaw (rshaw@micds.org), Mary Institute and Saint Louis Country Day School, St. Louis, Mo.

Learn about curriculum compacts to maximize inquiry, standards, rigor, academic choice,

and meaningful student learning through backward design of knowledge acquisition, exploration, and demonstration activities.

NESTA Session: National Earth Science Teachers Association Rock and Mineral Raffle —Professional Development— (Earth)

(General)

Bissonet, New Orleans Marriott

Wilene Rigbsby, Retired Educator, North Little Rock, Ark.

Roberta M. Johnson (rmjohnsn@ucar.edu), University Corporation for Atmospheric Research, Boulder, Colo.

Participants will have a chance to win display-quality specimens of rocks, minerals, fossils, and other earth science–related materials for their classrooms.

Introducing a New NOAA (National Oceanic and Atmospheric Administration) Interdisciplinary Curriculum: POET (Protect Our Environmental Treasures) —Science Content— (Env)

(Middle Level–High School)

La Galerie 5, New Orleans Marriott

Carrie McDougall, NOAA, Washington, D.C.

Learn about and receive the new NOAA POET curriculum, an interdisciplinary Earth systems science program designed to encourage better understanding of our planet and the effects human actions have on it. You will be engaged in completing two lessons and discussing ideas on implementing this curriculum in middle and high school.

Amazing Anatomy Finds —Science Content— (Bio)

(Middle Level–College)

Borgne, Sheraton

Melanie Hester (mhester@fsu.edu), Florida State University Schools, Tallahassee

I'll share the best of the best anatomy and physiology activities I have collected, stolen, and adapted from 15 years of going to NSTA conferences.

Measuring the Monster in the Middle: Black Holes and Active Galactic Nuclei —Professional Development— (Earth)

(High School)

Napoleon B2, Sheraton

Robert T. Sparks, National Optical Astronomy Observatory, Tucson, Ariz.

Pamela Whiffen (pwpwr@aol.com), NASA/Scottsdale Unified School District, Phoenix, Ariz.

Learn about the exciting science of black holes and the Gamma Ray Large Area Space Telescope (GLAST). Free teacher's guide.

JetStream: An Online School for Weather —Science Teaching— (Earth)

(Elementary–High School)

Napoleon C2, Sheraton

Dennis Cain (dennis.cain@noaa.gov), National Weather Service, Fort Worth, Tex.

Explore the free website JetStream, a useful resource for students or teachers desiring information and help in teaching weather.

Determining What Is Beneath Our Feet: Applying the Reflection and Refraction of Waves (IRIS) —Professional Development— (Phys)

(High School)

Salons 816 & 820, Sheraton

John Taber (taber@iris.edu), IRIS Consortium, Washington, D.C.

Juan M. Lorenzo, Louisiana State University, Baton Rouge

Explore how seismic refraction surveys reveal shallow earth structure by participating in innovative activities designed as extensions to your current wave/optics labs.

3:30–4:30 PM EXHIBITOR WORKSHOPS

Recipe for Sustainable Science (Gen)

(Grades 6–10)

Room 211, Convention Center

Sponsor: Fisher Scientific Education

Brooke Carson and **Greg Sloan**, Beyond Benign, Hanover Park, Ill.

Learn how to introduce your middle or high school students to the 12 principles of green chemistry. Through a dynamic business simulation, students learn the foundations of a chemical process and implement critical decision-making skills while considering sustainability. Experience hands-on activities and receive an overview of this 10-day interdisciplinary curriculum.

EarthComm: High School Guided Inquiry (Earth)

(Grades 6–8)

Room 212, Convention Center

Sponsor: It's About Time

Jack Deyton, It's About Time, Armonk, N.Y.

Participate in activities and real-world challenges that have been developed for high school students by the education experts at the American Geological Institute. We will include an overview of the full-year curriculum, web links, materials, and professional development. Leave with a practical hands-on activity that you can do in your classroom. Hear from teachers who have used the program and find out how it's working with their students.

Closer Look at a Unit (Gen)

(Grades K–6)

Room 213, Convention Center

Sponsor: Science A–Z.com (brought to you by Learning A–Z)

Bob Holl and **Elizabeth Ackerman**, Learning A–Z/Science A–Z, Tucson, Ariz.

Learn the ins and outs of a Science A–Z lesson as you make a leveled science reader, use multi-leveled Quick Reads to assess comprehension, play science games, watch a slideshow, engage in a leveled discussion of key science concepts, and have fun!

3:30–5:00 PM WORKSHOP

DUPONT Session: DuPont Presents—Connecting Science and Math Inquiry Through Formative Assessment —Science Teaching— (Gen)

(Elementary)

Southdown, Sheraton

Dorothy Moss (dmoss@clemsun.edu) and **Sandra Linder** (smamman@clemsun.edu), Clemson University, Pendleton, S.C.

We will examine strategies for formative assessment in inquiry-based classrooms through a hands-on investigation.

3:30–5:30 PM WORKSHOP

AMSE Session: Multicultural Science Activities for Urban and Suburban Grades 8–12 —Science Teaching— (Gen)

(Middle Level—College/Supervision)

Ascot, Hilton

Mary M. Atwater (atwater@uga.edu) and **Mario Watkins** (mwatki4022@bellsouth.net), The University of Georgia, Athens

CANCELED

Join us for hands-on multicultural science activities and evaluation suggestions for urban and suburban students in grades 8–12.

4:30–6:00 PM MEETING

National Earth Science Teachers Association (NESTA) Membership Meeting

Bissonet, New Orleans Marriott

For additional information, visit *nestanet.org*.

5:00–5:30 PM PRESENTATION

SESSION 1

Using Probes to Probe for Misconceptions —*Science Teaching*— (Gen)

(High School–College/Supervision)

Bonaparte, New Orleans Marriott

Robert L. Ferguson (*r.l.ferguson1@csuohio.edu*), Cleveland State University, Cleveland, Ohio

The common availability of handheld digital sensors (aka probes) opens up a new avenue in understanding, describing, and addressing misconceptions.

5:00–6:00 PM PRESENTATIONS

SESSION 1

The Perfect Inquiry Science Lesson —*Science Teaching*— (Gen)

(Elementary–Middle Level)

Room 351, Convention Center

Debra L. Mullinnix (*mullinnixd@uhd.edu*), University of Houston-Downtown, Houston, Tex.

Learn how to design effective inquiry science lessons. Suggestions for choosing the most effective inquiry activities, designing appropriate formative assessments, scaffolding debriefing questions to promote student learning, and relating the concept to “real life” will be described and modeled.

SESSION 2

Abstract Concepts for the Concrete Mind: Techniques and Lessons to Engage

Middle School Students —Science Teaching—

(Gen)

(Middle Level)

Room 354, Convention Center

Tracy M. Bratzke and **Nicole McRee** (*nicole_n52@hotmail.com*), Grayslake Middle School, Grayslake, Ill.

We have created a variety of units, lessons, and models in chemistry and life science that can be integrated into your current curriculum immediately or modified to fit the needs of your students.

SESSION 3

Pathways to Inquiry: Assessing and Teaching Inquiry Skills in Earth Science

—Assessment—

(Earth)

(Middle Level)

Room 357, Convention Center

Pamela B. Blanchard (*pamb@lsu.edu*), Louisiana State University, Baton Rouge

The PTI online assessment tool and lesson portal (*http://pti.lsu.edu*) enable earth science

teachers to identify inquiry-skill strengths/weaknesses and discover lessons to strengthen identified inquiry-skill weaknesses.

SESSION 4

I See the Light! Exploring the Fundamental Properties of Light with Young Children —Science Teaching— (Phys)

(Preschool/Elementary)

Room R03, Convention Center

Christina M. Ryan, Cambridgeport School, Cambridge, Mass.

Andrew Duffy (aduffy@bu.edu), Boston University, Boston, Mass.

Make the properties of light concrete for young learners (preK–2) through inquiry-based explorations of mirrors, prisms, simple lenses, flashlights, and color.

SESSION 5

Energy and the Polar Environment in the Elementary Classroom —Science Content— (Gen)

(Elementary)

Room R04, Convention Center

Jessica Fries-Gaither (fries-gaither.1@osu.edu) and **Kimberly Lightle** (lightle.16@osu.edu), The Ohio State University, Columbus

See how energy consumption and development affect the Arctic and Antarctic environments and examine strategies for developmentally appropriate instruction.

SESSION 6

Finding Funding —Professional Development— (Gen)

(General)

Newberry, Hilton

JoEllen Schuleman (missschuleman@yahoo.com), P.S. 134 Henrietta Szold, New York, N.Y.

Ever had an amazing idea but no way to fund it? Grants are within your reach! Discover some easy ways to get funding and grant sources to enrich your classroom, your knowledge, and your school.

SESSION 7

An Innovative Model System for Teaching Biological Molecular Structures and Genetic Processes —Science Teaching— (Bio)

(High School–College)

Maurepas, JW Marriott

Vernon W. Bauer, Francis Marion University, Florence, S.C.

Join me for an overview of an innovative teacher-developed model system that facilitates students' understanding of DNA, RNA, and protein structure and their interactions during replication, transcription, and translation.

SESSION 8

Free Teacher-developed Climate Change CD —Professional Development— (Env)

(General)

Bacchus, New Orleans Marriott

Mark Maley (mmaley5788@sbcglobal.net) and **Ron Pilatowski** (ron@linworth.org), Linworth Alternative Program, Worthington, Ohio

Carol E. Landis, The Ohio State University, Columbus

Donna Maley, Dublin Davis Middle School, Dublin, Ohio

This free CD is a resource that simplifies and/or streamlines the amount of information available on the internet that deals with global climate change.

SESSION 9**Unintimidated and Unashamed: Teaching Evolution to Religious Students**
—*Science Content*— **(Bio)***(Middle Level–High School)**Bayside A, Sheraton***Lee Meadows** (lmeadows@uab.edu), The University of Alabama at Birmingham

You're teaching students with religious objections to evolution. Here's an approach that avoids confrontation, engages them in the evidence, and respects their beliefs.

SESSION 10**Using Complexity to Understand the World** —*Science Content*— **(Gen)***(General)**Edgewood A/B, Sheraton*

Michelle I. Harth (harthc@gosaints.org) and **Chris Harth** (harthc@gosaints.org), St. Andrew's Episcopal School, Ridgeland, Miss.

Explore the apparent ubiquity and nature of complex systems. We'll share instructional materials and approaches to engage students in this critical emergent field.

SESSION 11**Harnessing Technology to Support Inquiry Curricula in the Urban High School**
—*Science Teaching*— **(Gen)***(High School)**Gallier A/B, Sheraton*

Jonathan McLaughlin (jmclaughlin4@boston.k12.ma.us) and **Patreka J. Wood** (pwood2@boston.k12.ma.us), Boston (Mass.) Public Schools

Scott Balicki, Boston Latin School, Boston, Mass.

Presider: John DioDato, Retired Educator, Needham, Mass.

Urban biology, chemistry, and physics teachers relate how they use a variety of technologies to enhance student learning as they implement inquiry curricula.

SESSION 12**The Live Surgical Broadcast: A Portal to STEMM+ Learning** —*Science Teaching*— **(Bio)***(High School)**Napoleon A3, Sheraton*

Nedra Starling (starlin@ccf.org), Cleveland Clinic Foundation, Cleveland, Ohio

Learn how to execute a live surgical broadcast with a premier medical institution. Engage students in STEMM+ learning. Watch a surgery and receive a DVD and accompanying curriculum.

SESSION 13**The Polar ARMADA: Teacher Research and Mentoring at the Poles** —*Professional Development*— **(Earth)***(Middle Level–High School)**Napoleon B3, Sheraton*

Gail Scowcroft and **Andrea Kecskes** (akecskes@gso.uri.edu), University of Rhode Island, Narragansett

The ARMADA Project places teachers in research environments from pole to pole. We'll look at the results, including classroom transfer, mentoring impacts, and professional growth.

SESSION 14**Historical Events in Effective Science Teaching** —*Professional Development*— **(Earth)***(General)**Napoleon C1, Sheraton*

Peter P. Chang (peterpchang@hotmail.com), Jackson State University, Jackson, Miss.

Inspire your students and enhance comprehension with a tale-telling style of science teaching that relates historical events to scientific discoveries.

5:00–6:00 PM WORKSHOPS



Digital Learning: Does It “Measure Up”? —*Science Content*— (Gen)

(Elementary–Middle Level)

Room 242, Convention Center

Shelanne C. Richard (shelanne@vrml.k12.la.us) and **Lori Carpenter** (loric@vrml.k12.la.us), Erath Middle School, Erath, La.

Elizabeth Ball and **Monica Moresi**, Herod Elementary School, Abbeville, La.

Participate in experiments requiring group communication, problem solving, higher-order thinking, and measurement skills using a variety of digital equipment as well as measuring tape, pH paper, and a stopwatch. The results of the experiments will be recorded via tables, charts, graphs, and written explanations. Participants will also receive copies of other lessons that incorporate digital learning.

The Nature of Science and Density in Middle School —*Professional Development*— (Chem)

(Elementary–Middle Level)

Room 353, Convention Center

Marianne C. Phillips (kumcp001@tamuk.edu), Texas A&M University-Kingsville-San Antonio

Illustrate the aspects of the nature of science with an investigation of density using interactive, online activities to gain an understanding of the relationship between mass and volume.

Exciting Engineering Ideas for Everyone —*Science Teaching*— (Gen)

(Elementary–Middle Level)

Room 355, Convention Center

Alison Dawn Fine (afine@rashi.org), The Rashi School, Newton, Mass.

Pick up ideas on planning a cheap but fun family science night. I will focus on several projects, including towers, boats, rockets, and bridges. The ideas are fantastic for all ages and can be adapted to the classroom environment.

Cloudy Day Hands-On and Online Classroom Adventures Bridge Fundamental Basic Weather Science to Literacy, Arts, and ELL —*Science Content*— (Earth)

(Elementary–Middle Level)

Room 356, Convention Center

Susan Q. Foster (susanf@ucar.edu), **Becca Hatheway** (hatheway@ucar.edu), **Roberta M. Johnson** (rmjohnsn@ucar.edu), **Randy M. Russell**, **Lisa Gardiner**, and **Sandra Henderson**, University Corporation for Atmospheric Research, Boulder, Colo.

This workshop offers hands-on and online student-centered approaches to teaching about how clouds form, common cloud types, and what clouds have to do with the weather. You will find it easy to explain the “ingredients of weather” using our no-cost, standards-aligned, and ready-to-go classroom activities exploring the kinetic energy of molecules, changes in gas volumes, air pressure, temperature, density, latent heat, and phase changes in water.

Push, Pull, and Perform! —*Science Content*— (Gen)

(Elementary/College)

Room R05, Convention Center

Sally M. Jean and **Deborah Black**, Keene State College, Keene, N.H.

After a simple jigsaw activity, we’ll put the pieces together to solve a puzzle. Leave with materials, lessons, and assessment guides.

What the...? What IS That? Science in a Box —Science Teaching— (Gen)
(Preschool/Elementary) Room R06, Convention Center

Tammy C. Brown (tbrown@uwa.edu), The University of West Alabama, Livingston
As participants explore mystery boxes, they naturally use science process skills to inquire as to what's in the box. Take home a mystery box.

Beyond the Bug Box: Science and Literacy in Early Childhood Classrooms —Science Teaching— (Gen)
(Preschool) Room R07, Convention Center

Kay Timme, Preschool/Primary Enrichment Services, Kingwood, Tex.
Explore appropriate classroom and field experiences that integrate science and literacy in preschool and kindergarten. Examine ways to use science as a springboard for literacy.

Food, Land, and People Resources for Learning —Science Teaching— (Gen)
(Elementary–High School) Jasperwood, Hilton

Ronald L. Towery, Mark A. McJunkin, Greg B. Meeks, and Ann Ross, Arkansas State University, State University, Ark.
Participate in sample hands-on activities from the Food, Land, and People curriculum.



Join your fellow NSTA Life Members for a breakfast filled with memories as well as meaning. Catch up with old friends, make new ones, trade war stories, and discuss ways to share your talents and vitality with the science education community.

NSTA Life Members Buffet Breakfast

Sunday, March 22

7:00–9:00 AM

New Orleans Marriott

La Galerie 5

Tickets are required (M-12)

On-site: \$45

For information on the Life Members Advisory Board, contact Joyce Tugel, chair, at jtugel@mmsa.org. Participation is limited to NSTA life members only.



The Great Nanotechnology Revolution —Science Teaching— (Gen)
(General) Oak Alley, Hilton

Joe Muskin (jmuskin@uiuc.edu) and **Matt Ragusa** (mtragusa@gmail.com), University of Illinois, Urbana

Janet Wattnem, Mahomet-Seymour CUSD #3, Mahomet, Ill.

Nanoscience will create millions of jobs and change the way we work. See what the buzz is about and get hands-on experience with nanotechnology.

Ready-to-Go Problems and Activities for Group Problem Solving in Chemistry, Biology, and Math —Science Teaching— (Gen)
(High School–College) Ile de France I, JW Marriott

Gretchen M. Adams (gadams4@uiuc.edu), **Tracey E. Hickox** (hickox@uiuc.edu), and **Jennifer R. McNeilly** (jrmcneil@uiuc.edu), University of Illinois at Urbana-Champaign, Urbana

Walk away with a packet of proven activities for engaging students in problem solving and improving conceptual understanding. Door prizes!

Making the Connection: How Digital Libraries Enhance 21st-Century Skills and Learning —Professional Development— (Gen)
(Elementary–High School) Ile de France II, JW Marriott

Robert P. Payo (rpayo@ucar.edu), The National Science Digital Library, Boulder, Colo.

Susan Van Gundy (vangundy@ucar.edu), NSTA Director, District XIV, and The National Science Digital Library, Boulder, Colo.

Applying skills needed in a 21st-century world requires examining and modifying existing teaching methods, particularly through effective use of online educational materials and technology.

Encourage Parents to Teach and Learn Science: If You Don't Teach the Parents...Then They Might Think You Have to Do All the Work! —Science Teaching— (Gen)
(General) Ile de France III, JW Marriott

Diane D. Walker (dwalker@nmsu.edu), New Mexico State University, Las Cruces

Christina N. Dragon (cdragon@email.smith.edu), Smith College, Northampton, Mass.

We will share practical and relevant suggestions for you to invite parents to participate in the science lives of their children. Hands-on activities!

Dendroclimatology: Using Tree Rings to Understand Climate —Science Teaching— (Env)
(Middle Level–High School) La Galerie 5, New Orleans Marriott

Anthony C. Derriso (derriso@mtnbrook.k12.al.us), Mountain Brook High School, Birmingham, Ala.

Learn how students can use trees on their campus as a natural archive of climate data to explore the climate history of their area.

Making Waves: Seismic Wave Activities and Demonstrations —Science Content— (Earth)
(Informal Education) Bayside C, Sheraton

Michael Hubenthal (hubenth@iris.edu) and **John Taber** (taber@iris.edu), IRIS Consortium, Washington, D.C.

We will share several activities for teaching seismic waves, including using a Slinky®, the human wave, online seismic wave animations, and software.

Years of Experience Applied to New Ventures —Professional Development—

(Chem)

(Middle Level–High School)

Napoleon B2, Sheraton

Patricia M. Mascolino (*mmmasco2@hotmail.com*), Union Catholic Regional High School, Scotch Plains, N.J.

Having 23 years of teaching “under my belt,” I participated in the UPenn MCE program. Wow! Student interaction, POGIL’s, and technology make science interactive.

Stellar Bar Codes —Science Content—

(Earth)

(General)

Napoleon C2, Sheraton

Donna L. Young (*donna.young@tufts.edu*), The Wright Center for Science Education, Tufts University, Medford, Mass.

Pamela Perry (*pperry@lewistonpublicschools.org*), Brunswick, Maine

Use spectra of different types of stars to investigate how the study of spectra provides scientists with important information about stellar temperatures and evolutionary history.

Soils: More Than the Dirt Under Your Feet —Science Teaching—

(Earth)

(Middle Level–High School)

Napoleon C3, Sheraton

Margaret A. Holzer (*mholzer@monmouth.com*), Chatham High School, Chatham, N.J.

Susan M. Schultz (*susan-schultz@nacdn.net.org*), National Association of Conservation Districts, Greenfield, Ind.

Clay Robinson (*crobenson@wtamu.edu*), West Texas A&M University, Canyon

Sherry Fulk-Bringman (*sherryfb@purdue.edu*), Purdue University, West Lafayette, Ind.

Soil science is the best-kept secret for meeting earth science, chemistry, and biology standards. Join us as we reveal this deep secret.

Gemstones in the Science Classroom —Science Teaching—

(Phys)

(Middle Level–High School)

Salons 816 & 820, Sheraton

Carl Wozniak (*cwozniak@nmu.edu*), Northern Michigan University, Marquette

Use rough and faceted gemstones to demonstrate physical science properties such as refraction, internal reflection, piezoelectricity, and chemical composition.

5:30–6:00 PM PRESENTATION

SESSION 1

Robots Explore Mayan Ruins —Science Teaching—

(Phys)

(Middle Level–High School)

Salons 825 & 829, Sheraton

Louise M. Prejean (*lprejean@louisiana.edu*), University of Louisiana at Lafayette

Andre Prejean (*andre.prejean@gmail.com*), Fugro, Arnaudville, La.

Our students apply physics concepts and learn programming as their robots explore Mayan ruins. We give them challenges with varying degrees of difficulty to provide opportunities to apply physics and programming skills.

6:00–6:45 PM PRE-BANQUET RECEPTION

(Tickets Required; \$40)

M-10

Versailles Ballroom, Hilton

Hors d'oeuvres and drinks will be served as you network with this year's NSTA teacher award recipients, corporate sponsors, Shell Science Seminar speakers, NSTA board and council, NSTA past presidents, and other distinguished guests. A limited number of tickets are available for this social event.

This event is sponsored in part by Shell.

Tickets, if still available, must be purchased at the NSTA Registration Area before 3:00 PM on Friday.

7:00–10:00 PM PRESIDENT'S BANQUET

A Celebration of Excellence

(Tickets Required; \$55)

M-11

Napoleon Ballroom, Hilton



Speaker

Philippe Cousteau

Co-Founder, President, and

Chief Executive Officer

EarthEcho International

Washington, D.C.

Join us for a very special evening featuring speaker Philippe Cousteau. Son of Philippe Cousteau, Sr., and the grandson of Captain Jacques-Yves Cousteau, Philippe is continuing the work of his father through EarthEcho International, the nonprofit organization he founded with his sister and mother

and on which he serves as CEO. Focused on youth leadership and education around ocean conservation, EarthEcho's mission is to foster extraordinary leaders to take action to restore and protect our oceans.

NSTA President Page Keeley will honor this year's teacher award recipients. The evening will be filled with special guests and a sustainable New Orleans dinner that is sure to tempt your palette. Evening attire is requested to honor our teacher award recipients.

Sponsored in part by NSTA.

Tickets, if still available, must be purchased at the NSTA Registration Area before 3:00 PM on Friday.

6:00 PM–12 Midnight **SPECIAL EVENING SESSION**A Stimulating Evening with the Late
Richard P. Feynman**Elmwood, Hilton**

Mitchell E. Batoff, Past President, New Jersey Science Teachers Association, Nutley

Gordon D. Clark, Retired Educator, Manalapan, N.J.

Presider: Donald E. Beahm, *Ophthalmologist*, Great Bend, Kans.

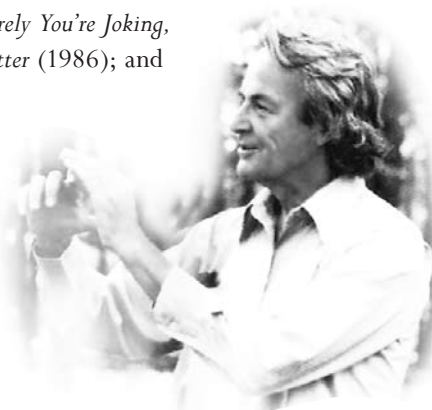
Be inspired, informed, motivated, and entertained by the life and contributions of this world-renowned luminary.

Savor six hours of vintage film—everything that exists—on the legendary physicist, Nobel Laureate, and charismatic teacher Richard P. Feynman (1918–1988). Be inspired and learn from this unusual personality who has been described as the “greatest mind since Einstein.” Some of this material has rarely been seen in the United States. We’ll look at the man, the teacher, the scientist, the artist, the safecracker, the actor, the bongo-drummer, the adventurer.

Experience what John Horgan calls “Feynmania, a condition of intellectual giddiness,” triggered by his quirky language; his idiosyncratic, iconoclastic brilliance and wit; his knack for making very profound points with simple ideas and anecdotes; his clear uncomplicated thinking; his persistent questioning of all assumptions; “his reflective, amusing, and ever enlightening wisdom”; and his prescient vision of computers and nanotechnology 50 years ago. He had a refreshingly enthusiastic view of life. A Times book reviewer considered Feynman a “storyteller in the tradition of Mark Twain, proving once again that it is possible to laugh out loud and scratch your head at the same time!”

At Caltech, Feynman became a legend during his lifetime, known not only for his science but also for his extraordinary ability to communicate its meaning to audiences at all levels. In 1982 he was honored by the Associated Students of the California Institute of Technology for his teaching excellence. His publications include *Surely You’re Joking, Mr. Feynman* (1985), *QED: The Strange Theory of Light and Matter* (1986); and *The Feynman Lectures on Physics* (1963).

Pick up ideas and a view on the nature of science that can influence your teaching. Receive a useful handout. Refreshments at halftime and door prizes galore throughout the evening—all pertaining to Feynman. Come and go, stay as long as you wish. Bring your dinner!





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Sunday, March 22

	Presentations/Workshops	General Sessions/Special Events	Shell Seminars	Exhibitor Workshops
8:00 AM				
9:00 AM				
10:00 AM				
11:00 AM				
12 Noon				
1:00 PM				
2:00 PM				
3:00 PM				
4:00 PM				
5:00 PM				
6:00 PM				
7:00 PM				
8:00 PM				

7:00–9:00 AM NSTA LIFE MEMBERS BUFFET BREAKFAST

(Tickets Required; \$45)

M-12

La Galerie 5, New Orleans Marriott

Looking for a morning filled with stories, songs, and activities? Then look no further. Join your fellow life members at this grand networking event.

Tickets, if still available, must be purchased at the Registration Area before 3:00 PM on Saturday.

8:00–9:00 AM PRESENTATIONS

SESSION 1

Removing Trichloroethylene from the Groundwater —*Science Content*— (Env)

(High School)

Room 204, Convention Center

Christopher D. Martin (christophe.martin@tusd1.org), Howenstine High Magnet School, Tucson, Ariz.

Learn how trichloroethylene contamination in the groundwater is treated with potassium permanganate. We'll explain this application of redox chemistry. Cross-curricular resources are available online.

SESSION 2

Analogical Approach to General Chemistry Teaching

(Chem)

(Middle Level–College)

Room 210, Convention Center

Peter P. Chang (peterpchang@hotmail.com), Jackson State University, Jackson, Miss.

Presider: Anil Waghe, Plymouth State University, Plymouth, N.H.

Discover a new approach to interpreting difficult but fundamental chemical principles with hit-home analogies and vivid demonstrations.

SESSION 3

Scientists as Professional Development Partners —*Science Teaching*— (Env)

(General)

Room 212, Convention Center

Robin W. McCartney, University of Louisiana at Lafayette

Candace B. Figg (cfigg@brocku.ca), Brock University, St. Catharines, Ont., Canada

Master-level students at the University of Louisiana worked with real scientists in the field in a collaborative effort to save the wetlands.

SESSION 4

Central Alabama Science Education Exchange (CASEE) —*Science Education System*— (Gen)

(Supervision/Administration)

Room 213, Convention Center

Beverly B. Radford (bevrad@uab.edu) and **Joan Dawson** (jdawson@uab.edu), The University of Alabama at Birmingham

Science program administrators from Birmingham Region systems discuss their collaboration on addressing issues affecting their K–12 programs, including how novices and veterans are learning from each other.

SESSION 5

Physical Science on a Shoestring —Science Teaching— (Phys)

(Elementary–Middle Level)

Room 220, Convention Center

Antonio M. Niro, Jr. (tonyniro@comcast.net), Goff Junior High School, Pawtucket, R.I.

Let me introduce you to high-interest hands-on physical science activities/demonstrations designed for use by middle-level grades. Emphasis is on low-/no-cost materials and how to get them.

SESSION 6

Our Solar System: Out-of-This-World Professional Development —Professional Development— (Earth)

(General)

Room 228, Convention Center

Steve Culivan, NASA Stennis Space Center, Stennis Space Center, Miss.

Develop a solar system curriculum by participating in focused NASA professional development. This overview will guide you through the procedure.

SESSION 7

The Magnet Lab: Magnets Is What We Do! —Science Content— (Phys)

(Middle Level–High School)

Room 231, Convention Center

Carlos R. Villa (villa@magnet.fsu.edu), National High Magnetic Field Laboratory, Tallahassee, Fla.

Take your lessons on magnetism and electromagnetism to the next level by using these ideas for lessons and activities that go well beyond ordinary electromagnetism. Everyone present will receive a unique souvenir.

SESSION 8



The Digital Evolution and Science Literacy with Virtual Notebooks —Science Teaching— (Gen)

(General)

Room 242, Convention Center

Teresa A. Le Sage (lesaget@uhv.edu) and **Jane Devick Fry** (fryj@uhv.edu), University of Houston, Victoria, Tex.

We will explore digital evolution and futuristic science inquiry literacy strategies that promote STEM disciplines with engaging virtual and concrete activities portrayed with virtual notebooks.

SESSION 9

Communicating the Evidence for Inquiry —Science Education System— (Gen)

(General)

Room 243, Convention Center

Lee Meadows (lmeadows@uab.edu), The University of Alabama at Birmingham

Hear evidence for the effectiveness of inquiry that is key to helping parents, administrators, and others outside of science teaching to better understand the move toward inquiry.

SESSION 10

Hollywood BAD Science —Science Content— (Gen)

(Middle Level–College)

Room 252, Convention Center

Daryl L. Taylor (booboo@darylscience.com), Greenwich High School, Greenwich, Conn.

Introduce science concepts by showing how Hollywood uses and abuses them! Movies, TV shows, and cartoons are fair game.

SESSION 11**Inflating Your Students' Imagination: Inflatable Teaching Tools —Science Content— (Gen)***(General)*

Room 254, Convention Center

Heidi L. Rhea (heidirhea@gmail.com), Tchefuncte Middle School, Mandeville, La.

Use duct tape, plastic sheeting, and a box fan to inexpensively create a variety of inflatables, including a planetarium, cells, biomes, ocean, and much more. Handouts and door prizes.

SESSION 12**NOAA Symposium Follow-Up Session: Watersheds—Connecting Your Backyard to Tropical Coral Reefs —Science Content— (Env)***(Informal Education)*

Room 256, Convention Center

Paulo Maurin (paulo.maurin@noaa.gov), NOAA, Silver Spring, Md.

You may live far from the sea but your actions still have an impact on the ocean. Watersheds connect marine ecosystems to vast sections of the country through estuaries, rivers, lakes, and streams. Although coral reefs reside in tropical coastal waters, they are still impacted heavily by land-based sources of pollution, especially sediment and nutrient run-off from land. Learn how the stream in your backyard is connected to rivers that flow into estuaries and then eventually make their way to the ocean! Free teaching materials provided by NOAA.

8:00–9:00 AM WORKSHOPS**Keeping It Clean and Green —Science Content— (Env)***(Middle Level—High School)*

Room 205, Convention Center

Susan G. Talkmitt (susan.talkmitt@ttu.edu), **Dean Fontenot** (dean.fontenot@ttu.edu), and **Audra Morse**, Texas Tech University, Lubbock**Betty Stennett**, BSCS, Colorado Springs, Colo.

Apply the engineering design process to reclaim water from a polluted watershed. Using science and math concepts, teams clean water to meet given requirements.

Fun Formative Assessments for the Biology Classroom —Science Teaching— (Bio)*(Middle Level—High School)*

Room 207, Convention Center

Sarah J. Anderson (sarah.anderson@ttu.edu), Texas Tech University, Lubbock

Assess your students without grading a single paper using these inductive lessons, concept attainment activities, vocabulary strategies, and other formative assessment opportunities.

NASA: Black Holes—Dividing by Zero Is Allowed (Sometimes) —Science Content— (Earth)*(General)*

Room 209, Convention Center

Jeff Adkins (astronomyteacher@mac.com), Deer Valley High School, Antioch, Calif.

Come to this NASA-sponsored workshop about black holes and find out what makes them tick. Hands-on activities designed by teachers for classrooms will be shared. Free NASA materials.

Sherlock Holmes Science “Forensic Science”: The Science of Intuition and the Research That Resolves the Mystery —Science Teaching— **(Bio)**

(Elementary–High School)

Room 211, Convention Center

Kenna L. Allen, Minor High School, Adamsville, Ala.

Experience professional and hands-on mini labs, including fingerprinting, DNA analysis, blood analysis, forensic anthropology, and much more. Take forensic resources back to your classroom.

LSU Coastal Roots Program = Ecological Stewardship + Environmental Literacy + Meaningful Science —Science Teaching— **(Gen)**

(General)

Room 214, Convention Center

Edward Bush and **Pamela B. Blanchard** (*pamb@lsu.edu*), Louisiana State University, Baton Rouge

Marlane Dows (*mdows@centralcss.org*), Central High School, Baton Rouge, La.

Jennifer C. Williams (*jwilliams@newmanschool.org*), Isidore Newman School, New Orleans, La.

Linda K. Messina, St. Joseph’s Academy, Baton Rouge, La.

Gina Callahan Egan and **Natalie Lartigue** (*nlartigue@mail.ppsb.org*), Belle Chasse Middle School, Belle Chasse, La.

Nessie Galliano (*ngalliano@olomschool.org*), Our Lady of Mercy Catholic School, Baton Rouge, La.

Kate Marchal (*kate.marchal@stmsaints.com*), St. Martin Episcopal School, Metairie, La.

David Bourgeois (*dbourgeois@agctr.lsu.edu*), Louisiana Sea Grant Marine Extension Program, Houma

Donna J. Boudreaux (*donnajboudreaux@cox.net; donnajane3@hotmail.com*), Jackson High School, Jackson, La.

Claudia Suazo (*suazocb@yahoo.com*) and **Mona Herbert** (*mona.herbert@jppss.k12.la.us*), Metairie Academy for Advanced Studies, Metairie, La.

Coastal Roots teachers will share how they combine science-based learning, native plant nurseries, and ecological stewardship to help their students become environmentally literate about coastal issues in Louisiana.

The Science of Bread Making —Science Teaching— **(Gen)**

(General)

Room 215, Convention Center

Vaughn Williams, Thomas C. Marsh Middle School, Dallas, Tex.

Explore polymers using the age-old process of bread making.

Hands On Means “Brains On” in the Elementary Science Lab —Science Education Program— **(Gen)**

(Elementary)

Room 217, Convention Center

Judy A. Young (*jyoung@pearl.k12.ms.us*), Pearl (Miss.) Public School District

Presider: Rosalind Langston, Pearl (Miss.) Public School District

Excite your students with hands-on “lab” activities. Turn “brains on” to science, math, technology, and literacy. Handouts and door prizes.

Rockin’ Earth Science —Science Teaching— **(Earth)**

(Elementary)

Room 218, Convention Center

Barbara Brightman (*barbara.brightman@sdhc.k12.fl.us*) and **Jonathan Gerlach** (*jonathan.gerlach@sdhc.k12.fl.us*), Hillsborough County Public Schools, Tampa, Fla.

Experience inquiry activities that can help your students understand earth science concepts. We'll investigate the different types of rocks, the rock cycle, and soil formation.

Mathnificent Scientific Experience, Part 2 —Science Teaching— (Gen)

(Preschool–Middle Level) Room 221, Convention Center

Shevinna M. Sims (*ssims2@cps.edu*), Johnnie Coleman Academy, Chicago, Ill.

Natasha Buckner-Peña and **Lorraine B. Wilson**, Chicago (Ill.) Public Schools

Motivate and engage your students with authentic hands-on math and science activities. See Volume 2 for Part 1.

Force and Motion: Energy Transfer Elementary Style —Science Teaching— (Gen)

(Preschool–Middle Level) Room 222, Convention Center

Alicia K. Foy, Discovery Key Elementary School, Lake Worth, Fla.

Presider: Leigha M. Phillips, Wellington, Fla.

Explore Newton's laws and use inquiry-based processes to learn how energy is transferred from one form to another.

Bringing Chemistry Home —Science Teaching— (Chem)

(High School) Room 227, Convention Center

Julie A. Cunningham (*jcunning@lakemills.k12.wi.us*), Lake Mills High School, Lake Mills, Wis.

Take-home labs are an excellent way for students to experience chemistry outside of the classroom—and also a unique method for involving family members.

It's About Time —Science Content— (Earth)

(Middle Level–High School) Room 229, Convention Center

Patricia H. Reiff, Rice University, Houston, Tex.

Carolyn T. Sumners (*csumners@hmns.org*), Houston Museum of Natural Science, Houston, Tex.

Learn about time sequences and software to analyze them. Explore real-world math problems using the Sun and take home a free DVD with *It's About Time* movie and activities.

Exploring Earth Begins at Home: Elementary GLOBE —Science Content— (Env)

(Elementary) Room 235, Convention Center

Lynne H. Hehr (*lhehr@uark.edu*) and **John G. Hehr** (*jghehr@uark.edu*), University of Arkansas, Fayetteville

Explore quick and easy language arts, math, and science integrated content. Experience the world of earth and environmental science (soils, earth systems, water, clouds, and seasons) in this hands-on inquiry- and content-driven session. Take home a CD with loads of materials.

Cockroaches in the Curious Classroom: Using Live Animals in Inquiry Science

—Science Teaching— (Bio)

(General) Room 253, Convention Center

Hollie A. Barattolo (*barattolo@ansp.org*), Academy of Natural Sciences, Philadelphia, Pa.

Use live invertebrates in your classroom to introduce scientific inquiry. Meet amazing cockroaches, try hands-on activities, and take resources back to your classroom.

9:30–10:30 AM PRESENTATIONS

SESSION 1

Excite Your Students Using an Innovative Website While Teaching About Aquatic Invasive Species —Science Content— (Env)

(Middle Level—High School/Informal Education)

Room 204, Convention Center

Dianne M. Lindstedt (*dlindst@lsu.edu*), Louisiana State University, Baton Rouge

Robin Goettel (*goettel@illinois.edu*), University of Illinois at Urbana-Champaign, Urbana

Learn about “Nab the Aquatic Invader,” an interactive website on aquatic invasive species, and take home ideas for environmental stewardship projects.

SESSION 2

Teaching Evolution: A 5E Nature of Science Lesson on Questioning —Science Teaching— (Bio)

(Middle Level—College)

Room 210, Convention Center

Kimberly Bilica (*kbilica@satx.rr.com*), The University of Texas at San Antonio

This 5E inquiry lesson plan helps learners distinguish questions of science from other types of questions about the world.

SESSION 3

Turn Your School into a GreenSchool! —Professional Development— (Env)

(General)

Room 212, Convention Center

Al Stenstrup and **Kathy McGlaufflin**, American Forest Foundation, Washington, D.C.

GreenSchools! is a new program of the American Forest Foundation that connects and builds on the success of Project Learning Tree (PLT) Whole Schools, PLT curricula, and GreenWorks! grants. Get your preK–12 school involved.

SESSION 4

Designing Quality Project-based Units for the Science Classroom —Science Teaching— (Gen)

(Supervision/Administration)

Room 213, Convention Center

Gail Dickinson (*gd14@txstate.edu*) and **Julie K. Jackson**, Texas State University, San Marcos

We will highlight research-based best practices for designing project-based units that address state and national standards while enhancing learning for students.

SESSION 5

21st-Century Lessons for the 21st-Century Student —Science Teaching—

(Chem)

(Middle Level—High School)

Room 227, Convention Center

Patricia C. Duncan (*duncanpatti@netzero.net*), Wallenpaupack Area High School, Hawley, Pa.

The kids in your classroom are NOT the same as those you taught as a new teacher. Learn about chemistry and earth/environmental lessons on the internet that really meet the needs of today’s student.

SESSION 6

Technology for Discovery to Analysis —Science Content— (Phys)

(High School)

Room 231, Convention Center

Katherine H. Morello (morellok@sjabr.org), St. Joseph’s Academy, Baton Rouge, La.

Simulation software leads to discovery of relationships in physics and as a launch pad for experimental design. Discover data collection and analysis using technology in 1-1 environment.

SESSION 7

Do the Clouds Suck? Guided Science for Children in Poverty —Science Teaching— (Gen)

(Elementary)

Room 237, Convention Center

Marilyn L. Fowler (mlfowler@austin.rr.com) and **Aida Alanis**, Austin (Tex.) Independent School District

We will share an approach and resources for small-group science interventions that raise achievement for children in poverty. Lessons provided will help you do the same.

SESSION 8



Addressing Societal Issues That Require Understanding of Science: Global Systems and NASA’s Digital Earth Watch —Science Content— (Env)

(Middle Level–High School)

Room 239, Convention Center

Alan Gould (agould@berkeley.edu), Lawrence Hall of Science, University of California, Berkeley

Incorporating vital societal issues in science courses is highly motivating. View Earth from a systems perspective and measure the health of our planet with Digital Earth Watch tools.

SESSION 9



Lessons Learned Over the Continuum —Professional Development— (Gen)

(General)

Room 242, Convention Center

Elizabeth Niehaus (niehaus_p@msn.com) and **Anthony F. Sky**, Lawrence Technological University, South Lyon, Mich.

Paul J. Niehaus (niehaus_p@msn.com), Niehaus and Associates, Inc., South Lyon, Mich.

Carol L. Jones (cjones@misd.net), Macomb Intermediate School District, Clinton Township, Mich.

After having more than five funded grant periods, we have learned many things in the professional development of grades 3–8 science teachers. Come see what has been revealed in the real-world implementation of research.

SESSION 10

Transformative Methods for Content Delivery and Assessment —Science Teaching— (Gen)

(General)

Room 243, Convention Center

Pamela G. Christol (christol@nsuok.edu), NSTA Director, District XIII, and Northeastern State University, Broken Arrow, Okla.

Rick W. Shelton (sheltorw@nsuok.edu), Northeastern State University, Broken Arrow, Okla.

Learn how podcasting, vodcasting, and wikis can complement and support content for almost any discipline and for both traditional and online teaching.

SESSION 11

AoA Session: Political Activism and Education (ASTE) —Science Education System— (Gen)

(General)

Room 252, Convention Center

Jon Pedersen (jep@unl.edu), University of Nebraska, Lincoln

Explore ways to advocate for and influence policy in education at the state and national levels.

SESSION 12

AoA Session: Research into Practice: Frameworks for Sequencing Rigorous and Focused Instructional Sequences (NARST) —Science Education Program— (Gen)

(General)

Room 253, Convention Center

Richard Duschl, Penn State University, University Park, Pa.

This session will provide substantive discussion between researchers and practitioners surrounding relevant research in science education.

SESSION 13

Differential Instruction in Science —Professional Development— (Gen)

(General)

Room 254, Convention Center

Sumita Bhattacharyya (sumita.bhattacharyya@nicholls.edu), Nicholls State University, Thibodaux, La.

Are you struggling every day not knowing how to deal with students' different needs? Participate in hands-on science activities designed to accommodate students' different learning styles.

9:30–10:30 AM WORKSHOPS

Investigating the Quality of Well Water: Mapping Total Dissolved Solids (TDS) with a Geographic Information System (GIS) (Env)

(Middle Level–High School)

Room 205, Convention Center

Carla M. McAuliffe (carla_mcauliffe@terc.edu), TERC, Tempe, Ariz.

Map and analyze factors affecting water quality. If possible, bring your charged laptop to work along with the facilitator. Leave with a free CD of activities.

What's Up, Part 1? Classroom Activities from the Association of Astronomy Educators (AAE)—Sun, Earth, and Planets —Science Content— (Earth)

(Informal Education)

Room 208, Convention Center

Emilie Drobnes (emilie.drobnes@nasa.gov), NASA Goddard Space Flight Center, Greenbelt, Md.

Jacob Noel-Storr (jake@cis.rit.edu), Rochester Institute of Technology, Rochester, N.Y.

Presider: Aleya Van Doren, NASA Goddard Space Flight Center, Greenbelt, Md.

Master astronomy teachers from the Association of Astronomy Educators (AAE) will share classroom-ready hands-on astronomy activities that really work. See page 144 for Part 2.

Impact: Earth! —Science Content— (Earth)

(Informal Education)

Room 209, Convention Center

Carolyn T. Sumners (csumners@hmns.org), Houston Museum of Natural Science, Houston, Tex.

Patricia Reiff, Rice University, Houston, Tex.

Just how much damage can a space rock do? Find out during this engaging and a little frightening workshop about asteroids and comets impacting Earth in the past and future.

Interactive Chromatography in the Classroom —Professional Development— (Chem)

(Middle Level—College)

Room 211, Convention Center

Charles A. Smith, Our Lady of the Lake University, San Antonio, Tex.

In this workshop each participant actually becomes part of a chromatographic separation, including being injected onto a column and experiencing diffusion, solubility, and ultimately detection.

Kicking It Up a Notch! Spicing Up Your Professional Development —Professional Development— (Gen)

(General)

Room 214, Convention Center

Jennifer Shinnors (jennifer.shinnors@esc13.txed.net) and **Deborah Rang** (deborah.rang@esc13.txed.net), Education Service Center Region XIII, Austin, Tex.

Designing meaningful and fun professional development can be a challenge. Wow participants with simple interactive strategies aimed at maximizing learning for students of all ages.

Professional Learning Does Not Have to Be Boring: Play with Cards, Perform Magic, and Do Puzzles —Professional Development— (Gen)

(General)

Room 215, Convention Center

Cindy H. Bray, **Jennifer Bernabo** (jennifer.bernabo@pisd.edu), and **Linda Flack**, Plano (Tex.) Independent School District

Presider: Deborah Johnston, Plano (Tex.) Independent School District

Professional learning can be research based...and be meaningful and fun. Apply strategies in science to increase critical thinking, cognition, and excitement. Activities provided.

Science in a Box —Science Content— (Gen)

(Preschool/Elementary)

Room 216, Convention Center

Loren Barrios (loren.barrios@la.gov) and **Nicholy Johnson** (nicholy.johnson@la.gov), Louisiana Dept. of Education, Baton Rouge

These hands-on activities for grades preK–2 can be used in whole or small groups or in learning centers. ECERS-R recommendations for preK will be included, and connecting fiction and nonfiction literature will be demonstrated.

G.A.L.S. (Girls About Loving Science) —Science Teaching— (Gen)

(Elementary)

Room 217, Convention Center

Sharon Betty (sbett@dentonisd.org), Denton (Tex.) Independent School District

Learn games, vocabulary development strategies, journaling techniques, and other best practices to accelerate girls (and guys, too) in science.

CSI: Alien Encounter on the Moon —Science Teaching— (Earth)

(Middle Level)

Room 218, Convention Center

Margaret Baguio (baguio@tsgc.utexas.edu), Texas Space Grant Consortium, Austin

R. Joyce Hill (jhill@ems-isd.net), Highland Middle School, Saginaw, Tex.

Become a CSI investigator to discover who destroyed the robot on the mission to the moon.

AMSE Session: Biome, Biome...That's My Home —Science Teaching— (Env)
(Elementary–Middle Level) Room 219, Convention Center

Brenda L. Tyndall, Gateway Middle School, St. Louis, Mo.

Get exposed to the different biomes of the world and take home some hands-on lessons.

Beat the Science Blues! Transform Activities into Inquiry —Science Teaching— (Gen)

(Elementary–Middle Level)

Room 221, Convention Center

Nancy M. Williams (nancym.williams@slps.org), St. Louis (Mo.) Public Schools

Wanicha Disharoon (wanicha.disharoon@slps.org) and **Frank Neal** (frank.neal@slps.org), Jefferson Elementary School, St. Louis, Mo.

Jazz up your elementary science classroom with these proven strategies involving students in authentic science inquiry, notebooking, and conferencing without changing your existing curriculum materials.

Brown Bear: More Than an Animal —Science Teaching— (Gen)
(Elementary) Room 224, Convention Center

Carlie D. Burton (carlie.burton@ttu.edu) and **Sarah J. Anderson** (sarah.anderson@ttu.edu), Texas Tech University, Lubbock

Bring science to life for elementary children with favorite literature resources. Guide children to learn through hands-on science activities that give books real-life connections.

Sense-ational Science Throughout the Seasons —Science Teaching— (Gen)
(Elementary–Middle Level) Room 225, Convention Center

Donita L. Legoas (donitalego@aol.com) and **Kristina R. Istre** (istrekris@aol.com), Diamond Lakes Elementary School, Augusta, Ga.

Wake up, students, and put away the textbooks! We will share ideas for integrating art, science, and the senses while still covering standards!

Let's Get Excited! Exciting Students with Exciting Chemistry —Science Teaching— (Chem)

(High School)

Room 228, Convention Center

Cylinda S. Barron and **Lynne Junot** (martha.junot@stpsb.org), Fontainebleau High School, Mandeville, La.

These hands-on activities, demonstrations, and resources engage learners in two areas of inquiry—excited electrons (modern atomic theory) and excited molecules (gases). *Note:* Activities available for the first 30 participants.

Maps from the Milky Way to the Hallway —Science Content— (Earth)
(Middle Level–High School/Informal Education) Room 229, Convention Center

Randall H. Landsberg (randy@oddjob.uchicago.edu), **Reid Sherman**, and **Robert B. Friedman** (rfriedman@uchicago.edu), The University of Chicago, Ill.

Test-drive fun and challenging student mapmaking activities that reach the edge of the galaxy. Explore scale, coordinates, topology, astronomy, and, where appropriate, technology (e.g., GPS).

Hands-On Activities for Teaching the Basic Physical Quantities of Mechanics
—*Science Teaching*— (Phys)

(High School)

Room 230, Convention Center

Timothy M. Ritter (tim.ritter@uncp.edu), **Peter A. Wish**, and **Rachel A. McBroom** (rachel.mcBroom@uncp.edu), The University of North Carolina at Pembroke

Gain hands-on experience in conducting proven, low-cost classroom activities that effectively teach the quantities of velocity, acceleration, force, work, and kinetic energy. Handouts provided.

Everything I Ever Needed to Know About Science I Learned in Kindergarten
—*Science Teaching*— (Phys)

(Elementary)

Room 232, Convention Center

Elaine M. Beck (ebeck@lsua.edu), **Melissa Soileau** (msoileau001@lsua.edu), **Emily Welch**, **Aimee Couvillion**, **Nikki Voinche**, **Kayla Jeanson**, **Whitney Estis**, **Kimberly LaPrairie**, and **Brandy Roberts**, Louisiana State University at Alexandria

Presider: Judy Rundell, Louisiana State University at Alexandria

Just how much science do you need to know to teach science in elementary school? Join LSU at Alexandria science methods students and participate in hands-on standards-based learning cycle lessons. Using household items, these activities guide students and teachers to discover complex concepts.

The Environment as the Second Teacher: Explorations in an Urban School Yard
—*Science Teaching*— (Env)

(Preschool/Elementary)

Room 235, Convention Center

Karen L. Anderson (karenanderson@stonehill.edu), Stonehill College, Easton, Mass.

Dean M. Martin (anderson.martin@netzero.com), Gardner Pilot Academy, Boston, Mass.

Through inquiry-based hands-on activities, we'll explore ways to connect mathematics and science curricula by using the urban school yard as a "second" teacher.

NOAA Symposium Follow-Up Session: NOAA Coral Reef Watch: Teaching About Coral Reefs Using Satellite Data —*Science Content*— (Env)

(Middle Level–High School)

Room 256, Convention Center

Britt-Anne A. Parker, NOAA Coral Reef Watch, Silver Spring, Md.

I will present NOAA's system for predicting coral bleaching from space. Resources include lesson plans, an online tutorial, and a hands-on activity.

11:00 AM–12 Noon PRESENTATION

SESSION 1

EduCaching: An Invasive Species Scavenger Hunt —*Science Teaching*— (Env)

(Middle Level–High School)

Room 204, Convention Center

Louise M. Prejean (lprejean@louisiana.edu), University of Louisiana at Lafayette

Andre Prejean (andre.prejean@gmail.com), Fugro GeoServices, Inc., Lafayette, La.

In the format of a scavenger hunt, students use global positioning receivers to locate and map the locations and density of invasive species. Participants will view lessons and student products.

SESSION 2

Nature Connections for Early Learners: Project WILD's Early Childhood Program —Science Content— (Env)

(General)

Room 212, Convention Center

Marc LeFebvre (marclcee@aol.com), Council for Environmental Education, Houston, Tex. Get an overview of Project WILD's *Early Childhood* program and engage in activities from Project WILD's new *Early Childhood* guide.

SESSION 3

A Novel Idea —Science Content—

(Bio)

(Middle Level–College)

Room 213, Convention Center

Melanie Hester (mhester@fsu.edu), Florida State University Schools, Tallahassee Use popular books, both fiction and nonfiction, to reinforce the nature of science in the biology classroom.

SESSION 4

Developing Science Vocabulary and Science Concepts with Second Language Learners —Science Content— (Gen)

(Elementary)

Room 224, Convention Center

Lora E. Holt, Johnson Elementary School, El Paso, Tex.

Pick up strategies that have proven successful in building science vocabulary with second language learners.

SESSION 5

Einstein Adds the Literacy Dimension —Science Content—

(Phys)

(High School)

Room 231, Convention Center

Juliana Texley (j.texley@att.net), Palm Beach Community College, Boca Raton, Fla.

Einstein Adds a New Dimension to your physical science program. This third book in *The Story of Science* might be an oxymoron—great modern physics literature—that allows you to develop a unique, integrated program with NSTA support materials.



SESSION 6

Using Technology to Support Struggling Elementary Readers —Science Content— (Gen)

(Elementary)

Room 237, Convention Center

Jessica Fries-Gaither (fries-gaither.1@osu.edu), The Ohio State University, Columbus

Lois McLean (stem@storyline.com), McLean Media, Grass Valley, Calif.

Discover how the use of audio books and interactive activities can support elementary students as they read and comprehend expository text.

SESSION 7

C2S2: Climate Change Student Summit —Science Education Program— (Env)

(Env)

(Elementary–Middle Level)

Room 239, Convention Center

Louise T. Huffman (lhuffman@andrill.org), ANDRILL, Naperville, Ill.

Betty Trummel (boop82@aol.com), Husmann Elementary School, Crystal Lake, Ill.

Sylvia K. Petersen (sylvia_petersen@ipsd.org), Crone Middle School, Naperville, Ill.

Anica Brown (abrown@lps.org), Pound Middle School, Lincoln, Neb.

Empower your students and help them become proactive about Earth. Learn how you can become involved in a Climate Change Student Summit.



SESSION 8

Video Carts in the Science Classroom and Don't Forget to Bring Your Reading Book —*Science Teaching*— (Gen)

(General)

Room 242, Convention Center

Lisa Ann Schoenbrun (*lschoenb@episd.org*) and **Bonita Fraire**, Western Hills Elementary School, El Paso, Tex.

Bring your science book and your reading book to this session. See how our school has incorporated science and literacy while talking to students around the world on a video cart! We will take you through the etiquette and steps to video conference science fair projects, experiments, and other topics to the world.

SESSION 9

Beyond the Test: The Learning Never Stops —*Science Teaching*— (Gen)

(Elementary–High School)

Room 243, Convention Center

Gina Oldendorf (*chemteacher55@gmail.com*), St. Charles Catholic High School, LaPlace, La.

Test correction journals, scientific writing, bell work, and other techniques keep the learning flowing after the test is over.

SESSION 10

AoA Session: 21st-Century Skills: An Alliance with Scientific Practices? (NARST) —*Science Education Program*— (Gen)

(Elementary–High School)

Room 252, Convention Center

Richard Duschl, Penn State University, University Park, Pa.

Join members of the National Association for Research in Science Teaching for an open conversation—time to share research, teaching strategies, materials, and ideas surrounding important 21st-century understandings and behaviors.

SESSION 11

AoA Session: 21st-Century Skills (ASTE) —*Science Education System*— (Gen)

(General)

Room 253, Convention Center

Jon Pedersen (*jep@unl.edu*), University of Nebraska, Lincoln

Join members of the Association for Science Teacher Education for an open conversation—time to share research, teaching strategies, materials, and ideas surrounding important 21st-century understandings and behaviors.

SESSION 12

NOAA Symposium Follow-up Session: Ocean Acidification and Corals —*Science Content*— (Bio)

(Elementary–High School)

Room 256, Convention Center

Paulo Maurin (*paulo.maurin@noaa.gov*), NOAA, Silver Spring, Md.

Learn about the process of ocean acidification and how it might affect corals and many other calciferous marine animals. Join us for hands-on experiments and demonstrations showing how carbon dioxide affects pH in water, and linking our carbon footprint to marine life. Participants will receive educational materials, including lesson plans and multimedia, to help cover ocean acidification in the classroom.

11:00 AM–12 Noon **WORKSHOP**

Space Connections for Earth-based Humans —Science Content— (Bio)

(Middle Level–High School) Room 205, Convention Center

Catherine Ryan (cryan@alvinisd.net), Alvin High School, Alvin, Tex.

Nina Corley (ninacorley@satorischool.net), Satori School, Galveston, Tex.

Experience the physiological challenges of space exploration with activities from the National Space Biomedical Research Institute (NSBRI). Teach measurement, technology development, and systems modeling using space biomedical research. Handouts and door prizes.

Hands-On/Bodies-On Biology —Science Teaching— (Bio)

(High School) Room 207, Convention Center

Patsy Jones, Higley High School, Gilbert, Ariz.

Ever wonder how to teach complex biological concepts? Get them out of their desks—learning biology with their whole body. What a fun, interactive way to learn!

What's Up, Part 2? Classroom Activities from the Association of Astronomy Educators (AAE)—Beyond the Solar System —Science Content— (Earth)

(Informal Education) Room 208, Convention Center

Jacob Noel-Storr (jake@cis.rit.edu), Rochester Institute of Technology, Rochester, N.Y.

Emilie Drobnes (emilie.drobnes@nasa.gov), NASA Goddard Space Flight Center, Greenbelt, Md.

Presider: Aleya Van Doren, NASA Goddard Space Flight Center, Greenbelt, Md.

Master astronomy teachers from the Association of Astronomy Educators (AAE) will share classroom-ready, hands-on astronomy activities that really work. See page 138 for Part 1.

Can Middle School Students Think and Act Like Scientists? Building Scientific Communities in a Science Classroom —Science Teaching— (Phys)

(General) Room 209, Convention Center

Robert H. Poel (bob.poel@wmich.edu), Western Michigan University, Kalamazoo

Cody Sandifer (csandife@towson.edu), Towson University, Towson, Md.

Scientists most often work in collaborative groups. We will emphasize strategies and materials that help students and teachers build effective scientific communities to enhance learning and understanding.

Inspirational Hands-On USDA Research to Inspire Students to Become FUTURE SCIENTISTS Aware of Global Interdependency and the Need to Ameliorate Adverse Human Environmental Impact —Science Teaching— (Env)

(General) Room 210, Convention Center

Craig Wilson (cwilson@science.tamu.edu), Texas A&M University, College Station

Study the life cycle of the corn earworm (*Helicoverpa zea*) and discuss its impact on the corn-ethanol debate, plus pick up environmentally friendly pest management strategies. Learn how to order the worms for free online at www.science.tamu.edu/usda/cornearworm.

Gel Electrophoresis Simulation with Restriction Enzymes —Professional Development— (Bio)

(General) Room 211, Convention Center

Carol A. Harrison, Booker T. Washington High School, Tuskegee, Ala.

Experience hands-on activities designed to help students understand how those bands on a gel are produced. Determine the parentage of an abandoned child.

I3: Investigate, Integrate, Interact —Science Teaching— (Gen)

(General)

Room 214, Convention Center

Alan B. Sowards (asowards@sfasu.edu) and **Jeanie Gresham** (greshamglori@sfasu.edu), Stephen F. Austin State University, Nacogdoches, Tex.

Learn how one teacher and university faculty using science investigations and reading strategies collaborated to increase student content knowledge by integrating inquiry, reading, and writing.

Chemistry Inquiry for Kids —Science Teaching— (Chem)

(General)

Room 215, Convention Center

Fred Estes and **Lisa Dettloff** (ldettloff@nuevaschool.org), The Nueva School, Hillsborough, Calif.

Chemistry for elementary kids is fun, easy, safe, and rewarding. These inquiry chemistry activities use a lesson design model to build learner independence in students.

Teaching Science with a Story —Science Teaching— (Gen)

(Preschool/Elementary)

Room 216, Convention Center

Jaymee Herrington, Georgia Youth Science and Technology Center, Carrollton

Presider: Steve Rich, Georgia Dept. of Education, Atlanta

Ever wonder how to integrate science standards with children's literature? In this fun session you'll see how easy it is to incorporate science with reading activities.

WALLS! —Science Content— (Earth)

(Elementary–High School)

Room 219, Convention Center

David Mastie (mastie@umich.edu), Retired Educator, Chelsea, Mich.

A unique team of teachers and scientists will share their repertoire of hands-on, inquiry-based activities for Water, Air, Land, Life, and Space content areas. Handouts.

Critiquing and Improving Models —Science Teaching— (Chem)

(Elementary–Middle Level)

Room 220, Convention Center

Suzanna J. Loper (sjloper@berkeley.edu) and **Jonathan Curley** (curley@berkeley.edu), Lawrence Hall of Science, University of California, Berkeley

Presider: Terry Cort, Lawrence Hall of Science, University of California, Berkeley

We will illustrate how elementary students can be guided to not only use models but to create, discuss, evaluate, critique, and improve them.

Kinesthetic Math and Science —Science Teaching— (Gen)

(Preschool–Middle Level)

Room 222, Convention Center

Emily O. Greene and **Adrienne Bledsoe** (bledsoea@palmbeach.k12.fl.us), Poinciana Elementary School, Boynton Beach, Fla.

Get moving and teach science using body motions, music, and dance. This session will get you on your feet for some science learning fun.

M.E.N. = Medical and Environmental Impact of Nanotechnology —Science Teaching— (Gen)

(Middle Level)

Room 225, Convention Center

Donna Harrell, Morehouse Magnet School, Bastrop, La.

Mar Beth B. McCoy (mccoy@opsb.net), Ouachita Junior High School, Monroe, La.

Participants in an innovative research project at Louisiana Tech University share bionano-

scale concepts to help grasp the global issues faced by this cutting-edge topic and its environmental impact.

Consumer Chemistry —Professional Development— (Chem)

(High School)

Room 227, Convention Center

Jenny R. Hartfield, North Hall High School, Gainesville, Ga.

Consumer Chemistry focuses on making consumer products, evaluating these products in relation to store-bought products, and giving students a real-world application of chemistry topics.

NASA: The Size and Scale of the Universe —Science Content— (Earth)

(Middle Level–College)

Room 229, Convention Center

Bryan J. Mendez (bmendez@ssl.berkeley.edu) and **Greg Schultz**, University of California, Berkeley

Explore hands-on, standards-based activities to help students grasp the size and scale of the universe and to understand how astronomers measure such incredible distances.

FUNdamentals of Electromagnetism with Paul and Mike —Professional Development— (Phys)

(Middle Level–High School)

Room 230, Convention Center

Michael H. Suckley (drsuckley@sciencescene.com) and **Paul A. Klozik**, Macomb Community College, Fraser, Mich.

Engage in 20 hands-on activities and demonstrations illustrating the FUNamentals of electromagnetism.

S5: Super Science Strategies for Student Success! —Science Teaching— (Gen)

(General)

Room 254, Convention Center

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From the floor to the ceiling and everything in between, these teacher-tested super science strategies are aimed at developing content understanding for all learners.



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- Meetings and Social Functions
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Conference Program

Meetings and Social Functions

Saturday, March 21

- NESTA Earth and Space Science Resource Day Breakfast
(By ticket through NESTA)
Bacchus, New Orleans Marriott 7:00–8:30 AM
- NESTA Past Presidents Breakfast
(For NESTA Past Presidents Only)
Riverview, New Orleans Marriott 7:30–9:00 AM
- George Washington Carver Breakfast
(By Invitation Only)
Rosedown, Hilton 7:30–9:15 AM
- TAC Members/Associates Meeting
(By Invitation Only)
Estherwood, Sheraton 8:00–9:00 AM
- NESTA Recommends Reviewer Coffee/Publisher Meeting
(By Invitation Only)
Evergreen, Sheraton 8:00–9:00 AM
- SESD “Science Abled” Breakfast (M-6)
(Tickets required; \$40)
Newberry, Hilton 8:00–10:00 AM
- Past Presidents Advisory Board Meeting
Riverview, New Orleans Marriott 9:00–10:00 AM
- Research for Classroom Teachers (RAISE) Meeting
Windsor, Hilton 9:00 AM–12 Noon
- NESTA International Lounge
Trafalgar, Hilton 9:00 AM–5:00 PM
- NESTA Districts Meet and Greet
Acadia, New Orleans Marriott 9:30–10:30 AM
- Climate Literacy Planning Group Meeting
Salon 828, Sheraton 10:00 AM–12 Noon
- COSEE Luncheon: Natural Coastal Hazards and Their Impacts
on the Human Condition
(Available First Come/First Served)
St. Charles, New Orleans Marriott 12 Noon–1:30 PM

- NSTA/SCST College Luncheon (M-7)
(Tickets required; \$55)
Orleans, JW Marriott 12 Noon–1:30 PM
- Aerospace Educators Luncheon (M-8)
(Tickets required; \$55)
Gallery Ballroom, Sheraton 12 Noon–2:00 PM
- CESI/NSTA Elementary Science Luncheon (M-9)
(Tickets required; \$55)
Rosedown, Hilton 12 Noon–2:30 PM
- Paul F-Brandwein Annual Luncheon
(By Invitation Only)
Newberry, Hilton 12:30–1:30 PM
- Development Advisory Board Meeting
(By Invitation Only)
Evergreen, Sheraton 1:30–2:30 PM
- Science Matters – Building a Presence: Building the Community
Meeting
Bacchus, New Orleans Marriott 2:00–3:00 PM
- Alliance of Affiliates (AoA) Meeting
Estherwood, Sheraton 2:30–4:00 PM
- NESTA Membership Meeting
Bissonet, New Orleans Marriott 4:30–6:00 PM
- Pre-Banquet Reception (M-10)
(Tickets required; \$40)
Versailles Ballroom, Hilton 6:00–6:45 PM
- President’s Banquet—A Celebration of Excellence (M-11)
(Tickets required; \$55)
Napoleon Ballroom, Hilton 7:00–10:00 PM
- ### Sunday, March 22
- Life Members Buffet Breakfast (M-12)
(Tickets required; \$40)
La Galerie 5, New Orleans Marriott 7:00–9:00 AM

Index of Exhibitor Workshops

Adam Equipment Inc.

Booth No. 1225

Saturday, March 21	10:00–11:30 AM	Room 231, Conv. Center	Soil, Sand, and Density (p. 57)
Saturday, March 21	12 Noon–1:30 PM	Room 231, Conv. Center	Soil, Sand, and Density (p. 82)

Bio-Rad Laboratories

Booth No. 439

Saturday, March 21	8:00–9:30 AM	Room 230, Conv. Center	Bio-Rad—Microbes and Health: “What Causes Yogurtiness?”™ (p. 32)
Saturday, March 21	10:00–11:00 AM	Room 230, Conv. Center	Bio-Rad Teach Standards Using Hands-On Biotech Labs (p. 52)

BIOPAC Systems, Inc.

Booth No. 438

Saturday, March 21	2:00–3:30 PM	Room 236, Conv. Center	BIOPAC Science Lab Physiology Monitor with Lessons (p. 108)
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BIOZONE International Ltd.

Booth No. 545

Saturday, March 21	8:00–9:30 AM	Room 231, Conv. Center	BIOZONE Showcases Their Biology Workbooks and Presentation Media for Grades 10–12 (p. 32)
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Carolina Biological Supply Co.

Booth No. 124

Saturday, March 21	8:00–9:30 AM	Room 215, Conv. Center	SQUID INK-UIRY: Inquiry-based Invertebrate Anatomy Through Squid Dissection (p. 29)
Saturday, March 21	8:00–9:30 AM	Room 216, Conv. Center	Hands-On Science with Classroom Critters (p. 30)
Saturday, March 21	8:00–9:30 AM	Room 217, Conv. Center	Discover the Solar System and Beyond with GEMS® Space Science Sequences (p. 30)
Saturday, March 21	10:00–11:30 AM	Room 215, Conv. Center	Rats! Inquiry-based Dissection with Carolina’s Perfect Solution® Specimens (p. 54)
Saturday, March 21	10:00–11:30 AM	Room 216, Conv. Center	Need “Energy” in Your Environmental Classes? Learn About Carolina’s New <i>Inquiries in Science</i> Series (p. 54)
Saturday, March 21	10:00–11:30 AM	Room 217, Conv. Center	Math Out of the Box®: Data Analysis and Algebraic Thinking Connect to Science (p. 54)
Saturday, March 21	12 Noon–1:30 PM	Room 215, Conv. Center	Creating Habitats in the Classroom (p. 80)
Saturday, March 21	12 Noon–1:30 PM	Room 216, Conv. Center	Forensics for the Biology Lab (p. 80)
Saturday, March 21	12 Noon–1:30 PM	Room 217, Conv. Center	The <i>Zula Patrol</i> ®: Blast Off with Mixtures, Solutions, and Chemical Reactions (p. 80)
Saturday, March 21	2:00–3:30 PM	Room 215, Conv. Center	Comparative Mammalian Organ Dissection with Carolina’s Perfect Solution® Specimens (p. 107)
Saturday, March 21	2:00–3:30 PM	Room 216, Conv. Center	Introduction to Protozoa (p. 107)
Saturday, March 21	2:00–3:30 PM	Room 217, Conv. Center	Math Out of the Box®: Developing Geometric Logic (p. 107)

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CORD Communications

Booth No. 611

Saturday, March 21	12 Noon–1:30 PM	Room 235, Conv. Center	The Case of the Kidnapped Tamarin Monkey: Did You Do It? (p. 82)
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CPO Science/School Specialty Science

Booth No. 610

Saturday, March 21	8:00–9:30 AM	Room 210, Conv. Center	Genetics: The Crazy Traits Game (p. 29)
Saturday, March 21	10:00–11:30 AM	Room 210, Conv. Center	Chemistry and the Atom (p. 54)
Saturday, March 21	12 Noon–1:30 PM	Room 210, Conv. Center	Optics with Light and Color (p. 79)
Saturday, March 21	2:00–3:30 PM	Room 210, Conv. Center	Chemistry and the Data Collector (p. 106)

Delta Education/School Specialty Science-FOSS

Booth No. 411

Saturday, March 21	8:30–11:30 AM	Room 209, Conv. Center	Using Science Notebooks with FOSS Modules K–6 (p. 36)
Saturday, March 21	12:30–3:00 PM	Room 209, Conv. Center	Explore Weather and Water with FOSS Middle School (p. 94)

Dinah-Might Adventures, LP

Booth No. 724

Saturday, March 21	12 Noon–1:30 PM	Room 204/205, Conv. Center	Using Dinah Zike’s Foldables to Teach Science More Effectively (p. 79)
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Discovery Education

Booth No. 242

Saturday, March 21	8:00–9:30 AM	Room 225, Conv. Center	Fuel Our Future Now (p. 31)
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Disney Educational Products/Underwriters Laboratories

Booth No. 303

Saturday, March 21	8:00–9:30 AM	Room 229, Conv. Center	Wild About Safety® with Timon and Pumbaa Goes Green! (p. 32)
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ETA/Cuisenaire

Booth Nos. 1524/1525

Saturday, March 21	12 Noon–1:30 PM	Room 225, Conv. Center	Hands-On Standards in Science (p. 81)
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Fisher Scientific Education

Booth Nos. 602/603

Saturday, March 21	8:00–9:30 AM	Room 211, Conv. Center	How Safe Is Your Lab? (p. 29)
Saturday, March 21	10:30 AM–12 Noon	Room 211, Conv. Center	New! High School Curriculum Mastery* Games (p. 60)
Saturday, March 21	1:30–3:00 PM	Room 211, Conv. Center	PCR Made Easy (p. 96)
Saturday, March 21	3:30–4:00 PM	Room 211, Conv. Center	Recipe for Sustainable Science (p. 120)

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Flinn Scientific, Inc.

Booth No. 710

Saturday, March 21 10:00–11:30 AM Room 204/205, Conv. Center Teach AP Chemistry—It Is Now Easy for You (p. 52)

Howard Hughes Medical Institute

Booth No. 435

Saturday, March 21 8:00–9:30 AM Room 214, Conv. Center FREE Teaching Resources from the Howard Hughes Medical Institute (p. 29)

Saturday, March 21 10:00–11:30 AM Room 214, Conv. Center Enrich Your AP Biology Lessons with Free Resources from the Howard Hughes Medical Institute (p. 54)

Saturday, March 21 12 Noon–1:30 PM Room 214, Conv. Center Survival of the Fittest: Variation and Selection (p. 79)

Saturday, March 21 2:00–3:30 PM Room 214, Conv. Center Mechanisms of Evolution: Genetic Switches and Natural Selection (p. 107)

Insurance Institute for Highway Safety

Booth No. 2111

Saturday, March 21 2:00–3:30 PM Room 225, Conv. Center Just Released! New IIHS Car Crash Video—Perfect for Integrating the Sciences (p. 108)

It's About Time

Booth No. 100

Saturday, March 21 8:00–9:00 AM Room 212, Conv. Center InterActions in Physical Science—Newly Revised (p. 26)

Saturday, March 21 9:30–10:30 AM Room 212, Conv. Center Project-Based Inquiry Science: A New Middle School Science Program—From a Cognitive Scientist's Point of View (p. 50)

Saturday, March 21 11:00 AM–12 Noon Room 212, Conv. Center Teaching in the 21st Century (p. 77)

Saturday, March 21 12:30–1:30 PM Room 212, Conv. Center Physics for Everyday Thinking (PET) and Physical Science for Everyday Thinking (PSET) (p. 93)

Saturday, March 21 2:00–3:00 PM Room 212, Conv. Center Investigations in Environmental Science: A Case-based Approach (p. 106)

Saturday, March 21 3:30–4:30 PM Room 212, Conv. Center EarthComm: High School Guided Inquiry (p. 120)

The JASON Project

Booth No. 1114

Saturday, March 21 8:00–9:30 AM Room 236, Conv. Center Using Math and Science as the “New Literacy” to Combat “At-Risk” Student Achievement (p. 33)

Key Curriculum Press

Booth No. 1818

Saturday, March 21 10:00–11:30 AM Room 232, Conv. Center Living by Chemistry: Take a Breath (p. 58)

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Kinetic Books

Booth No. 402

Saturday, March 21	12 Noon–1:30 PM	Room 232, Conv. Center	Experience Digital Physics Curricula (p. 82)
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Lab-Aids, Inc.

Booth No. 717

Saturday, March 21	8:00–9:30 AM	Room 226, Conv. Center	Lab-Aids Kits: Find the Answers Inside the Box (p. 31)
Saturday, March 21	10:00–11:30 AM	Room 226, Conv. Center	New Tools for Teaching About the Periodic Table (p. 56)
Saturday, March 21	12 Noon–1:30 PM	Room 226, Conv. Center	Understanding Mendelian and Non-Mendelian Inheritance (p. 81)
Saturday, March 21	2:00–3:30 PM	Room 226, Conv. Center	Teaching About the Rock Cycle and Earth Time (p. 108)

LaMotte Co.

Booth No. 333

Saturday, March 21	8:00–9:30 AM	Room 232, Conv. Center	A Virtual Tour of Your Watershed (p. 32)
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Luidia, Inc.

Booth No. 1125

Saturday, March 21	10:00–11:30 AM	Room 225, Conv. Center	Interactive Technology = Interactive Science (p. 56)
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National Academy of Sciences

Booth No. 1204

Saturday, March 21	8:00–9:30 AM	Room 228, Conv. Center	From the Field: Igniting a Passion for Science (p. 31)
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National Geographic School Publishing

Booth No. 1111

Saturday, March 21	10:00–11:30 AM	Room 236, Conv. Center	Student Success with Inquiry (p. 58)
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PASCO Scientific

Booth No. 1813

Saturday, March 21	8:00–9:00 AM	Room 218, Conv. Center	Tough Topics in Earth Science: Plate Tectonics with GIS (p. 28)
Saturday, March 21	8:00–9:00 AM	Room 219, Conv. Center	Tough Topics in Chemistry: Gas Laws (p. 28)
Saturday, March 21	9:30–10:30 AM	Room 218, Conv. Center	Tough Topics in Physics: Archimedes' Principle (p. 50)
Saturday, March 21	9:30–10:30 AM	Room 219, Conv. Center	Tough Topics in Biology: Diffusion and Osmosis (p. 50)

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Pearson Booth No. 110

Saturday, March 21	8:00–9:30 AM	Room 220, Conv. Center	Visual Literacy in Science (p. 30)
Saturday, March 21	8:00–9:30 AM	Room 221, Conv. Center	The Origin After 150 Years: Teaching the Science of Darwin's Great Idea in the Climate of Controversy (p. 30)
Saturday, March 21	10:00–11:30 AM	Room 220, Conv. Center	How to Analyze Your Prints (p. 55)
Saturday, March 21	10:00–11:30 AM	Room 221, Conv. Center	Integrating Scenario-based Instruction into Your Science Curriculum (p. 55)
Saturday, March 21	12 Noon–1:30 PM	Room 220, Conv. Center	Planet Diary: Web-based Science News and Activities Engage Students in Science (p. 80)
Saturday, March 21	12 Noon–1:30 PM	Room 221, Conv. Center	Stem Cell Biology: What's Really Happening and How Do We Teach It? (p. 80)

Science A-Z.com (brought to you by Learning A-Z)

Booth No. 825

Saturday, March 21	8:00–9:00 AM	Room 213, Conv. Center	Introduction to ScienceA–Z.com (p. 28)
Saturday, March 21	9:30–10:30 AM	Room 213, Conv. Center	Closer Look at a Unit (p. 50)
Saturday, March 21	11:00 AM–12 Noon	Room 213, Conv. Center	Introduction to ScienceA–Z.com (p. 77)
Saturday, March 21	12:30–1:30 PM	Room 213, Conv. Center	Closer Look at a Unit (p. 93)
Saturday, March 21	2:00–3:00 PM	Room 213, Conv. Center	Introduction to ScienceA–Z.com (p. 106)
Saturday, March 21	3:30–4:30 PM	Room 213, Conv. Center	Closer Look at a Unit (p. 120)

Smithsonian Institution

Booth No. 1640

Saturday, March 21	10:00–11:30 AM	Room 228, Conv. Center	Smithsonian Science: Bottleneck Genes and the Cheetah Conservation Story (p. 56)
Saturday, March 21	12 Noon–1:30 PM	Room 228, Conv. Center	Smithsonian Science: Dig It! The Secret of Soil (p. 81)
Saturday, March 21	2:00–3:30 PM	Room 228, Conv. Center	Smithsonian Science: Design Your Own Plankton Competition (p. 108)

Society for Neuroscience

Booth No. 1200

Saturday, March 21	8:00–9:30 AM	Room 208, Conv. Center	Practical Insights into What Research Tells Us About Learning and Memory: Classroom Strategies (p. 28)
Saturday, March 21	10:00–11:30 AM	Room 208, Conv. Center	Understanding Executive Function: Linking Brain Science to Education (p. 52)
Saturday, March 21	12 Noon–2:00 PM	Room 208, Conv. Center	Connecting Brain Research with Effective Teaching: The Brain-Targeted Teaching Model (p. 83)

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Spitz, Inc.

Booth No. 1133

Saturday, March 21	11:00 AM–12 Noon	Booth No. 1133, Conv. Center	Immersive Space Science Curriculum: “Moon Phases” in a Fulldome Classroom (p. 76)
Saturday, March 21	3:00–4:00 PM	Booth No. 1133, Conv. Center	Visualizing Our Universe in a Fulldome Classroom: Teaching Simulations (p. 109)

Tabula Digita

Booth No. 400

Saturday, March 21	8:00–9:30 AM	Room 235, Conv. Center	Educational Gaming in Science: Shifting the Paradigm (p. 32)
Saturday, March 21	10:00–11:30 AM	Room 235, Conv. Center	Educational Gaming in Science: Shifting the Paradigm (p. 58)

USA TODAY

Booth No. 2009

Saturday, March 21	10:00–11:30 AM	Room 229, Conv. Center	No Boundaries: An Exploration of STEM Careers Led by <i>USA TODAY</i> /NASA (p. 57)
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Vernier Software & Technology

Booth No. 314

Saturday, March 21	8:00–9:30 AM	Room 222, Conv. Center	<i>Physics with Vernier</i> (p. 30)
Saturday, March 21	8:00–9:30 AM	Room 224, Conv. Center	Advanced Biology and Biotechnology with Vernier (p. 31)
Saturday, March 21	10:00–11:30 AM	Room 222, Conv. Center	<i>Biology with Vernier</i> (p. 56)
Saturday, March 21	10:00–11:30 AM	Room 224, Conv. Center	IB* Science with Vernier (p. 56)
Saturday, March 21	12 Noon–1:30 PM	Room 222, Conv. Center	<i>Human Physiology with Vernier</i> (p. 81)
Saturday, March 21	12 Noon–1:30 PM	Room 224, Conv. Center	Spectroscopy with Vernier (p. 81)
Saturday, March 21	2:00–3:30 PM	Room 222, Conv. Center	K–8 Science with Vernier (p. 107)
Saturday, March 21	2:00–3:30 PM	Room 224, Conv. Center	Advanced Logger Pro and LabQuest (p. 108)

Wizards of the Coast LLC

Booth No. 2108

Saturday, March 21	12 Noon–1:30 PM	Room 236, Conv. Center	The Games Kids Play: How to Manage a Successful School Gaming Club (p. 82)
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Schedule At a Glance

G = General M = Middle School S = Supervision/Administration T = Teacher Preparation
 P = Preschool H = High School I = Informal Education
 E = Elementary C = College R = Research

BIOLOGY/LIFE SCIENCE

SAT

8:00–9:00 AM	H-C/I	Maurepas, JW Marriott	Exploring Genes to Cognition Online: Using Neuroscience to Unlock the Secrets of the Brain (p. 20)
8:00–9:00 AM	M–H	Bayside A, Sheraton	Combining the Power of Inquiry with Digital Technology to Investigate Photosynthesis (p. 21)
8:00–9:00 AM	M–C	Napoleon A3, Sheraton	Amazing Things Cells Can Do (p. 21)
8:00–9:00 AM	M–H	Napoleon A1&2, Sheraton	Applying Current Research to Reach All Biology Students (p. 21)
8:00–9:00 AM	M–H	Napoleon B1, Sheraton	The Dead T-Shirt Contest! (p. 26)
8:00–9:00 AM	E	Room R01, Conv. Ctr.	Cultivating Literacy: Linking Children’s Literature and Plant Science (p. 24)
8:00–9:00 AM	M	Room R02, Conv. Ctr.	Bring the PBS Series <i>Jean-Michel Cousteau: Ocean Adventures</i> into Your Classroom to Teach Science Content Standards (p. 18)
8:00–9:30 AM	10	Room 231, Conv. Ctr.	BIOZONE Showcases Their Biology Workbooks and Presentation Media for Grades 10–12 (p. 32)
8:00–9:30 AM	9	Room 215, Conv. Ctr.	SQUID INK-UIRY: Inquiry-based Invertebrate Anatomy Through Squid Dissection (p. 29)
8:00–9:30 AM	9–C	Room 224, Conv. Ctr.	Advanced Biology and Biotechnology with Vernier (p. 31)
8:00–9:30 AM	K1	Room 216, Conv. Ctr.	Hands-On Science with Classroom Critters (p. 30)
8:00–9:30 AM	5–C	Room 230, Conv. Ctr.	Bio-Rad—Microbes and Health: “What Causes Yogurtiness?”™ (p. 32)
8:00–9:30 AM	9	Room 221, Conv. Ctr.	The Origin After 150 Years: Teaching the Science of Darwin’s Great Idea in the Climate of Controversy (p. 30)
8:00–9:30 AM	5–8	Room 210, Conv. Ctr.	Genetics: The Crazy Traits Game (p. 29)
8:00–9:30 AM	9–C	Room 214, Conv. Ctr.	FREE Teaching Resources from the Howard Hughes Medical Institute (p. 29)
9:30–10:30 AM	6–8	Room 212, Conv. Ctr.	Project-Based Inquiry Science—a New Middle School Science Program—from a Cognitive Scientist’s Point of View (p. 50)
9:30–10:30 AM	6–12	Room 219, Conv. Ctr.	Tough Topics in Biology: Diffusion and Osmosis (p. 50)
9:30–10:30 AM	H–C	Maurepas, JW Marriott	Genomics Research with a Computer: Free Tools for Bringing Cutting-Edge Bioinformatics Research into the Classroom (p. 42)
9:30–10:30 AM	H	Napoleon A1&2, Sheraton	Energize Your Energetics Unit! (p. 44)
9:30–10:30 AM	M–C	Napoleon A3, Sheraton	Model Organisms: Research and Learning with Fruit Flies, Thale Cress, Zebrafish, and Others (p. 44)

BIOLOGY/LIFE SCIENCE, cont.

SAT

9:30–10:30 AM	H	Napoleon B1, Sheraton	Minds-On/Bodies-On! Teaching Biology is a Whole-Body Experience (p. 48)
9:30–10:30 AM	M	Room R02, Conv. Ctr.	Modeling: Naturally Selecting an Effective Teaching Method (p. 45)
9:30–10:30 AM	H–C	Ile de France I, JW Marriott	Molecular Evolution of Cholera (p. 46)
10:00–11:00 AM	5–C	Room 230, Conv. Ctr.	Bio-Rad—Teach Standards Using Hands-On Biotech Labs (p. 52)
10:00–11:30 AM	9–C	Room 214, Conv. Ctr.	Enrich Your AP Biology Lessons with Free Resources from the Howard Hughes Medical Institute (p. 54)
10:00–11:30 AM	4–12	Room 228, Conv. Ctr.	Smithsonian Science: Bottleneck Genes and the Cheetah Conservation Story (p. 56)
10:00–11:30 AM	6–12	Room 215, Conv. Ctr.	Rats! Inquiry-based Dissection with Carolina's Perfect Solution® Specimens (p. 54)
10:00–11:30 AM	9–C	Room 222, Conv. Ctr.	<i>Biology with Vernier</i> (p. 56)
11:00 AM–12 Noon	6–8	Room 212, Conv. Ctr.	Teaching in the 21st Century (p. 77)
11:00 AM–12 Noon	H–C	Maurepas, JW Marriott	The Case of the Coughing Construction Worker (p. 66)
11:00 AM–12 Noon	M–H	Bayside A, Sheraton	Summer Multi-Day Field Trips—See Your Students in a Different Light! (p. 68)
11:00 AM–12 Noon	M–H	Napoleon A1&2, Sheraton	Tissue Engineering/Regenerative Medicine: A Biomedical and Classroom Revolution (p. 69)
11:00 AM–12 Noon	M–H	Napoleon B1, Sheraton	Using 5E to Teach Ecology (p. 75)
11:00 AM–12 Noon	M–C	Borgne, Sheraton	Scaling the Human Body (p. 75)
11:00 AM–12 Noon	E-M/I	Room R02, Conv. Ctr.	Field Studies: They Can Be Elementary! (p. 72)
11:00 AM–12 Noon	H	Room R01, Conv. Ctr.	Bring Your Biology Classroom into the Bioscience Century (p. 72)
11:00 AM–12 Noon	G	Napoleon A3, Sheraton	A Zoo in My CLASSROOM?!? (p. 69)
11:00 AM–12 Noon	H–C	Room 242, Conv. Ctr.	Beyond the Central Dogma: Epigenetics (p. 64)
12 Noon–1:30 PM	9–12	Room 221, Conv. Ctr.	Stem Cell Biology: What's Really Happening and How Do We Teach It? (p. 80)
12 Noon–1:30 PM	6–12	Room 210, Conv. Ctr.	Optics with Light and Color (p. 79)
12 Noon–1:30 PM	7–C	Room 214, Conv. Ctr.	Survival of the Fittest: Variation and Selection (p. 79)
12 Noon–1:30 PM	6–8	Room 226, Conv. Ctr.	Understanding Mendelian and Non-Mendelian Inheritance (p. 81)
12 Noon–1:30 PM	9–12	Room 216, Conv. Ctr.	Forensics for the Biology Lab (p. 80)
12 Noon–1:30 PM	K–12	Room 215, Conv. Ctr.	Creating Habitats in the Classroom (p. 80)
12 Noon–1:30 PM	9–C	Room 222, Conv. Ctr.	<i>Human Physiology with Vernier</i> (p. 81)
12:30–1:30 PM	G	Room 256, Conv. Ctr.	NOAA Symposium Follow-Up Session: Inspiring Ocean Literacy by Bringing Coral Reefs into Your Classroom (p. 85)
12:30–1:30 PM	E–M	Room R06, Conv. Ctr.	Podcasting on Planet Earth (p. 86)
12:30–1:30 PM	E–H	Borgne, Sheraton	Smithsonian Science: Invasive Species and Society—Tools to Understand and Protect Our Local Environment (p. 91)

BIOLOGY/LIFE SCIENCE, cont.**SAT**

12:30–1:30 PM	M–H	Napoleon A3, Sheraton	Sharing Successful Teaching Strategies/Activities for Secondary Science Students (p. 88)
12:30–1:30 PM	M–C	Rosalie, JW Marriott	NARST Session: A Project-based Biology Curriculum Impacts Minority Students' Achievement and Attitudes via Teacher Knowledge and Practice (p. 87)
12:30–1:30 PM	E–M	Room R07, Conv. Ctr.	CESI Session: Cycles of Life—Beyond Frogs and Butterflies (p. 90)
12:30–1:30 PM	P	Room R01, Conv. Ctr.	The Human Body Inside and Out (p. 89)
12:30–1:30 PM	H	Napoleon B1, Sheraton	Using and Assessing Differentiated Instruction Strategies in a Biotechnology Classroom (p. 92)
1:30–3:00 PM	7–12	Room 211, Conv. Ctr.	PCR Made Easy (p. 96)
2:00–3:00 PM	P/E	Room R01, Conv. Ctr.	Dig Dirt? Inquiry in Early Childhood (p. 104)
2:00–3:00 PM	H–C	Maurepas, JW Marriott	Eating for Healthy Cells (p. 100)
2:00–3:00 PM	M–H	Bayside A, Sheraton	The Role of Hands-On Science and Research Curriculum in the Formation of Science Opinions in Middle School Students (p. 101)
2:00–3:00 PM	M–C	Borgne, Sheraton	Detecting the Vitamin C of Fruit (p. 105)
2:00–3:00 PM	M–H	Napoleon B1, Sheraton	Teaching Global Responsibility Through Calculator Data Collection Technology (p. 105)
2:00–3:00 PM	M	Room R06, Conv. Ctr.	Walking Through Mitosis (p. 104)
2:00–3:00 PM	H	Napoleon A3, Sheraton	Genes and Proteins and Traits: Strategies for Teaching Molecular Genetics (p. 102)
2:00–3:30 PM	9–C	Room 236, Conv. Ctr.	BIOPAC Science Lab Physiology Monitor with Lessons (p. 108)
2:00–3:30 PM	9–C	Room 214, Conv. Ctr.	Mechanisms of Evolution: Genetic Switches and Natural Selection (p. 107)
2:00–3:30 PM	3–8	Room 228, Conv. Ctr.	Smithsonian Science: Design Your Own Plankton Competition (p. 108)
2:00–3:30 PM	6–12	Room 215, Conv. Ctr.	Comparative Mammalian Organ Dissection with Carolina's Perfect Solution® Specimens (p. 107)
2:00–3:30 PM	9–12	Room 216, Conv. Ctr.	Introduction to Protozoa (p. 107)
3:30–4:30 PM	E–H	Room 256, Conv. Ctr.	NOAA Symposium Follow-Up Session: Free Coral Resources for the Classroom and Teacher Professional Development from NOAA and NSTA (p. 112)
3:30–4:30 PM	H–C	Maurepas, JW Marriott	The New SAT Subject Test in Biology: A Tool for Assessing Both Biology Curriculum and Biology Students (p. 114)
3:30–4:30 PM	H	Bayside A, Sheraton	C.H.O.I.C.E.S. (Choices Honoring Our Involved, Committed, and Engaged Students) (p. 115)
3:30–4:30 PM	M–C	Borgne, Sheraton	Amazing Anatomy Finds (p. 119)
4:00–4:30 PM	G	Napoleon A3, Sheraton	NIDA Goes Back to School: Science-based Information on Drug Abuse for Educators (p. 116)

BIOLOGY/LIFE SCIENCE, cont.

SAT	3:30–4:00 PM	M–H	Napoleon A3, Sheraton	CDC’s Science Ambassador Professional Development Program (p. 115)
	3:30–4:30 PM	4–6	Room R02, Conv. Ctr.	Flower to Seed (p. 113)
	5:00–6:00 PM	H–C	Maurepas, JW Marriott	An Innovative Model System for Teaching Biological Molecular Structures and Genetic Processes (p. 122)
	5:00–6:00 PM	H	Napoleon A3, Sheraton	The Live Surgical Broadcast: A Portal to STEMM+ Learning (p. 123)
	5:00–6:00 PM	M–H	Bayside A, Sheraton	Unintimidated and Unashamed: Teaching Evolution to Religious Students (p. 123)
SUN	8:00–9:00 AM	E–H	Room 211, Conv. Ctr.	Sherlock Holmes Science “Forensic Science”: The Science of Intuition and the Research That Resolves the Mystery (p. 134)
	8:00–9:00 AM	M–H	Room 206, Conv. Ctr.	Fun Formative Assessments for the Biology Classroom (p. 207)
	8:00–9:00 AM	G	Room 253, Conv. Ctr.	Cockroaches in the Curious Classroom: Using Live Animals in Inquiry Science (p. 135)
	9:30–10:30 AM	M–C	Room 210, Conv. Ctr.	Teaching Evolution: A 5E Nature of Science Lesson on Questioning (p. 136)
	11:00 AM–12 Noon	M–C	Room 213, Conv. Ctr.	A Novel Idea (p. 142)
	11:00 AM–12 Noon	M–H	Room 205, Conv. Ctr.	Space Connections for Earth-based Humans (p. 144)
	11:00 AM–12 Noon	H	Room 206, Conv. Ctr.	Hands-On/Bodies-On Biology (p. 144)
	11:00 AM–12 Noon	G	Room 211, Conv. Ctr.	Gel Electrophoresis Simulation with Restriction Enzymes (p. 144)
	11:00 AM–12 Noon	E–H	Room 256, Conv. Ctr.	NOAA Symposium Follow-up Session: Ocean Acidification and Corals (p. 143)
	CHEMISTRY/PHYSICAL SCIENCE			
SAT	8:00–9:00 AM	H	Gallier A/B, Sheraton	Using Models and Analogies to Enhance Student Learning in the Chemistry Classroom (p. 21)
	8:00–9:00 AM	P/E	Room R03, Conv. Ctr.	Physical Science in an Early Childhood Classroom (p. 24)
	8:00–9:00 AM	M–C	Salons 817 & 821, Sheraton	Students’ Conceptions of Basic Concepts in Physical Chemistry (p. 22)
	8:00–9:00 AM	H	Napoleon B2, Sheraton	The Murder of Kirsten Knight-Jensen: Using Chemistry to Solve the Crime (p. 26)
	8:00–9:00 AM	7–8	Room 212, Conv. Ctr.	InterActions in Physical Science—Newly Revised (p. 26)
	8:00–9:00 AM	6–12	Room 219, Conv. Ctr.	Tough Topics in Chemistry: Gas Laws (p. 28)

CHEMISTRY/PHYSICAL SCIENCE, cont.

SAT	9:30–10:30 AM	H	Gallier A/B, Sheraton	Sharing the Responsibility for Learning with Your Students (p. 43)
	9:30–10:30 AM	M–C	Oak Alley, Hilton	Sports Equipment and Materials Science (p. 46)
	9:30–10:30 AM	M–H	Napoleon B2, Sheraton	A–Z Chemistry (p. 48)
	10:00–11:30 AM	6–C	Room 210, Conv. Ctr.	Chemistry and the Atom (p. 54)
	10:00–11:30 AM	9–12	Rooms 204/205, Conv. Ctr.	Teach AP Chemistry—It Is Now Easy for You (p. 52)
	10:00–11:30 AM	6–8	Room 226, Conv. Ctr.	New Tools for Teaching About the Periodic Table (p. 56)
	10:00–11:30 AM	9–11	Room 232, Conv. Ctr.	Living By Chemistry: Take a Breath (p. 58)
	11:00 AM–12 Noon	H	Napoleon B2, Sheraton	Have Einstein, Curie, and Newton Visit Your Classroom: Embedding the History of Science into Your Teaching (p. 75)
	11:00 AM–12 Noon	H	Salons 817 & 821, Sheraton	Engage Their Minds on Day One (p. 76)
	11:00 AM–12 Noon	M–H	Maurepas, Sheraton	Logical Chemistry Puzzles (p. 75)
	12 Noon–1:30 PM	9–C	Room 224, Conv. Ctr.	Spectroscopy with Vernier (p. 81)
	12:30–1:00 PM	M–C	Napoleon C1, Sheraton	Why Your Students Misunderstand the Atom and What to Do About It (p. 84)
	12:30–1:30 PM	H	Gallier A/B, Sheraton	Guess What? You’re Teaching Chemistry! (p. 88)
	12:30–1:30 PM	H–C	Ile de France I, JW Marriott	Stoichiometry in Two Steps (p. 91)
	12:30–1:30 PM	M–H	Room 242, Conv. Ctr.	Biotechnology in the Classroom (p. 89)
	2:00–3:00 PM	H	Salons 817 & 821, Sheraton	Sixty Labs You Can Do with Little or No Budget (p. 103)
	2:00–3:00 PM	M–H	Napoleon B2, Sheraton	Bowling for Density: Teaching Chemistry Using Discrepant Events (p. 105)
	2:00–3:30 PM	5–12	Room 210, Conv. Ctr.	Chemistry and the Data Collector (p. 106)
	3:30–4:30 PM	H–C	Ile de France I, JW Marriott	Teach Chemistry with Hydrogen and Fuel Cells (p. 118)
	3:30–4:30 PM	M	Room 353, Conv. Ctr.	Shampoo or Soy Sauce? Middle-Level Density Activities (p. 112)
	3:30–4:30 PM	G	Room 238, Conv. Ctr.	The Human Spirit, Function, and Artificial Consciousness (p. 111)
	3:30–4:30 PM	I	Salons 817 & 821, Sheraton	The Element Walk (p. 117)
	5:00–6:00 PM	M–H	Napoleon B2, Sheraton	Years of Experience Applied to New Ventures (p. 127)
5:00–6:00 PM	E–M	Room 353, Conv. Ctr.	The Nature of Science and Density in Middle School (p. 124)	
SUN	8:00–9:00 AM	H	Room 227, Conv. Ctr.	Bringing Chemistry Home (p. 135)
	8:00–9:00 AM	M–C	Room 210, Conv. Ctr.	Analogical Approach to General Chemistry Teaching (p. 131)
	9:30–10:30 AM	M–H	Room 227, Conv. Ctr.	21st-Century Lessons for the 21st-Century Student (p. 136)

CHEMISTRY/PHYSICAL SCIENCE, cont.

SUN	9:30–10:30 AM	H	Room 228, Conv. Ctr.	Let's Get Excited! Exciting Students with Exciting Chemistry (p. 140)
	9:30–10:30 AM	M–C	Room 211, Conv. Ctr.	Interactive Chromatography in the Classroom (p. 139)
	11:00 AM–12 Noon	E–M	Room 220, Conv. Ctr.	Critiquing and Improving Models (p. 145)
	11:00 AM–12 Noon	G	Room 215, Conv. Ctr.	Chemistry Inquiry for Kids (p. 145)
	11:00 AM–12 Noon	H	Room 227, Conv. Ctr.	Consumer Chemistry (p. 146)
EARTH/SPACE SCIENCE				
SAT	8:00–9:00 AM	E–M	Room 356, Conv. Ctr.	To the Moon, Alice! Or How to Build a Rocket to Send Someone Far Away (p. 24)
	8:00–9:00 AM	I	Carondelet, NO Marriott	Geosciences ROCKS! Discover the Excitement of Geosciences Research in Antarctica (p. 25)
	8:00–9:00 AM	H	Napoleon C3, Sheraton	NASA: An Introduction to Cosmic Times: Astronomy History and Science for the Classroom (p. 26)
	8:00–9:00 AM	E–M	Room R07, Conv. Ctr.	NASA: Exploring Magnetism in Space Science (p. 24)
	8:00–9:00 AM	6–12	Room 218, Conv. Ctr.	Tough Topics in Earth Science: Plate Tectonics with GIS (p. 28)
	8:00–9:00 AM	M–H	Napoleon C2, Sheraton	Astronomy—Solar Labs and Activities Workshop (p. 26)
	8:00–9:00 AM	G	Napoleon B3, Sheraton	WAIS Divide Outreach Program (p. 22)
	8:00–9:30 AM	K–3	Room 229, Conv. Ctr.	Wild About Safety® with Timon and Pumbaa Goes Green! (p. 32)
	8:00–9:30 AM	3–8	Room 217, Conv. Ctr.	Discover the Solar System and Beyond with GEMS® Space Science Sequences (p. 30)
	9:30–10:30 AM	E–H	Napoleon C2, Sheraton	Feed Their Hunger to Learn (p. 48)
	9:30–10:30 AM	E–H	Bissonet, NO Marriott	NESTA Session: National Earth Science Teachers Association Natural Hazards and the Environment Share-a-Thon (p. 47)
	9:30–10:30 AM	G	Napoleon B3, Sheraton	Increasing Student Achievement Through Instructional Technology Using Astrobiology in an All-inclusive Learning Environment (p. 44)
	9:30–10:30 AM	E–M	Room 356, Conv. Ctr.	Sands of Time and Place: Year Two (p. 45)
	9:30–10:30 AM	M–H/I	Salons 817 & 821, Sheraton	NASA: Inquiry Activities for Learning About Light and the EM Spectrum and Multiwavelength Astronomy (p. 44)
	9:30–10:30 AM	M–H	Bayside C, Sheraton	Earthquakes: Activities and Models for Your Classroom (p. 48)
9:30–10:30 AM	G	Napoleon C1, Sheraton	Climate Change and the WAIS Divide Ice Coring Educational Outreach Program (p. 44)	

EARTH/SPACE SCIENCE, cont.

SAT

10:00–11:30 AM	7–12	Room 229, Conv. Ctr.	No Boundaries: An Exploration of STEM Careers Led by <i>USA TODAY</i> /NASA (p. 57)
10:00–11:30 AM	6–9	Room 231, Conv. Ctr.	Soil, Sand, and Density (p. 57)
11:00 AM–12 Noon	K–12	Booth No. 1133, Conv. Ctr.	Immersive Space Science Curriculum: “Moon Phases” in a Full-dome Classroom (p. 76)
11:00 AM–12 Noon	E–H	Napoleon C1, Sheraton	Meteorites Decoded: A Sideways Take on Asteroids, Comets, and the Wonderful World of the “Poor Man’s Space Probe” (p. 69)
11:00 AM–12 Noon	E	Room R03, Conv. Ctr.	News from Saturn and the <i>Cassini</i> Spacecraft (p. 72)
11:00–11:30 AM	G	Napoleon C2, Sheraton	Remote Sensing: Mapping the Community with Model Rockets (p. 69)
11:30 AM–12 Noon	E–H	Napoleon C2, Sheraton	Create Your Own Zero Gravity Chamber! (p. 69)
11:00 AM–12 Noon	M	Room 356, Conv. Ctr.	Exploring Our Solar System and Beyond: Thinking Outside the Spacecraft (p. 72)
11:00 AM–12 Noon	E–H	Bissonet, NO Marriott	NESTA Session: Hurricane Katrina’s Impact on the Environment of Greater New Orleans: Fears, Concerns, and Prognosis for the Future (p. 63)
11:00 AM–12 Noon	M-H/I	Napoleon C3, Sheraton	Airplanes and the Atmosphere: A Weather and Climate Curriculum Module (p. 76)
11:30 AM–12 Noon	G	Edgewood A/B, Sheraton	The U.S. and Italy: International Cooperation and Educational Outreach Efforts During IPY (p. 69)
11:00 AM–12 Noon	I	Bayside C, Sheraton	Science and Snowflakes: Join the Global Snowflake Network! (p. 75)
11:00–11:30 AM	G	Edgewood A/B, Sheraton	NOAA Education Outreach in Alabama (p. 68)
11:00 AM–12 Noon	M	Southdown, Sheraton	DUPONT Session: The Use of Technology in the Middle School Weather Classroom (p. 76)
11:00 AM–12 Noon	M–H	Napoleon D1&2, Sheraton	Scale the Universe (p. 76)
12 Noon–1:30 PM	G	St. Charles, NO Marriott	COSEE Luncheon Presentation: Natural Coastal Hazards and Their Impacts on the Human Condition (p. 79)
12 Noon–1:30 PM	6–9	Room 231, Conv. Ctr.	Soil, Sand, and Density (p. 82)
12 Noon–1:30 PM	6–8	Room 228, Conv. Ctr.	Smithsonian Science: Dig It! The Secret of Soil (p. 81)
12:30–1:30 PM	M–C	Napoleon B3, Sheraton	Minds On <i>vs.</i> Hands On in Science Education (p. 88)
12:30–1:30 PM	M–C	Salons 817 & 821, Sheraton	NASA: Exploring Magnetism in Solar Flares with the RHESSI Mission (p. 92)
12:30–1:30 PM	G	Napoleon C2, Sheraton	NanoScale PlanetWalk (p. 92)
12:30–1:30 PM	M–H	Napoleon C3, Sheraton	One Coral, Two Coral, Shallow Coral, Deep Coral (p. 92)
12:30–1:30 PM	E	Room R08/R09, Conv. Ctr.	Sun-Earth Elementary Share-a-Thon (p. 90)
12:30–1:30 PM	E–H	Bissonet, NO Marriott	NESTA Session: Coastal Louisiana in a World of Global Change (p. 85)
12:30–1:30 PM	G	Room 239, Conv. Ctr.	Hurricane Cycles and Global Warming (p. 85)
12:30–1:30 PM	M–H	Bayside C, Sheraton	Volcanoes: A Monitoring Simulation and 3-D Models (p. 91)

EARTH/SPACE SCIENCE, cont.

SAT

12:30–1:30 PM	E	Room R02, Conv. Ctr.	Engineering Science into Your Classroom (p. 90)
12:30–3:00 PM	5–8	Room 209, Conv. Ctr.	Explore Weather and Water with FOSS Middle School (p. 94)
1:30–3:00 PM	M–H	Regent, NO Marriott	COSEE Session: The Oceans They Are A-changin’...How Might This Change You? (p. 96)
2:00–3:00 PM	G	Napoleon C1, Sheraton	Using Copy Change to Teach Earth Science: An Integrated Approach to Teaching Science and Literacy (p. 102)
2:00–3:00 PM	M–H	Napoleon B3, Sheraton	A Wide Spectrum of Solar Science for After-School Astronomy Clubs (p. 102)
2:00–3:00 PM	G	Napoleon C2, Sheraton	Enhancing Diversity in Geosciences in Alaska Through an Introduction of Geospatial Education and Digital Storytelling (p. 102)
2:00–3:00 PM	P–M	Room 356, Conv. Ctr.	Keeping Things in Motion: Using Newton’s Laws to Understand the Universe (p. 103)
2:00–3:00 PM	I	Bayside C, Sheraton	ISS Toys in Space: Science on the Station (p. 105)
2:00–3:00 PM	E–H	Bissonet, NO Marriott	NESTA Session: Geologic Processes of Coastal Louisiana and the Impacts of Hurricanes: Can New Orleans Survive? (p. 97)
2:00–3:30 PM	6–8	Room 226, Conv. Ctr.	Teaching About the Rock Cycle and Earth Time (p. 108)
3:00–4:00 PM	K–12	Booth No. 1133, Conv. Ctr.	Visualizing Our Universe in a Full-dome Classroom: Teaching Simulations (p. 109)
3:00–4:00 PM	I	Regent, NO Marriott	COSEE Session: Sediment—It Ain’t Just Dirt (p. 109)
3:30–4:30 PM	E–M/I	Room 239, Conv. Ctr.	Lessons from the Ice (p. 117)
3:30–4:30 PM	E–H	Napoleon C1, Sheraton	An Easy Way to Use the Web to Create Student-oriented Projects (p. 116)
3:30–4:30 PM	H	Napoleon B2, Sheraton	Measuring the Monster in the Middle: Black Holes and Active Galactic Nuclei (p. 119)
3:30–4:30 PM	E	Room R03, Conv. Ctr.	Creative Expressions in Science (p. 118)
4:00–4:30 PM	M–H	Napoleon B3, Sheraton	GLOBE’s Earth System Science Project: Watershed Dynamics (p. 116)
3:30–4:00 PM	M–H	Napoleon B3, Sheraton	Rainfall and Flash Floods: An Investigation (p. 116)
3:30–4:30 PM	M–H	Napoleon C3, Sheraton	Web-based Space Lessons Use Videos: Virtual Labs with Pizzazz (p. 116)
3:30–4:30 PM	6–8	Room 212, Conv. Ctr.	EarthComm: High School Guided Inquiry (p. 120)
3:30–4:30 PM	E–H	Napoleon C2, Sheraton	JetStream—An Online School for Weather (p. 119)
3:30–4:30 PM	G	Bissonet, NO Marriott	NESTA Session: National Earth Science Teachers Association Rock and Mineral Raffle (p. 119)
5:00–6:00 PM	M–H	Napoleon C3, Sheraton	Soils: More Than the Dirt Under Your Feet (p. 127)
5:00–6:00 PM	M	Room 357, Conv. Ctr.	Pathways to Inquiry: Assessing and Teaching Inquiry Skills in Earth Science (p. 121)
5:00–6:00 PM	M–H	Napoleon B3, Sheraton	The Polar ARMADA: Teacher Research and Mentoring at the Poles (p. 123)

EARTH/SPACE SCIENCE, cont.

SAT	5:00–6:00 PM	G	Napoleon C2, Sheraton	Stellar Bar Codes (p. 127)
	5:00–6:00 PM	E–M	Room 356, Conv. Ctr.	Cloudy Day Hands-On and Online Classroom Adventures Bridging Fundamental Basic Weather Science to Literacy, Arts, and ELL (p. 124)
	5:00–6:00 PM	G	Napoleon C1, Sheraton	Historical Events in Effective Science Teaching (p. 123)
	5:00–6:00 PM	I	Bayside C, Sheraton	Making Waves: Seismic Wave Activities and Demonstrations (p. 126)
SUN	8:00–9:00 AM	G	Room 209, Conv. Ctr.	NASA: Black Holes—Dividing by Zero Is Allowed (Sometimes) (p. 133)
	8:00–9:00 AM	M–H	Room 229, Conv. Ctr.	It’s About Time (p. 135)
	8:00–9:00 AM	E	Room 218, Conv. Ctr.	Rockin’ Earth Science (p. 134)
	8:00–9:00 AM	G	Room 228, Conv. Ctr.	Our Solar System: Out-of-This-World Professional Development (p. 132)
	9:30–10:30 AM	M	Room 218, Conv. Ctr.	CSI: Alien Encounter on the Moon (p. 139)
	9:30–10:30 AM	M-H/I	Room 229, Conv. Ctr.	Maps from the Milky Way to the Hallway (p. 140)
	9:30–10:30 AM	I	Room 208, Conv. Ctr.	What’s Up, Part 1? Classroom Activities from the Association of Astronomy Educators (AAE)—Sun, Earth, and Planets (p. 138)
	9:30–10:30 AM	I	Room 209, Conv. Ctr.	Impact: Earth! (p. 138)
	11:00 AM–12 Noon	I	Room 208, Conv. Ctr.	What’s Up, Part 2? Classroom Activities from the Association of Astronomy Educators (AAE)—Beyond the Solar System (p. 144)
	11:00 AM–12 Noon	M–C	Room 229, Conv. Ctr.	NASA: The Size and Scale of the Universe (p. 146)
	11:00 AM–12 Noon	E–H	Room 219, Conv. Ctr.	WALLS! (p. 145)
ENVIRONMENTAL SCIENCE				
SAT	8:00–9:00 AM	H	La Galerie 6, NO Marriott	Teaching About Global Warming (p. 25)
	8:00–9:00 AM	G	Room 239, Conv. Ctr.	Arctic Climate-modeling Project (p. 17)
	8:00–9:00 AM	E–H	Room 238, Conv. Ctr.	Growing Environmental Learners Through Cross-Grade-Level Collaboration (p. 17)
	8:00–9:00 AM	M-H/I	La Galerie 5, NO Marriott	What Does Color Have to Do with It or Why Is Earth Red? (p. 25)
	8:00–9:30 AM	4–9	Room 232, Conv. Ctr.	A Virtual Tour of Your Watershed (p. 32)
	9:00–9:30 AM	M–H	Regent, NO Marriott	COSEE Session: COSEE-West Opportunities for Teachers and Students in the Online World and Beyond (p. 36)
	9:30–10:00 AM	M–H	Regent, NO Marriott	COSEE Session: Coastal Trends in Sea Grass (p. 39)

ENVIRONMENTAL SCIENCE, cont.

SAT

9:30–10:30 AM	M–H	La Galerie 6, NO Marriott	Understanding the Hydrogen Fuel Cell and Its Impact On the U.S. (p. 48)
9:30–10:30 AM	P/E	Room R01, Conv. Ctr.	Nature-based Inquiry (p. 40)
9:30–10:30 AM	H	La Galerie 5, NO Marriott	Drop the Lecture and Let the Students Pick Up the Learning in AP Environmental Science (p. 47)
9:30–10:30 AM	M/I	Room 238, Conv. Ctr.	Environmental Heroes (p. 39)
10:00–10:30 AM	M-H/I	Regent, NO Marriott	COSEE Session: Explorations: COSEE Great Lakes (p. 52)
10:00–11:30 AM	9–C	Room 216, Conv. Ctr.	Need “Energy” in Your Environmental Classes? Learn About Carolina’s New <i>Inquiries in Science</i> Series (p. 54)
11:00 AM–12 Noon	G	La Galerie 5, NO Marriott	Going Green—From Classrooms to Curriculum Application (p. 68)
11:00 AM–12 Noon	M–H	Room 238, Conv. Ctr.	Green Teens: Ideas for Action (p. 70)
11:00 AM–12 Noon	E-M/I	Room 239, Conv. Ctr.	From Farm to Table and Beyond—Making Systems Come Alive (p. 70)
11:00 AM–12 Noon	G	La Galerie 6, NO Marriott	Earth Matters: Hands-On Population and Environmental Activities (p. 74)
11:00 AM–12 Noon	E–M	Room 357, Conv. Ctr.	Louisiana’s Wetlands Are Everyone’s Treasure (p. 72)
12 Noon–1:00 PM	E–H	Carondelet, NO Marriott	Antarctica’s Climate Secrets: Resources for Teaching Climate Change (p. 78)
12:30–1:30 PM	M–H	La Galerie 5, NO Marriott	The Little Things That Run the World (p. 91)
12:30–1:30 PM	E–M	Room 357, Conv. Ctr.	Favorite Project-based Environmental Activities That Teach Student Awareness from Mississippi Science Teachers (p. 89)
12:30–1:30 PM	G	Bonaparte, NO Marriott	Student Provocateurs: High-Interest, Collaborative Learning, Digital Action! (p. 87)
2:00–3:00 PM	E–H	Bonaparte, NO Marriott	Growing Spectacular Science Students Through Service Learning (p. 101)
2:00–3:00 PM	6–8	Room 212, Conv. Ctr.	Investigations in Environmental Science: A Case-based Approach (p. 106)
2:00–3:00 PM	M–H	Room 256, Conv. Ctr.	NOAA Symposium Follow-Up Session: Discovering Deep Sea Coral Communities (p. 98)
2:00–3:00 PM	E–H	Maurepas, Sheraton	The Coastal Classroom: Connecting Students with Real-World Science (p. 101)
2:00–3:00 PM	G	Room R02, Conv. Ctr.	PLT’s Exploring Environmental Issues: Places We Live (p. 104)
2:00–3:00 PM	I	Napoleon D1&2, Sheraton	Using Digital Imagery to Enhance Environmental Literacy (p. 106)
2:00–3:00 PM	E-M/I	Room R07, Conv. Ctr.	We’re All in This Together—Watersheds and You! (p. 99)
2:00–3:00 PM	E–H	La Galerie 6, NO Marriott	Using Soil Science in the Classroom (p. 105)
2:00–3:00 PM	M–H	La Galerie 5, NO Marriott	Exploring Energy and Environment: How to Navigate a Science Adventure (p. 105)

ENVIRONMENTAL SCIENCE, cont.

SAT	3:30–4:30 PM	G	Room 243, Conv. Ctr.	Featured Presentation: America's Energy Coast: An Introduction (p. 111)
	3:30–4:30 PM	E	Room R01, Conv. Ctr.	Human Footprint Activities for Young Learners (p. 117)
	3:30–4:30 PM	M–H	La Galerie 5, NO Marriott	Introducing a New NOAA (National Oceanic and Atmospheric Administration) Interdisciplinary Curriculum: POET (Protect Our Environmental Treasures) (p. 119)
	3:30–4:30 PM	G	Bacchus, NO Marriott	Developing a Virtual Workshop About Climate Change (p. 114)
	5:00–6:00 PM	G	Bacchus, NO Marriott	Free Teacher-developed Climate Change CD (p. 122)
	5:00–6:00 PM	M–H	La Galerie 5, NO Marriott	Dendroclimatology: Using Tree Rings to Understand Climate (p. 126)
SUN	8:00–9:00 AM	M–H	Room 205, Conv. Ctr.	Keeping It Clean and Green (p. 133)
	8:00–9:00 AM	H	Room 204, Conv. Ctr.	Removing Trichloroethylene from the Groundwater (p. 131)
	8:00–9:00 AM	E	Room 235, Conv. Ctr.	Exploring Earth Begins at Home: Elementary GLOBE (p. 135)
	8:00–9:00 AM	I	Room 256, Conv. Ctr.	NOAA Symposium Follow-up Session: Watersheds—Connecting Your Backyard to Tropical Coral Reefs (p. 133)
	8:00–9:00 AM	G	Room 212, Conv. Ctr.	Scientists as Professional Development Partners (p. 131)
	9:30–10:30 AM	M–H	Room 256, Conv. Ctr.	NOAA Symposium Follow-up Session: NOAA Coral Reef Watch: Teaching About Coral Reefs Using Satellite Data (p. 141)
	9:30–10:30 AM	G	Room 212, Conv. Ctr.	Turn Your School into a GreenSchool! (p. 136)
	9:30–10:30 AM	E–M	Room 219, Conv. Ctr.	AMSE Session: Biome, Biome...That's My Home (p. 140)
	9:30–10:30 AM	E	Room 235, Conv. Ctr.	The Environment as the Second Teacher: Explorations in an Urban Schoolyard (p. 141)
	9:30–10:30 AM	M-H/I	Room 204, Conv. Ctr.	Excite Your Students Using an Innovative Website While Teaching About Aquatic Invasive Species (p. 136)
	9:30–10:30 AM	M–H	Room 239, Conv. Ctr.	Addressing Societal Issues That Require Understanding of Science: Global Systems and NASA's Digital Earth Watch (p. 137)
	9:30–10:30 AM	M–H	Room 205, Conv. Ctr.	Investigating the Quality of Well Water: Mapping Total Dissolved Solids (TDS) with a Geographic Information System (GIS) (p. 138)
	11:00 AM–12 Noon	G	Room 212, Conv. Ctr.	Nature Connections for Early Learners: Project WILD's Early Childhood Program (p. 142)

ENVIRONMENTAL SCIENCE, cont.

SUN	11:00 AM–12 Noon	G	Room 210, Conv. Ctr.	Inspirational Hands-On USDA Research to Inspire Your Students to Become FUTURE SCIENTISTS Aware of Global Interdependency and the Need to Ameliorate Adverse Human Environmental Impact (p. 144)
	11:00 AM–12 Noon	M–H	Room 204, Conv. Ctr.	EduCaching: An Invasive Species Scavenger Hunt (p. 141)
	11:00 AM–12 Noon	E–M	Room 239, Conv. Ctr.	C2S2: Climate Change Student Summit (p. 142)
INTEGRATED/GENERAL SCIENCE				
SAT	8:00–9:00 AM	G	Elmwood, Hilton	Teaching in the 21st Century: Traditional Teaching Infrastructure vs. Cyberinfrastructure Learning (p. 20)
	8:00–9:00 AM	M	Room 353, Conv. Ctr.	Trash Lab (p. 23)
	8:00–9:00 AM	E–H	Ile de France II, JW Marriott	Science Notebooks—Making Deep Connections (p. 25)
	8:00–9:00 AM	M–H	Napoleon D1&2, Sheraton	To the Moon Alice! An Alice in Wonderland Adventure (p. 26)
	8:30–9:00 AM	H/S	Bonaparte, NO Marriott	Redefining Science Teacher Preparation: The Woodrow Wilson Indiana Teaching Fellowship Program (p. 20)
	8:00–9:00 AM	I	Edgewood A/B, Sheraton	Leading Discussions About the Societal Impact of Advances in Nanotechnology (p. 21)
	8:00–9:00 AM	M	Room 354, Conv. Ctr.	Rev Your Engines: A Low-Budget, High-Tech Middle School Automotive Lab (p. 23)
	8:00–9:00 AM	G	Norwich, Hilton	Leadership Teams: Addressing Change and Challenge Together (p. 20)
	8:00–9:00 AM	E	Room R06, Conv. Ctr.	Be a Model Scientist (p. 24)
	8:00–9:00 AM	E–H	Room 240/241, Conv. Ctr.	A Helping Hand in the Classroom: Study of Teacher-Graduate Fellow Teams in Science Classrooms (p. 18)
	8:00–9:00 AM	G	Belle Chasse, Hilton	Science Olympiad: The Best Kept Secret in Science Education (p. 19)
	8:00–9:00 AM	M	Room 355, Conv. Ctr.	Using Online Games to Teach Science: Four Evidence-based Examples (p. 18)
	8:00–9:00 AM	M	Room 351, Conv. Ctr.	Save the Penguins: Engineering Design in the Science Classroom (p. 18)
	8:00–9:00 AM	P/E	Room R05, Conv. Ctr.	Inquiry with Young Scientists: Helping Children Investigate Their World (p. 24)
	8:00–9:00 AM	H	Room 242, Conv. Ctr.	We’ve Got the Technology, Now What? (p. 22)
8:00–9:00 AM	G	Room 243, Conv. Ctr.	Science Teaching as a Profession: Why It Isn’t; How It Could Be (p. 18)	

INTEGRATED/GENERAL SCIENCE, cont.**SAT**

8:00–9:00 AM	P/E	Room R04, Conv. Ctr.	Technology Tools for the Elementary Science Classroom (p. 19)
8:00–9:00 AM	G	Jackson, NO Marriott	Before and After Retirement: Practicalities and Possibilities (p. 20)
8:00–9:00 AM	M–H	Napoleon D3, Sheraton	Hurricane Katrina: The Intersection of Human Justice and Environmental Issues and Why We Must Care (p. 22)
8:00–8:30 AM	C/S	Bonaparte, NO Marriott	The Digital e-Portfolio in Science Teacher Professional Development (p. 20)
8:00–9:00 AM	K–6	Room 213, Conv. Ctr.	Introduction to ScienceA–Z.com (p. 28)
8:00–9:30 AM	3–5	Room 235, Conv. Ctr.	Educational Gaming in Science: Shifting the Paradigm (p. 32)
8:00–9:30 AM	6–12	Room 225, Conv. Ctr.	Fuel Our Future Now (p. 31)
8:00–9:30 AM	K–5	Room 220, Conv. Ctr.	Visual Literacy in Science (p. 30)
8:00–9:30 AM	4–12	Room 226, Conv. Ctr.	Lab-Aids Kits: Find the Answers Inside the Box (p. 31)
8:00–9:30 AM	6–C	Room 211, Conv. Ctr.	How Safe Is Your Lab? (p. 29)
8:00–9:30 AM	K–12	Room 208, Conv. Ctr.	Practical Insights into What Research Tells Us About Learning and Memory: Classroom Strategies (p. 28)
8:00–9:30 AM	G	Room 236, Conv. Ctr.	Using Math and Science as the “New Literacy” to Combat “At-Risk” Student Achievement (p. 33)
8:00–9:30 AM	3–9	Room 228, Conv. Ctr.	From the Field: Igniting a Passion for Science (p. 31)
8:30–11:30 AM	K–6	Room 209, Conv. Ctr.	Using Science Notebooks with FOSS Modules K–6 (p. 36)
9:00–10:30 AM	G	Room 352, Conv. Ctr.	Shell Science Seminar: Fantasy, Reality, and Almost Miracles: Forensic Anthropology in the 21st Century (p. 37)
9:00–11:00 AM	G	Carondelet, NO Marriott	Teacher Share! A Share-a-Thon for Teachers Involved in the International Polar Year (p. 37)
9:30–10:30 AM	M-H/I	Napoleon D1&2, Sheraton	Teaching Middle and High School Teachers How to Help Students Develop Scientific Explanations Based On Claims, Evidence, and Reasoning (p. 49)
9:30–10:30 AM	G	Elmwood, Hilton	I Love FREE! (p. 41)
9:30–10:00 AM	C/S	Bonaparte, NO Marriott	Preservice Elementary Teachers: The Impact of Methods and Field Experience on Professional Development (p. 43)
9:30–10:30 AM	M	Southdown, Sheraton	DUPONT Session: Middle School Activities Focused On Addressing Gender Equity (p. 49)
9:30–10:30 AM	P–M	Room 253, Conv. Ctr.	AOA Session: Get the Scoop (CESI) (p. 40)
9:30–10:30 AM	S	Room 252, Conv. Ctr.	AOA Session: Leadership for Science Education (NSELA) (p. 40)
9:30–10:30 AM	G	Norwich, Hilton	Metric Week (p. 42)
9:30–10:30 AM	E–M	Room 355, Conv. Ctr.	Teaching Elementary Science with Everyday Items (p. 45)

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9:30–10:30 AM	G	Belle Chasse, Hilton	Science for Students with Significant Intellectual Disabilities (p. 41)
10:00–10:30 AM	C/S	Bonaparte, NO Marriott	Art and Science Preservice Intersections (p. 43)
9:30–10:30 AM	P/E	Room R06, Conv. Ctr.	Project See What Happens! An Early-Childhood Science Literacy Project (p. 40)
9:30–10:30 AM	P/E	Room R05, Conv. Ctr.	Purple, Pointed, and Pokey! Exploring and Investigating the Potential of Properties in Early Childhood Science (p. 46)
9:30–10:30 AM	G	Ile de France II, JW Marriott	A Leader’s Guide to Science Curriculum Topic Study: Designs, Tools, and Resources for Professional Learning (p. 46)
9:30–10:30 AM	G	Rosalie, JW Marriott	Engaging Students and Challenging Science Misconceptions Through Discrepant Events (p. 42)
9:30–10:30 AM	I	St. Claude, JW Marriott	The Built Environment: A Springboard to STEM Learning and Citizenship (p. 42)
9:30–10:30 AM	E–M	Ile de France III, JW Marriott	ASTE Session: Let’s Explore Early Childhood Science (p. 47)
9:30–10:30 AM	E–H	Room 354, Conv. Ctr.	SciLinks: Using the Online Assignment Tool (p. 40)
9:30–10:30 AM	I	Edgewood A/B, Sheraton	Problem-based Learning: A Practical Approach for STEM Education (p. 43)
9:30–10:30 AM	M–H	Room 240/241, Conv. Ctr.	The Teacher Researcher: Using the RET Experience to Improve Your Classroom (p. 39)
9:30–10:30 AM	E	Room R04, Conv. Ctr.	After-School Robotics for Children: Creative and Critical Tinkering (p. 46)
9:30–10:30 AM	M	Room 353, Conv. Ctr.	NMLSTA Session: Secrets of Fun in Science (p. 45)
9:30–10:30 AM	K–6	Room 213, Conv. Ctr.	Closer Look at a Unit (p. 50)
9:30–10:30 AM	M	Napoleon Ballroom, Hilton	Middle Level Share-a-Thon (p. 42)
9:30–10:30 AM	G	Jackson, NO Marriott	Starting an NSTA Student Chapter: Student and Faculty Perspectives (p. 43)
9:30–11:00 AM	G	Versailles Ballroom, Hilton	Multicultural/Equity Division and AMSE Joint Share-a-Thon/Poster Session (p. 50)
10:00–10:30 AM	E/C/S	Bacchus, NO Marriott	Developing Mentor Teachers to Support Inquiry Science Implementation (p. 51)
10:00–11:30 AM	6–8	Room 220, Conv. Ctr.	How to Analyze Your Prints (p. 55)
10:00–11:30 AM	9–12	Room 224, Conv. Ctr.	IB* Science with Vernier (p. 56)
10:00–11:30 AM	K–5	Room 217, Conv. Ctr.	Math Out of the Box®: Data Analysis and Algebraic Thinking Connect to Science (p. 54)
10:00–11:30 AM	3–5	Room 235, Conv. Ctr.	Educational Gaming in Science: Shifting the Paradigm (p. 58)
10:00–11:30 AM	K–5	Room 236, Conv. Ctr.	Student Success with Inquiry (p. 58)
10:00–11:30 AM	6–8	Room 221, Conv. Ctr.	Integrating Scenario-based Instruction into Your Science Curriculum (p. 55)
10:00–11:30 AM	K–12	Room 208, Conv. Ctr.	Understanding Executive Function: Linking Brain Science to Education (p. 52)
10:00–11:30 AM	5–C	Room 225, Conv. Ctr.	Interactive Technology = Interactive Science (p. 56)

INTEGRATED/GENERAL SCIENCE, cont.**SAT**

10:30–11:00 AM	I	Regent, NO Marriott	COSEE Session: From Sea to Inland Sea—COSEE Teachers Exchange Coastlines for Broader Professional Experience (p. 58)
10:30 AM–12 Noon	9–11	Room 211, Conv. Ctr.	New! High School Curriculum Mastery* Games (p. 60)
11:00–11:30 AM	E–M	Room 351, Conv. Ctr.	Telling Science Tales: Promoting Inquiry for ELLs Using Digital Stories (p. 61)
11:00 AM–12 Noon	G	Room 352, Conv. Ctr.	Paul F-Brandwein Lecture: The Ecology of Hope: Building a Movement to Reconnect Children and Nature (p. 62)
11:00 AM–12 Noon	G	Regent, NO Marriott	COSEE Session: New Views on Sand: Virtual Samples Bring the World’s Beaches to Your Classroom (p. 75)
11:00 AM–12 Noon	E–H	Jasperwood, Hilton	Writing in the Content Area of Science (p. 73)
11:00 AM–12 Noon	G	Oak Alley, Hilton	Cut It, Stab It, Slice It, Dice It: Using the Potato in the Science Classroom (p. 73)
11:00 AM–12 Noon	E–H	Rosalie, JW Marriott	Integrating Rich Media into the STEM Classroom (p. 68)
11:00 AM–12 Noon	G	Ile de France III, JW Marriott	Using the Natural World as an Integral Part of Learning (p. 74)
11:00 AM–12 Noon	P–M	Room 252, Conv. Ctr.	AOA Session: 21st-Century Skills (CESI) (p. 64)
11:00 AM–12 Noon	S	Room 253, Conv. Ctr.	AOA Session: 21st-Century Skills (NSELA) (p. 64)
11:00 AM–12 Noon	G	Elmwood, Hilton	Web 2.0 in the Classroom: Collaborative Learning Tools for Science (p. 66)
11:00 AM–12 Noon	E–H	Carondelet, NO Marriott	Bringing the Poles to Your Classroom—Polar Bears, Penguins, Climate Change, and More (p. 74)
11:00 AM–12 Noon	G	Ascot, Hilton	Creating Access to Science: Developing Accommodations for Middle School Students with Learning Disabilities (p. 66)
11:00 AM–12 Noon	G	Ile de France II, JW Marriott	What Were They Thinking? Uncovering Student Ideas with Formative Probes and FACTS (p. 74)
11:00 AM–12 Noon	E	Room R05, Conv. Ctr.	Technology: Where Science, Engineering, and Society Meet—Implications for the Future (p. 73)
11:00 AM–12 Noon	H	Napoleon D3, Sheraton	Tested Model for “Doing Science” in the IB Group 4 Project (p. 70)
11:00 AM–12 Noon	G	Belle Chasse, Hilton	Integrating Science and Technology (p. 66)
11:00 AM–12 Noon	E	Room R04, Conv. Ctr.	Deck the Halls with Science Cycles! (p. 72)
11:00 AM–12 Noon	M	Room 353, Conv. Ctr.	NMLSTA Session: Let’s Explore Middle Level Magnetism, Electricity, Heat, Light, & Sound, and Earth Science (p. 70)
11:00 AM–12 Noon	E–M	Room 355, Conv. Ctr.	Using the School Yard as an Outdoor Classroom (p. 72)
11:30 AM–12 Noon	G	Norwich, Hilton	The Japan Fulbright Memorial Fund Teacher Program (p. 66)
11:00 AM–12 Noon	G	St. Claude, JW Marriott	Strategies, Tools, and Tips from a Mentor (p. 68)

INTEGRATED/GENERAL SCIENCE, cont.

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11:00–11:30 AM	E–H	Norwich, Hilton	Become an Einstein Fellow! (p. 66)
11:00 AM–12 Noon	P/E	Room R06, Conv. Ctr.	Sensational Science for Kids! (p. 64)
11:00 AM–12 Noon	E–H	Room 354, Conv. Ctr.	Win the \$10,000 Shell Science Teaching Award (p. 64)
11:00 AM–12 Noon	K–6	Room 213, Conv. Ctr.	Introduction to ScienceA–Z.com (p. 77)
11:00 AM–12 Noon	G	Napoleon Ballroom, Hilton	K–12 Share-a-Thon (p. 73)
11:00 AM–12 Noon	G	Room 240/241, Conv. Ctr.	Research to Practice (p. 64)
12 Noon–1:30 PM	K–2	Room 217, Conv. Ctr.	The <i>Zula Patrol</i> ®: Blast Off with Mixtures, Solutions, and Chemical Reactions (p. 80)
12 Noon–1:30 PM	6–8	Room 220, Conv. Ctr.	Planet Diary: Web-based Science News and Activities Engage Students in Science (p. 80)
12 Noon–1:30 PM	9–C	Room 236, Conv. Ctr.	The Games Kids Play: How to Manage a Successful School Gaming Club (p. 82)
12 Noon–1:30 PM	K–12	Rooms 204/205, Conv. Ctr.	Using Dinah Zike’s Foldables to Teach Science More Effectively (p. 79)
12 Noon–1:30 PM	K–5	Room 225, Conv. Ctr.	Hands-On Standards in Science (p. 81)
12 Noon–1:30 PM	9–12	Room 235, Conv. Ctr.	The Case of the Kidnapped Tamarin Monkey: Did You Do It? (p. 82)
12 Noon–2:00 PM	K–12	Room 208, Conv. Ctr.	Connecting Brain Research with Effective Teaching: The Brain-Targeted Teaching Model (p. 83)
12:30–1:30 PM	K–6	Room 213, Conv. Ctr.	Closer Look at a Unit (p. 93)
12:30–1:30 PM	E–H	Ile de France II, JW Marr.	Engage Learners from Day One with Science Olympiad! (p. 91)
12:30–1:00 PM	H	Edgewood A/B, Sheraton	The Pete Conrad Spirit of Innovation Award: Combining STEM and Entrepreneurship (p. 87)
12:30–1:30 PM	M–C	Magnolia, Hilton	Publishing Your Chemical Education Ideas: What, How, When, Where, and Why (p. 86)
12:30–1:30 PM	M–H	Napoleon D3, Sheraton	Science and Literacy Strategy Harvest 7–12 (p. 88)
12:30–1:30 PM	E/C	Room R05, Conv. Ctr.	Children as Urban Ecologists: A Model for Inquiry—Preschool Through Preservice (p. 90)
12:30–1:30 PM	M–C	Windsor, Hilton	Order in the (Science) Court: Using Mock Trials to Explore Scientific Controversies and Issues (p. 87)
12:30–1:30 PM	G	Ile de France III, JW Marr.	Professional Development for When You KNOW What You Don’t Know (p. 91)
12:30–1:30 PM	G	Belle Chasse, Hilton	Providing a Valuable Purpose for Learning (p. 86)
12:30–1:30 PM	E–H	Elmwood, Hilton	Lights, Camera, Science! (p. 86)
12:30–1:30 PM	P/E	Room R04, Conv. Ctr.	Starting Early: Scientific Literacy for PreK Students (p. 86)
12:30–1:30 PM	E–H	Room 240/241, Conv. Ctr.	Online Science Professional Development—Formula for Success (p. 85)
12:30–1:30 PM	G	Jasperwood, Hilton	What’s This All About? Uncovering Students’ Misconceptions (p. 90)
1:00–1:30 PM	M–H	Edgewood A/B, Sheraton	Dynamic Lab Report (p. 88)
12:30–1:30 PM	E–M	Room 354, Conv. Ctr.	Using Scientific Data to Generate Scientific Ideas in K–6 Teacher Professional Development (p. 89)

INTEGRATED/GENERAL SCIENCE, cont.

SAT

12:30–2:30 PM	G	Room 238, Conv. Ctr.	NSTA Press Session: Planning Safe, Sustainable, and Flexible Facilities for Inquiry-based Science (p. 94)
12:30–3:00 PM	H	Ascot, Hilton	NSTA Multicultural/Equity in Science Education Division: Support for Secondary Science Students (p. 94)
1:30–3:00 PM	G	Room 243	Shell Science Seminar: The Science of Art—The Teaching of Optics (p. 95)
2:00–3:00 PM	G	Room 352, Conv. Ctr.	NSTA/ASE Honors Exchange Lecture: Toward a Science of Science Teaching (p. 97)
2:00–3:00 PM	K–6	Room 213, Conv. Ctr.	Introduction to Science A–Z.com (p. 106)
2:00–3:00 PM	G	Ile de France III, JW Marr.	The Nature of Science: Personal Experience That Can Lead to Informed Teaching (p. 105)
2:00–3:00 PM	G	Belle Chasse, Hilton	Using Science Skills to Become an Asset to Your Community (p. 100)
2:00–3:00 PM	E	Room R05, Conv. Ctr.	Science Notebooks: Assessing for Learning (p. 99)
2:00–3:00 PM	G	Oak Alley, Hilton	Orienteering for Multiple Science Curricula to Meet the Need of Diverse Student Populations (p. 104)
2:00–3:00 PM	G	Norwich, Hilton	Career Changers—From Lab to Classroom: Successfully Recruiting and Training Scientists to Become Science Teachers (p. 100)
2:00–3:00 PM	E	Room 242, Conv. Ctr.	Technology Infusion in the Elementary Science Classroom (p. 98)
2:00–3:00 PM	M–H	Napoleon D3, Sheraton	Teacher-Ranger-Teacher: Nurturing a Student's Love for Learning By Using the Natural Classrooms of the National Parks (p. 103)
2:00–3:00 PM	E–M	Room 354, Conv. Ctr.	Questions...Questions...and More Questions! (p. 103)
2:00–3:00 PM	I	Windsor, Hilton	Great Science for Girls! (p. 100)
2:00–3:00 PM	E–M	Room 357, Conv. Ctr.	Science + Writing = Learning (p. 103)
2:00–2:30 PM	G	Norwich, Hilton	Navigating Out of the Doldrums: Enlivening Your Career Through Experiences in the Scientific Field (p. 100)
2:00–3:00 PM	M	Room 355, Conv. Ctr.	Long-Term Science Investigations: Beyond the Science Fair (p. 99)
2:00–3:00 PM	M	Room 351, Conv. Ctr.	Beyond Webquests: Effective Technology Practices to Increase Student Achievement (p. 98)
2:00–3:00 PM	E	Room R04, Conv. Ctr.	A Chain Is Only as Strong as Its Weakest Link: One District's Approach to Building a Strong Chain in Elementary Science Education (p. 99)
2:00–3:00 PM	G	Room 240/241, Conv. Ctr.	What Research Says to the Science Teacher About Effective Professional Development (p. 98)
2:00–3:00 PM	M–H	Edgewood A/B, Sheraton	Multiple Types of Journals Used to Enhance the Whole-Class Inquiry Setting (p. 101)

INTEGRATED/GENERAL SCIENCE, cont.

SAT

2:00–3:00 PM	G	Elmwood, Hilton	Project-based Technology Projects Your Students Will Love! (p. 100)
2:00–3:00 PM	E–H	Southdown, Sheraton	DUPONT Session: DuPont Presents—Safety in the Science Classroom and Lab (p. 103)
2:00–3:00 PM	E–H	Room 237, Conv. Ctr.	Toyota TAPESTRY Grants for Science Teachers = \$\$\$ for Your School (p. 98)
2:00–3:00 PM	G	Ile de France II, JW Marriott	Infusing Content with Best Practices Using the 5E Model (p. 104)
2:00–3:30 PM	9–12	Room 224, Conv. Ctr.	Advanced Logger <i>Pro</i> and LabQuest (p. 108)
2:00–3:30 PM	K–5	Room 217, Conv. Ctr.	Math Out of the Box®: Developing Geometric Logic (p. 107)
2:00–3:30 PM	K–8	Room 222, Conv. Ctr.	K–8 Science with Vernier (p. 107)
2:00–3:30 PM	9–12	Room 225, Conv. Ctr.	Just Released! New IIHS Car Crash Video—Perfect for Integrating the Sciences (p. 108)
3:30–4:30 PM	G	Room 352, Conv. Ctr.	Robert Karplus Lecture: Why I Teach (p. 110)
3:30–4:30 PM	6–10	Room 211, Conv. Ctr.	Recipe for Sustainable Science (p. 120)
3:30–4:30 PM	S	Jackson, NO Marriott	Grow Students NOT Grades (p. 115)
3:30–4:30 PM	K–6	Room 213, Conv. Ctr.	Closer Look at a Unit (p. 120)
3:30–4:30 PM	M–H	Edgewood A/B, Sheraton	One Hundred and One GREAT Internet Resources for Teaching Science (p. 115)
3:30–4:30 PM	G	Room R06, Conv. Ctr.	Dress Like the Frizz (p. 118)
4:00–4:30 PM	G	Norwich, Hilton	Supporting the Scientific Inquiry Process with UDL (p. 114)
3:30–4:00 PM	G	Norwich, Hilton	Maria Montessori and the Inquiry Process (p. 114)
3:30–4:30 PM	E	Room R04, Conv. Ctr.	Weaving the Science as Inquiry Tapestry in Grades K–3 (p. 118)
3:30–4:30 PM	G	Elmwood, Hilton	Science Education Professional Development Through Technology (p. 114)
3:30–4:30 PM	G	Bonaparte, NO Marriott	Teaching About Evolution and Global Warming in Colorado (p. 114)
3:30–4:30 PM	G	Oak Alley, Hilton	D.I.Y. Forensics (p. 118)
3:30–4:30 PM	G	Ile de France III, JW Marr.	Science Compacting (p. 118)
3:30–4:30 PM	E–H	Room 242, Conv. Ctr.	Supporting Science Literacy with 21st-Century Tools (p. 112)
3:30–4:30 PM	E	Room R05, Conv. Ctr.	Are Your Students Limited by the Context in Which You Teach? (p. 113)
3:30–4:30 PM	G	Belle Chasse, Hilton	Engineer Your Life: Talking to High School Girls About Engineering (p. 113)
3:30–4:30 PM	E–M	Room 355, Conv. Ctr.	NSTA Press Session: Simulating Science: Using Computer Simulations to Enhance Elementary and Middle Science Instruction (p. 112)
3:30–4:30 PM	G	Room 240/241, Conv. Ctr.	School Science Leaders: Professional Learning Communities That Work! (p. 112)
3:30–4:30 PM	M–H	Napoleon D3, Sheraton	Metrics Made Easy (p. 117)
3:30–4:30 PM	G	Jasperwood, Hilton	Enriching Your Classroom Using Gold and Oil (p. 118)

INTEGRATED/GENERAL SCIENCE, cont.

SAT	3:30–5:00 PM	E	Southdown, Sheraton	DUPONT Session: DuPont Presents— Connecting Science and Math Inquiry Through Formative Assessment (p. 120)
	3:30–5:30 PM	M-C/S	Ascot, Hilton	AMSE Session: Multicultural Science Activities for Urban and Suburban Grades 8–12 (p. 120)
	5:00–5:30 PM	H-C/S	Bonaparte, NO Marriott	Using Probes to Probe for Misconceptions (p. 121)
	5:00–6:00 PM	H	Gallier A/B, Sheraton	Harnessing Technology to Support Inquiry Curricula in the Urban High School (p. 123)
	5:00–6:00 PM	G	Edgewood A/B, Sheraton	Using Complexity to Understand the World (p. 123)
	5:00–6:00 PM	P/E	Room R06, Conv. Ctr.	What the...? What IS That? Science in a Box (p. 125)
	5:00–6:00 PM	G	Oak Alley, Hilton	The Great Nanotechnology Revolution (p. 126)
	5:00–6:00 PM	E–H	Jasperwood, Hilton	Food, Land, and People Resources for Learn- ing (p. 125)
	5:00–6:00 PM	G	Ile de France III, JW Marr.	Encourage Parents to Teach and Learn Science: If You Don't Teach the Parents...Then They Might Think You Have to Do All the Work! (p. 126)
	5:00–6:00 PM	P	Room R07, Conv. Ctr.	Beyond the Bug Box: Science and Literacy in Early Childhood Classrooms (p. 125)
	5:00–6:00 PM	M	Room 354, Conv. Ctr.	Abstract Concepts for the Concrete Mind: Techniques and Lessons to Engage Middle School Students (p. 121)
	5:00–6:00 PM	H–C	Ile de France I, JW Marriott	Ready-to-Go Problems and Activities for Group Problem Solving in Chemistry, Biology, and Math (p. 126)
	5:00–6:00 PM	G	Newberry, Hilton	Finding Funding (p. 122)
	5:00–6:00 PM	E/C	Room R05, Conv. Ctr.	Push, Pull, and Perform! (p. 124)
	5:00–6:00 PM	E–H	Ile de France II, JW Marr.	Making the Connection: How Digital Libraries Enhance 21st-Century Skills and Learning (p. 126)
	5:00–6:00 PM	E–M	Room 242, Conv. Ctr.	Digital Learning: Does It “Measure Up”? (p. 124)
	5:00–6:00 PM	E	Room R04, Conv. Ctr.	Energy and the Polar Environment in the Ele- mentary Classroom (p. 122)
	5:00–6:00 PM	E–M	Room 355, Conv. Ctr.	Exciting Engineering Ideas for Everyone (p. 124)
	5:00–6:00 PM	E–M	Room 351, Conv. Ctr.	The Perfect Inquiry Science Lesson (p. 121)
6:00–11:45 PM	G	Elmwood, Hilton	A Stimulating Evening with the Late Richard P. Feynman (p. 129)	
SUN	8:00–9:00 AM	P–M	Room 222, Conv. Ctr.	Force and Motion: Energy Transfer Elementary Style (p. 135)
	8:00–9:00 AM	E	Room 217, Conv. Ctr.	Hands On Means “Brains On” in the Elementary Science Lab (p. 134)
	8:00–9:00 AM	P–M	Room 221, Conv. Ctr.	Mathnificent Scientific Experience, Part 2 (p. 135)
	8:00–9:00 AM	G	Room 243, Conv. Ctr.	Communicating the Evidence for Inquiry (p. 132)
	8:00–9:00 AM	G	Room 214, Conv. Ctr.	LSU Coastal Roots Program = Ecological Stewardship + Environmental Literacy + Meaningful Science (p. 134)

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SUN	8:00–9:00 AM	G	Room 242, Conv. Ctr.	The Digital Evolution and Science Literacy with Virtual Notebooks (p. 132)
	8:00–9:00 AM	G	Room 254, Conv. Ctr.	Inflating Your Students' Imagination: Inflatable Teaching Tools (p. 133)
	8:00–9:00 AM	M–C	Room 252, Conv. Ctr.	Hollywood BAD Science (p. 132)
	8:00–9:00 AM	G	Room 215, Conv. Ctr.	The Science of Bread Making (p. 134)
	8:00–9:00 AM	S	Room 213, Conv. Ctr.	Central Alabama Science Education Exchange (CASEE) (p. 131)
	9:30–10:30 AM	S	Room 213, Conv. Ctr.	Designing Quality Project-based Units for the Science Classroom (p. 136)
	9:30–10:30 AM	G	Room 242, Conv. Ctr.	Lessons Learned Over the Continuum (p. 137)
	9:30–10:30 AM	E	Room 237, Conv. Ctr.	Do the Clouds Suck?: Guided Science for Children in Poverty (p. 137)
	9:30–10:30 AM	G	Room 254, Conv. Ctr.	Differential Instruction in Science (p. 138)
	9:30–10:30 AM	G	Room 215, Conv. Ctr.	Professional Learning Does Not Have to Be Boring: Play with Cards, Perform Magic, and Do Puzzles (p. 139)
	9:30–10:30 AM	P/E	Room 216, Conv. Ctr.	Science in a Box (p. 139)
	9:30–10:30 AM	E	Room 224, Conv. Ctr.	Brown Bear: More Than an Animal (p. 140)
	9:30–10:30 AM	E–M	Room 221, Conv. Ctr.	Beat the Science Blues! Transform Activities into Inquiry (p. 140)
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	9:30–10:30 AM	G	Room 243, Conv. Ctr.	Transformative Methods for Content Delivery and Assessment (p. 137)
	9:30–10:30 AM	E	Room 217, Conv. Ctr.	G.A.L.S. (Girls About Loving Science) (p. 139)
	9:30–10:30 AM	G	Room 252, Conv. Ctr.	AOA Session: Political Activism and Education (ASTE) (p. 138)
	9:30–10:30 AM	G	Room 253, Conv. Ctr.	AOA Session: Research into Practice: Frameworks for Sequencing Rigorous and Focused Instructional Sequences (NARST) (p. 138)
	9:30–10:30 AM	E–M	Room 225, Conv. Ctr.	Sense-ational Science Throughout the Seasons (p. 140)
	11:00 AM–12 Noon	E–H	Room 243, Conv. Ctr.	Beyond the Test: The Learning Never Stops (p. 143)
	11:00 AM–12 Noon	E–H	Room 252, Conv. Ctr.	AOA Session: 21st-Century Skills: An Alliance with Scientific Practices? (NARST) (p. 143)
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	11:00 AM–12 Noon	P–M	Room 222, Conv. Ctr.	Kinesthetic Math and Science (p. 145)
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	11:00 AM–12 Noon	M	Room 225, Conv. Ctr.	M.E.N. = Medical and Environmental Impact of Nanotechnology (p. 145)
	11:00 AM–12 Noon	P/E	Room 216, Conv. Ctr.	Teaching Science with a Story (p. 145)
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SAT	8:00–9:00 AM	E–H	Maurepas, Sheraton	Energize Your Classroom (While Teaching Those Tough Energy Concepts) (p. 25)
	8:00–9:00 AM	H–C	Ile de France I, JW Marriott	Reality Physics: Activities That Engage Students in Real-World Applications (p. 25)
	8:00–9:00 AM	H-C/I	Regent, NO Marriott	COSEE Session: COSEE NOW Data Activity—Don't Even “Sink” About It! (p. 25)
	8:00–9:00 AM	M–H	Salons 825 & 829, Sheraton	Nanomagnets? Thresholds of Force and Energy at the Nanoscale (p. 22)
	8:00–9:30 AM	9–C	Room 222, Conv. Ctr.	<i>Physics with Vernier</i> (p. 30)
	9:30–10:30 AM	6–12	Room 218, Conv. Ctr.	Tough Topics in Physics: Archimedes' Principle (p. 50)
	9:30–10:30 AM	E–H	Maurepas, Sheraton	Dr. Gadget Presents Flying (Gliding and Floating) Gadgets (p. 48)
	9:30–10:30 AM	M	Room R07, Conv. Ctr.	Pendulums and the Physics of Music (p. 46)
	9:30–10:30 AM	E	Room 242, Conv. Ctr.	Robotics in the Elementary School (p. 45)
	9:30–10:30 AM	H	Salons 825 & 829, Sheraton	Physics for All—Differentiating Instruction (p. 45)
	9:30–10:30 AM	P/E	Room R03, Conv. Ctr.	Energy Everywhere: Physics for Kids (p. 46)
	10:30 AM–12 Noon	G	Room 243, Conv. Ctr.	Shell Science Seminar: Ice Fishing for Neutrinos (p. 60)
	11:00 AM–12 Noon	M–H	Salons 816 & 820, Sheraton	What Color Do YOU See? (p. 76)
	11:00 AM–12 Noon	M–C	Salons 825 & 829, Sheraton	Interactive Lecture Demonstration: An Engaging Alternative for Limited Budgets (p. 70)
	11:00 AM–12 Noon	E–M	Room R07, Conv. Ctr.	Activities, Materials, and Resources That TEACH SCIENCE! (p. 73)
	11:00 AM–12 Noon	H–C	Ile de France I, JW Marriott	Math Modeling In Physics Using Physics Simulations (p. 74)
	12 Noon–1:30 PM	9–C	Room 232, Conv. Ctr.	Experience Digital Physics Curricula (p. 82)
	12:30–1:30 PM	E–H	Room 353, Conv. Ctr.	NMLSTA Session: Seeing Things in a Different Light (p. 89)
	12:30–1:30 PM	H	Salons 816 & 820, Sheraton	Teaching Core Physics Concepts Through the Lens of Seismology (p. 92)
	12:30–1:30 PM	E	Room R03, Conv. Ctr.	Using Toys to Understand Energy Transfers (p. 90)
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SAT	12:30–1:30 PM	C	Room 212, Conv. Ctr.	Physics for Everyday Thinking (PET) and Physical Science for Everyday Thinking (PSET) (p. 93)
	2:00–3:00 PM	H–C/I	Ile de France I, JW Marriott	Discovery of Sound in the Sea: An Online Resource for Teachers and Students (p. 104)
	2:00–3:00 PM	M–H	Napoleon A1&2, Sheraton	“Old” Demos for “New” Teachers (p. 102)
	2:00–3:00 PM	M–C/S	Jackson, NO Marriott	The Role of Computer Simulations and Visualization in STEM Education (p. 101)
	2:00–3:00 PM	M–H	Salons 816 & 820, Sheraton	Let’s Get Movin’: Enrich Students’ Understanding with Kinesthetic Models in Which Students “Become” a Science Concept (p. 106)
	3:30–4:30 PM	H	Salons 816 & 820, Sheraton	Determining What Is Beneath Our Feet: Applying the Reflection and Refraction of Waves (IRIS) (p. 119)
	3:30–4:30 PM	G	Napoleon A1&2, Sheraton	What Do Our Students Really Think About Weight, Volume, and Matter? (p. 115)
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	3:30–4:30 PM	P–M	Room R07, Conv. Ctr.	Physical Science Quickies (p. 113)
	4:00–4:30 PM	M–C	Salons 825 & 829, Sheraton	Reel in Your Students with Screencasts (p. 117)
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	8:00–9:00 AM	M–H	Room 231, Conv. Ctr.	The Magnet Lab: Magnets Is What We Do! (p. 132)
	9:30–10:30 AM	H	Room 230, Conv. Ctr.	Hands-On Activities for Teaching the Basic Physical Quantities of Mechanics (p. 141)
	9:30–10:30 AM	H	Room 231, Conv. Ctr.	Technology for Discovery to Analysis (p. 137)
	9:30–10:30 AM	E	Room 232, Conv. Ctr.	Everything I Ever Needed to Know About Science I Learned in Kindergarten (p. 141)
	11:00 AM–12 Noon	M–H	Room 230, Conv. Ctr.	FUNDamentals of Electromagnetism with Paul and Mike (p. 146)
	11:00 AM–12 Noon	H	Room 231, Conv. Ctr.	NSTA Press Session: Einstein Adds the Literacy Dimension (p. 142)
	11:00 AM–12 Noon	G	Room 209, Conv. Ctr.	Can Middle School Students Think and Act Like Scientists? Building Scientific Communities in a Science Classroom (p. 144)

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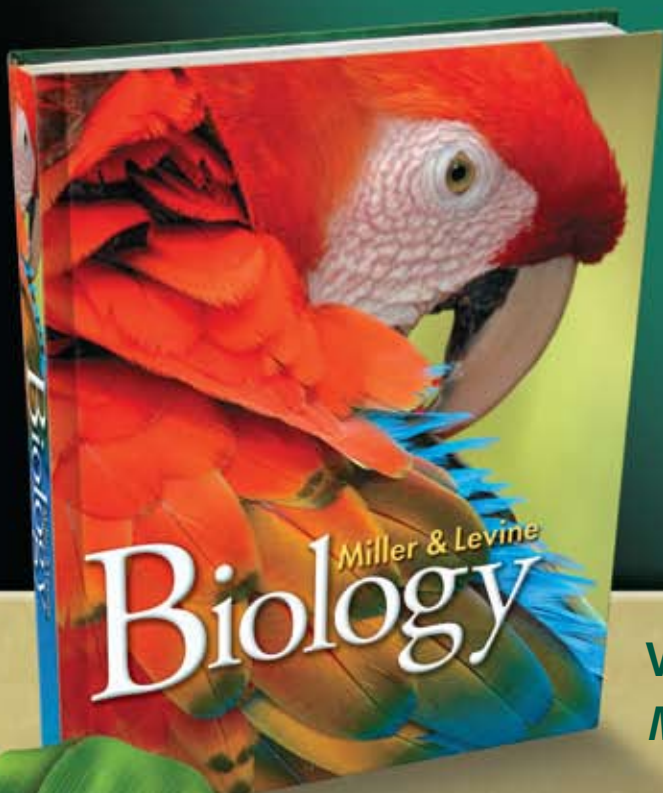
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