

Draft 2016 GSTA Program

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Graffiti and the Integration of Literacy and Science</i>	Room:	Audubon
Presenter(s):	Sarida Hoy, Alecia Hagberg	Vendor:	
Description:	This session will use Graffiti as an interdisciplinary theme between Literacy and Science. Participants will collect and analyze evidence from a vandalism crime scene.		
Level(s):	Upper Elementary (3-5), Middle (6-8), High (9-12), Advanced High (AP/IB)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>STEM-sational Family Nights</i>	Room:	Balsam
Presenter(s):	Kelly Bodner	Vendor:	ETA
Description:	This session uses the engineering design process to design and test three make it and take it activities. Prizes will be given out!		
Level(s):	Lower Elementary (K-2), Upper Elementary (3-5)	Content:	Physical Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Using marine invertebrates to design, implement, and evaluate an animal behavior experiment.</i>	Room:	Birch
Presenter(s):	Catherine Teare Ketter	Vendor:	
Description:	Investigative activity focus on marine invertebrate behavior		
Level(s):	Upper Elementary (3-5), Middle (6-8), High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Georgia Partnership Movement: Beyond DOE, Accreditation</i>	Room:	Cherry
Presenter(s):	George W. Stickel	Vendor:	
Description:	Info on Partnership expectations in GA--School District, Higher Educ, ed prep accreditation, & what you can do to improve your classroom & GA economy		
Level(s):	Middle (6-8), High (9-12), Advanced High (AP/IB), College, Supervisor/Leadership, Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Stability and Change

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Hands on Assessment in Life Science</i>	Room:	Dogwood A
Presenter(s):	Kristen Butera, Jennifer Duncan, Jennifer Scoggins	Vendor:	
Description:	Creative and Hands on ways to assess student learning in Life Science		
Level(s):	Middle (6-8)	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Practices:	Concepts:
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Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Competencies: An Honest Look into our Journey</i>	Room:	Dogwood B
Presenter(s):	Heidi Pickett, Brandi Mather, Ashley Lay	Vendor:	
Description:	A look at why this has been the most rewarding journey or our careers		
Level(s):	Middle (6-8),High (9-12),Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Fast Modes of Assessment</i>	Room:	Gardenia
Presenter(s):	Karen Henman	Vendor:	
Description:	Do you spend hours on grading to determine if students are meeting learning goals. It's simple to incorporate these free tools into your lessons immediately.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Develop a STEM School on a budget</i>	Room:	Holly
Presenter(s):	Susan Hardy	Vendor:	Delta Education
Description:	Creative ways to start a STEM program at a school		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),Supervisor/Leadership	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Beyond Advanced Placement: Post Secondary Research Experience in a Secondary classroom setting</i>	Room:	Lake
Presenter(s):	April Bentley, Garrett Harrison, Audrey Heckler, Hattie Huszagh, Ansley Bowman	Vendor:	
Description:	The integration of research practices with ties to the social, educational, and cultural identify of our community, as successfully carried out in independent research and publication.		
Level(s):	High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	Other
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>"Did you see what he Wrote?": Exploration of Literacy in the Middle Grades Science Classroom</i>	Room:	Maple
Presenter(s):	Amber Morgan	Vendor:	
Description:	A dialogue session exploring various resources and the impact of literacy in the middle grades science classroom.		

Level(s):	Middle (6-8)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Putting the Social in STEM: Social Science as a Driver for STEM learning</i>	Room:	Poplar
Presenter(s):	Dr. Kania Greer; Dr. Amanda Glaze	Vendor:	
Description:	Using social science arguments to teach STEM.		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Making Your Assessments Informative & Meaningful</i>	Room:	Rhododendron A
Presenter(s):	Lauren Ferguson, Lauren Horton, Tasha Young	Vendor:	
Description:	Do you want to get meaningful feedback from your assessments? Come gain some insight on making assessments useful in your classroom!		
Level(s):	Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Developing and Implementing Technological, Interactive Lessons in the Science Classroom</i>	Room:	Rhododendron B
Presenter(s):	Matthew Taylor, Amanda Rudd, Meagan Gay	Vendor:	
Description:	This interactive session will expose attendees to various interactive written and technological resources they can use in the 21st Century science classroom.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8)	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>First-Timers Session</i>	Room:	Rotunda
Presenter(s):	Marlee Tierce	Vendor:	
Description:	Is this your first GSTA Conference? Come see how to make the most of your experience. Tips from the GSTA expert and free refreshments! Not to be missed by any first-timer.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>STEM/Science Lab Design</i>	Room:	Summit
Presenter(s):	Darryl Davis, RabieghHafza, Veronica Wilson-Seville	Vendor:	
Description:	Designing a K-5 Elementary STEM? Scienc Lab		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General

Strand:	Speaking Up on Building STEM from Science	Crosscutting Concepts:	Not Applicable
Sci. & Eng. Practices:	Planning and Carrying Out Investigations		

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Using the SLAP Pyramid to Assess Student Learning</i>	Room:	Willow
Presenter(s):	Samantha Brown	Vendor:	
Description:	The SLAP Pyramid is a method that can be implemented in any classroom to allow students to take responsibility for their own learning. It allows for differentiation and multiple ways to learn content.		
Level(s):	High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	8:00:00 AM
Title:	<i>Supporting Ideation: Using Pitch Days and Poster Sessions to Get Professional Feedback for Students Before Science Fair</i>	Room:	Woodland
Presenter(s):	Amanda Baskett, Scott Bolen	Vendor:	
Description:	Learn results from two different programs, pitch days and poster sessions, that help teachers get their student researchers feedback from professionals during the ideation stage.		
Level(s):	High (9-12)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Educating Georgia's Future</i>	Room:	Auditorium
Presenter(s):	GA. State Superintendent Dr. Richard Woods	Vendor:	
Description:	Mr. Richard Woods, Georgia's State School Superintendent, will discuss his first year in office and talk about his priorities for the rest of his term, including the revision of the science and social studies standards.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>The Best in Lit: How to Choose It and How to Use It</i>	Room:	Audubon
Presenter(s):	Juliana Texley	Vendor:	
Description:	How NSTA chooses and applies the best non-fiction literature		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Patterns

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Destination Imagination</i>	Room:	Balsam
Presenter(s):	Annette Rogers, LaTrina Howell	Vendor:	Destination Imagination

Description:	Destination Imagination - Workshop includes Educator Guide and 10 STE(A)M co-curricular activities for your classroom.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),College	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Captivating the Interest of ALL Students Through Project Based Learning</i>	Room:	Birch
Presenter(s):	Sureka Taylor	Vendor:	
Description:	Come discover through hands-on 5 E Model lessons how to interest and meet the needs of ALL your students as you make Science “come alive” with project based lessons.		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>How Teacher Research Internship Experiences Change the Face of Science Teaching</i>	Room:	Cherry
Presenter(s):	Casey M. Bethel	Vendor:	Douglas County School System, Georgia Institute of Technology
Description:	The presenter will share personal experiences working with university scientists and data driven teaching practices to increase student engagement in science classrooms.		
Level(s):	High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>The Wall of Wonder: Huge Steel Wall+Pipes+Magnets+3D printer=STEM LEARNING FUN</i>	Room:	Dogwood A
Presenter(s):	Christopher L. Sugiuchi	Vendor:	
Description:	Learn about the Wall of Wonder-a giant interactive STEM learning tool!		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	Engineering
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Teaching STEM through Birds</i>	Room:	Dogwood B
Presenter(s):	Deb Jenkins and Teachers	Vendor:	
Description:	Teachers share how they teach STEM concepts through birds.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),Pre-service/Early Career Teachers	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		

Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Structure and Function
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Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Personalizing Your Practice</i>	Room:	Gardenia
Presenter(s):	Christina Hood	Vendor:	
Description:	Are looking for ideas to help with the integration of personalized learning practice into your classroom? Please join me. Attendees should bring a Wi-Fi-enabled tablet/smartphone.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Not Applicable		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>4H and STEM</i>	Room:	Holly
Presenter(s):	Sherry Sutton	Vendor:	
Description:	STEM, 4H and YOU!		
Level(s):	Middle (6-8)	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Successful Ideas for Collaboration for a Diverse Classroom</i>	Room:	Lake
Presenter(s):	Sherrie Chovanec, Peter Fischer	Vendor:	
Description:	Collective best practices to create a successful collaborative environment.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Pre-service/Early Career Teachers	Content:	Other
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Supporting STEM in your classroom through nanoscience.</i>	Room:	Maple
Presenter(s):	Tyler Kinner	Vendor:	
Description:	Experiences, ideas, resources, and concerns with enriching your science classroom with nanoscience in a bid to expand STEM connections.		
Level(s):	High (9-12),Advanced High (AP/IB),College	Content:	Chemistry
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Building a STEM-tastic Program through PBL and Engineering Design Challenges</i>	Room:	Poplar
Presenter(s):	Veronica Wilson-Seville, Darryl Davis, Dr. Bobby Allen, Ernest Sessoms	Vendor:	
Description:	This session will demonstrate how Project/Problem based instruction and Engineering Design Challenges can support science standards on grades K-5.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	Engineering
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Constructing Explanations and Designing	Crosscutting Concepts:	Cause and Effect: Mechanisms and

Practices:	Solutions	Concepts:	Explanations
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Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Spiraling through the Helix: Molecular Biology Differentiated for On-level, Honors and AP Biology Using a Case Study of a Disease</i>	Room:	Rhododendron A
Presenter(s):	Tobie Hendricks, Laurie Howard, Tina Link, Vince Mull, Madalyn Murphy	Vendor:	
Description:	Using a case study of a disease from its DNA sequence to protein synthesis, students conduct authentic laboratory investigations in the development of content knowledge.		
Level(s):	High (9-12),Advanced High (AP/IB)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Who Done It? A Middle School CSI Experience</i>	Room:	Rhododendron B
Presenter(s):	Angela Fleisher	Vendor:	
Description:	This session will focus on using a crime scene to encourage problem solving. The R.A.C.E writing strategy is used to help students write their conclusions on how the crime took place.		
Level(s):	Middle (6-8)	Content:	Forensic Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Calling all Biointeractive Newbies!</i>	Room:	Rotunda
Presenter(s):	Jennifer Barnes	Vendor:	HHMI Biointeractive
Description:	Never heard of Biointeractive? Come find out about FREE and HIGH QUALITY resources for your students! Giveaways included!!		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	Biology/Life Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Integrating STEM in the Middle School Classroom</i>	Room:	Summit
Presenter(s):	Kathleen Lanman, Sally Heintz, Jason Bingel	Vendor:	
Description:	Lessons learned in our integrated STEM pilot program		
Level(s):	Middle (6-8)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Strategically Using Assessment to Enhance Learning</i>	Room:	Willow
Presenter(s):	Marion M. Reeves	Vendor:	
Description:	Mapping out an instructional unit allows blending of instruction and assessment to gain insight into how students are understanding the three strands of science learning.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		

Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Patterns
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Day:	Thursday	Time:	9:00:00 AM
Title:	<i>Leading the Transformation to a STEM Culture</i>	Room:	Woodland
Presenter(s):	Celeste Martin, Carmen Flammini	Vendor:	
Description:	Break the education mold with relevant, meaningful work for students fostered by unique partner relationships, bold administrative moves, and commitment toward a common direction.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Supervisor/Leadership	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>How do Social Determinants of Health Impact IQ and Achievement in the United States?</i>	Room:	Auditorium
Presenter(s):	Dr. William Thompson	Vendor:	
Description:			
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Constructing Scientific Explanations: A Literacy Tool Promoting Proficiency in Science for All Learners</i>	Room:	Audubon
Presenter(s):	Helene Dutcher	Vendor:	
Description:	Learn how literacy strategies involved in constructing explanations help students to understand and make connections between core ideas of science and scientific investigations.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Forensics DNA crime lab: Turn your classroom into a crime scene!</i>	Room:	Balsam
Presenter(s):	Sebastian Kraves Ph.D., Zeke Alvarez Saavedra Ph.D.	Vendor:	miniPCR
Description:	Hands-on workshop using latest PCR (polymerase chain reaction) technology and DNA gel electrophoresis		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB),College	Content:	Forensic Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Patterns

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Robotic Activities for Teaching STEM (Project RAFTSTEM)</i>	Room:	Birch
Presenter(s):	Deborah Riddleberger, Will Dodd, Angie Konarski, Jennifer Ellis, Thomas Layfied, Amy Tinnell, Roger Hill	Vendor:	
Description:	As part of a MSP grant, 3rd-8th grade teachers will discuss how they are integrating robotic		

Level(s):	activities into the curriculum for teaching STEM principles. Upper Elementary (3-5),Middle (6-8)	Content:	Engineering
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Georgia Science Standards Revision: Who? What? When? How? Why?</i>	Room:	Cherry
Presenter(s):	Jeremy Peacock, Moderator	Vendor:	
Description:	Educators, business representatives, and policy makers who participated in the revision process will discuss the process and how our new standards should benefit Georgia's students.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Bioweathering: Connecting to the Inside Wisdom and STEAM</i>	Room:	Dogwood A
Presenter(s):	Dr. Renuka Rajasekaran and her three students	Vendor:	
Description:	Chemistry as the Central Science is the hub for STEM education. Bioweathering demonstrates this union		
Level(s):	Middle (6-8),High (9-12),Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	Chemistry
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Blending hands-on chemistry learning with a 3-D learning environment to promote conceptual understanding</i>	Room:	Dogwood B
Presenter(s):	Georgia Hodges, Lu Wang, Zane Everett, Tom Robertson	Vendor:	
Description:	Join us to experience chemistry inquiry using a well known lab and a new immersive learning environment		
Level(s):	High (9-12),Advanced High (AP/IB),College	Content:	Chemistry
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Guided Science: Literacy in the Science Classroom</i>	Room:	Gardenia
Presenter(s):	Susie Throop, Stormi Johnson	Vendor:	
Description:	Teachers will learn how to incorporate guided reading during the science block.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Investigating Renewable Energy with KidWind and Vernier</i>	Room:	Holly
Presenter(s):	David Carter	Vendor:	Vernier Software & Technology
Description:	Teach engineering design principles with a focus on renewable energy using KidWind Wind Experiment Kits and Vernier data-collection technology		
Level(s):	Middle (6-8),High (9-12)	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Problem-Based Learning: a successful teaching methodology for the 21st Century</i>	Room:	Lake
Presenter(s):	John Schafer, Mimi Dyer	Vendor:	Classroom Unsquared LLC
Description:	Classroom Unsquared presents PBL as a very exciting and effective teaching methodology that focuses on critical-thinking, creativity, collaboration, and communication.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Growing Solutions to Combat Hunger</i>	Room:	Maple
Presenter(s):	Jane Keegan, Carmen Flaminni	Vendor:	
Description:	Research of hydroponics, aquaponics, and simple irrigation systems help students to address some of the of the causes of childhood malnutrition and hunger.		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Written Art Meets Science: Using Poetry in the Science Classroom</i>	Room:	Poplar
Presenter(s):	Clayton Woodfin	Vendor:	
Description:	Help your students learn to demonstrate Science concepts through poetry.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>CPO Science Wind Turbine with a focus on STEM</i>	Room:	Rhododendron A
Presenter(s):	Erik Benton, Dawn Matton	Vendor:	School Specialty Science (FREY Scientific and CPO Science)
Description:	Design, build, test, and revise your model to maximize power generation. Take away STEM		

Level(s):	activities and an understanding of how to apply the Engineering Cycle in science classes. Middle (6-8),High (9-12)	Content:	Engineering
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Teaching Evolution For Understanding</i>	Room:	Rhododendron B
Presenter(s):	Alan Gorlin, katrina Toledo, Logan Chatham	Vendor:	
Description:	Biology students encounter difficulties understanding evolution. Explore how to assess and identify evolutionary misconceptions. Participate in inquiry based activities designed to eliminate misconc		
Level(s):	High (9-12),Advanced High (AP/IB),College	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Incorporating STEM in the Elementary Classroom through PSCI-Train</i>	Room:	Rotunda
Presenter(s):	Sanghee Choi, April Nelms, Mark Spraker, Cheryl Sundberg, Rena Bryan, Sarah Cline, Carol Duncan, Talia Gray, Melanie Haley, Tori Jones, Stacey Smallwood, Cheryl Walls	Vendor:	
Description:	This session is to introduce the PSCI-Train teacher training program and participant teachers will share how they are incorporating STEM lessons in their elementary classrooms.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Building STEM Connections Through Nanoscale Science and Engineering</i>	Room:	Summit
Presenter(s):	Joyce Allen	Vendor:	
Description:	Hands-on workshop will provide resources to show how nanoscale science and engineering connects to your K-12 curriculum including ideas for a STEM Family Science night.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Scale, Proportion, and Quantity

Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Challenging Ideas of Formative Assessment Usage with Data Analysis</i>	Room:	Willow
Presenter(s):	Rebecca Selleck, Robert Kuhn	Vendor:	
Description:	Introducing two formative assessment strategies used to develop students' data analysis skills.		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Patterns

Practices:	Concepts:
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Day:	Thursday	Time:	10:00:00 AM
Title:	<i>Building Confidence through Teaching Science</i>	Room:	Woodland
Presenter(s):	Catherine Bowers	Vendor:	
Description:	Find out how one elementary school transformed into a STEM focused school by creating a fully functional science lab and building confidence in teaching science.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	11:00:00 AM
Title:	<i>Developing Academic Language Through Science and STEM</i>	Room:	Auditorium
Presenter(s):	Ken Wesson	Vendor:	
Description:	Research has found that approximately 13% of pupils in an average classroom are auditory learners, who learn best by listening to others (typically the teacher). Consequently, we know that the dominant teaching method used in most schools is likely not meeting the learning needs of 87% of our students. According to David Perkins at Harvard University, the human brain does its best work when students are learning language by doing, not by passively listening to others use it. We learn academic language best while actively engaging in evidence-based discourse and dialogue (argumentation) serving as the instructional centerpiece, where the development of academic language occurs in the context of doing, rather than listening. This approach is a drastic departure from traditional 19th and 20th century educational delivery. In this seminar, we will focus on how the human brain “works,” how it learns language, and how it makes the transition from informal/everyday language to academic language easily and effectively.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>Teaching with Technology: tips and tools for differentiating your genetics unit</i>	Room:	Auditorium
Presenter(s):	Briana Ransom, Hillary Johnson	Vendor:	
Description:	An overall approach to designing a differentiated genetics unit with a special focus on the effective use of technology.		
Level(s):	High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>CER: Justifying a Claim using Scientific Evidence and Reasoning</i>	Room:	Audubon
Presenter(s):	Monica Grace and Jessica Holden	Vendor:	
Description:	This session will equip teachers with the literacy routines that promote critical thinking, questioning, and problem-solving, so students have a deeper understanding of science concepts.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Constructing Explanations and Designing	Crosscutting Concepts:	Not Applicable

Practices:	Solutions	Concepts:	
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Day:	Thursday	Time:	12:00:00 PM
Title:	<i>Ecosystems, Partnerships, and Finding Funding</i>	Room:	Balsam
Presenter(s):	Rusti Berent	Vendor:	Ward's Science
Description:	Explore strategies to uncover, build, and leverage partnerships and funding; collaborate with colleagues to prospect funding sources and resources to benefit students and the community.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>Using Close Reading Strategies to improve comprehension of complex text</i>	Room:	Birch
Presenter(s):	LaTanya Price	Vendor:	
Description:	This workshop will provide differentiated strategies that promote student comprehension of complex informational text. Participants will engage in reading, writing, and exploring science.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>Collaboration COUNTS - Building Partnerships, Exceeding the Standards</i>	Room:	Cherry
Presenter(s):	Dr. Andrea Scandrett, Dr. Michael Mahan, Marci Vining	Vendor:	Lamar County Elementary School, Gordon State College
Description:	Partnering with a local college creates exceeding results for students. Join Lamar County Elementary and Gordon State College to learn more.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),College,Supervisor/Leadership	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Stability and Change

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>Observational Astronomy Research Projects Using the Internet</i>	Room:	Dogwood A
Presenter(s):	Tim Slater	Vendor:	
Description:	Inquiry-based, classroom ready activities for middle & high school students using NASA databases to engage in scientific inquiry.		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB),College	Content:	Earth Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>3...2...1...Liftoff! Physics and engineering for elementary students.</i>	Room:	Dogwood B
Presenter(s):	Richard Kilburn, Dee Smith	Vendor:	
Description:	Learn how to teach force and motion with safe, hands-on rockets. Walk away with eight lessons and the confidence to employ them in your classroom.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	Physics
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>STEM Made Easy</i>	Room:	Gardenia
Presenter(s):	Judy Ward, Kathryn Mullins	Vendor:	
Description:	Teachers will be able to take away ideas, strategies, and activities that they can immediately implement in their classrooms.		
Level(s):	Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>The "T" in STEM = Technology</i>	Room:	Holly
Presenter(s):	Marilyn Encoch and Kathy Armstrong	Vendor:	Delta Education
Description:	FOSSweb.com Technology integration for the Elementary Classroom		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>Killer Instincts: Murder Scene Problem-Based Learning Activity.</i>	Room:	Lake
Presenter(s):	Ashley Brown, Heather Glazebrook, and LeShea Hermansen	Vendor:	
Description:	Students will be engaged with a culturally relevant murder case using various genetics standards; where students have to determine who killed who through genetic tests.		
Level(s):	High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>STEM and Outdoor Learning</i>	Room:	Maple
Presenter(s):	Karen Stanfield	Vendor:	
Description:	Integrating outdoor learning and GPS		
Level(s):	Upper Elementary (3-5)	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>Polarized Light Mosaics</i>	Room:	Poplar
Presenter(s):	Lynn Wright	Vendor:	
Description:	STEAM Lesson using polarized light and refraction		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	Physical Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>Loggerhead Sea Turtles of Wassaw Island</i>	Room:	Rhododendron A
Presenter(s):	Susan Collins	Vendor:	Educator
Description:	Slap at mosquitos, wave at swarm of gnats, and bounce over holes in the path and you're on your way in search of the loggerhead. Not for the faint of heart.		
Level(s):	Upper Elementary (3-5)	Content:	Biology/Life Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>Integrating Science through a Place-Based Learning Model</i>	Room:	Rhododendron B
Presenter(s):	Sonia Elkins, Tiffany Thompson, Annette Rojas	Vendor:	
Description:	Through a place-based integrated model, implementing STEM instruction for ALL students throughout the day year round is possible.		
Level(s):	Upper Elementary (3-5)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>KSU MSP Elementary Share-A-Thon</i>	Room:	Rotunda
Presenter(s):	Dr. Charlease Kelly-Jackson & KSU MSP Participants	Vendor:	
Description:	Looking for best practice science lessons aligned to your standards? Come learn with us! We'll be sharing our favorite lessons we've learned during our time with the Kennesaw State Math Science Partnership. Resources, links and sample lessons will be shared.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:			
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>STEM for all students</i>	Room:	Summit
Presenter(s):	Sarah Eales, Amy Maxwell, Hyunjin Son	Vendor:	
Description:	Come take a look at how one school has expanded the STEM program by more than 160%		
Level(s):	High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>Engaging Students in the Crosscutting Concepts</i>	Room:	Willow

Presenter(s):	Brett Moulding	Vendor:	
Description:	The NRC Framework for K-12 Science Education provides a clear and compelling argument for crosscutting science concepts and their role in the classroom. Understanding the nature of these concepts is an important tool for effective science instruction, curriculum development, and teacher professional development. Participants will engage in science performance focused on the crosscutting concepts and their utility to develop meaning across all science disciplines.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Thursday	Time:	12:00:00 PM
Title:	<i>Evolution of a STEM School</i>	Room:	Woodland
Presenter(s):	Colleen Cauffiel	Vendor:	
Description:	How do you create a culture of STEM at your elementary school? This session will discuss how to implement these advances.		
Level(s):	Lower Elementary (K-2), Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Uncovering Student Thinking- What Does It Really Mean to Teach for Conceptual Understanding?</i>	Room:	Auditorium
Presenter(s):	Page Keeley	Vendor:	
Description:	Four decades ago David Ausubel made the oft-quoted statement: "The most important single factor influencing learning is what the learner already knows. Ascertain this and teach accordingly." But for four decades we have been trying to find out what accordingly means! K–12 students (and teachers) hold strongly held ideas about the natural world as they actively try to make sense of their every day and instructional experiences. Teaching for conceptual understanding begins with identifying the ideas students bring to their learning and using them to build a bridge between where the student is and the scientific ideas we want students to know and be able to use. Join Page to explore what this means in a standards-based system where test scores are often equated with student learning.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Caution! Merging Literacies Ahead</i>	Room:	Audubon
Presenter(s):	Christine Anne Royce	Vendor:	
Description:	Integration of reading and informational literacies and science literacy is a natural connection not to mention visual and media literacies. Participants will also participate in sample activities		
Level(s):	Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>STEMscopes in Middle School Earth and Space Science</i>	Room:	Balsam
Presenter(s):	Terry Talley	Vendor:	STEMscopes -

		Accelerate Learning	
Description:	Join us for a hands-on preview of STEMscopes a digital curriculum designed to bring inquiry and achievement gains to your NGSS ESS Science classroom.		
Level(s):	Middle (6-8)	Content:	Earth Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Patterns

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Project MAREA: You, Too, Can Drive the Mars Rover</i>		
Presenter(s):	John Kludt, Wes Lamboley, Martha Muir	Room:	Birch
Description:	Get hands on experience with the logic and techniques involved in driving the Mars Rover		
Level(s):	Middle (6-8),High (9-12)	Content:	Engineering
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Speaking Up for Science Education in Georgia</i>		
Presenter(s):	Jeremy Peacock, Brian Butler	Room:	Cherry
Description:	Many GSTA members are already leaders in your schools and districts, but our work is directly affected by decisions made at the state level. Are you ready to work to influence these decisions rather than simply waiting for them to be announced? Come and learn about GSTA's efforts to advocate for science education in our state, and learn about how you can use your teacher voice to support excellent science learning for all our students		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12), College, Supervisor/Leadership	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Questioning is a Learned Craft</i>		
Presenter(s):	Marlee Tierce	Room:	Dogwood A
Description:	Asking questions is a prevalent technique in teaching. We hear a lot about levels, wait time, and what to ask. Let's delve into the teacher craft of questioning. Yes-- Handouts!		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Using Edmodo and other web 2.0 tools to develop 21st learners in the Science classroom</i>		
Presenter(s):	Chanel Johnson	Room:	Dogwood B
Description:	Edmodo is more than a place to submit work. It is a place that embraces the 4 C's and a place where teachers can develop a PLN (Personal Learning Network)		
Level(s):	Middle (6-8)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Integrating biotechnology lab skills in secondary science classes</i>	Room:	Gardenia
Presenter(s):	Catherine Teare Ketter, John Rose	Vendor:	
Description:	Brief discussion of biotechnology importance with hands-on experience with basic biotech skills		
Level(s):	High (9-12),Advanced High (AP/IB),College	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Patterns

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Beyond Just Because: Literacy Practices in the Science Classroom</i>	Room:	Holly
Presenter(s):	Michael Bryant	Vendor:	Discovery Education
Description:	In this session, we'll dive into practical strategies to incorporate literacy practices into daily Science lessons including resources from your Discovery Streaming services provided by GPB.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Supervisor/Leadership	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>EverFi - Free STEM resources for your classroom</i>	Room:	Lake
Presenter(s):	Jamal Cornelious	Vendor:	EverFi
Description:	This session will provide online resources around STEM concepts that focus on math and science. EverFi is 100% free to K-12 schools.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Applying Reasoning Modalities to STEM.</i>	Room:	Maple
Presenter(s):	Robert Mayes, Shawn Jackson,	Vendor:	Georgia Southern University
Description:	Educating to Assist students in thinking like a Scientist		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	Other
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Georgia Tech's RET: Creating K-12 STEAM Lesson Plans Based on Engineering Research</i>	Room:	Poplar
Presenter(s):	Jamila Cola	Vendor:	
Description:	Learn about Georgia Tech's paid summer internship to develop arts--integrated engineering lesson		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Energy and Matter: Flows, Cycles,

Practices:	Concepts: and Conservation
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Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Using Project-Based Learning to Teach Upper Level Science Concepts to High Needs Students</i>	Room:	Rhododendron A
Presenter(s):	Shari Weaver	Vendor:	
Description:	Explore how project-based learning provides the relevance, ownership, and challenge needed to engage high needs students in learning science.		
Level(s):	High (9-12)	Content:	Physics
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Integrating Science/STEM Instruction with SeeSaw App.</i>	Room:	Rhododendron B
Presenter(s):	Patricia Dianto-Ucciferri, Alison Dunford, Jennifer Gates	Vendor:	
Description:	Teachers will learn how to integrate SeeSaw app in order to enhance STEM/Science education.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Elementary Share-a-thon</i>	Room:	Rotunda
Presenter(s):	Denise Webb	Vendor:	
Description:	Elementary school teachers are encouraged to bring and share quick activities and ideas		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Enhancing the STEM Curriculum with Virtual Simulations</i>	Room:	Summit
Presenter(s):	Erica Beard, Tiffany Christian	Vendor:	
Description:	ExploreLearning Gizmos help teachers take advantage of research-proven instructional strategies and let students of all ability levels develop deep conceptual understanding.		
Level(s):	Middle (6-8)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	1:00:00 PM
Title:	<i>Poster Session: KSU MSP Earth Science Participants</i>	Room:	Woodland
Presenter(s):	Stephanie Miles, Karen Tefend, Judy Cox and KSU Earth Science MSP Participants	Vendor:	
Description:	KSU MSP teachers will present posters showcasing students' earth science investigations.		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	Earth Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	2:00:00 PM
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Title:	<i>Building a Culture of Collaboration</i>	Room:	Auditorium
Presenter(s):	Juliana Texley	Vendor:	
Description:	Don't look now, but the Framework for K-12 Science Education includes far more quantitative performance expectations. To support content in areas like Environmental Science requires the ability to nurture mathematics skills. You'll bet by "with a little help from your friends" in the mathematics department.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Integrating Science Picture Books in the Kindergarten Classroom</i>	Room:	Audubon
Presenter(s):	Angie Curtis	Vendor:	
Description:	This session will provide new ideas for immediate use in the kindergarten science classroom.		
Level(s):	Lower Elementary (K-2)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Squeaky Clean Magnets</i>	Room:	Balsam
Presenter(s):	Kelly Bodner	Vendor:	ETA Hand2Mind
Description:	How can you clean a fish tank using magnets? Come use the engineering design process to design a solution to this problem.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	Physical Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Transferring MSP to the Classroom</i>	Room:	Birch
Presenter(s):	Lynn Larsen, Macon County MSP Participants	Vendor:	
Description:	Come see how we transferred the knowledge gained during our MSP grant into the classroom.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Developing Mathematics and Science Partnerships (MSP) with Title II B Federal Grant Funds</i>	Room:	Cherry
Presenter(s):	Amanda Buice	Vendor:	
Description:	MSP grants require partnerships between STEM faculty from institutes of higher education and K-12 math and science teachers for professional learning.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Practices:		Concepts:	
Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Exploring How Students Learn Neurobiology Concepts in a Three-Dimensional Virtual Learning Environment</i>	Room:	Dogwood A
Presenter(s):	Sophia Jeong, Jennifer Yauck, Anna Scott	Vendor:	
Description:	Students work through an interactive, virtual learning module to learn important neurobiology concepts.		
Level(s):	High (9-12)	Content:	Human Anatomy & Physiology
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Systems and System Models
Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Big Data, Small Devices: Using BYOT Technology for Real-Time Investigations in Earth and Environmental Science</i>	Room:	Dogwood B
Presenter(s):	Donna Governor	Vendor:	
Description:	Engage students in authentic investigations using real time data with BYOT and smartphone technology to create an environment of active learning.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	Earth Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Patterns
Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Document-Based Quesitons...It's not just for Social Studies Anymore</i>	Room:	Gardenia
Presenter(s):	Heather Toliver	Vendor:	
Description:	Participants will epxerience how to use authentic DBQ's in a science classroom.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation
Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Crazy Adaptations and Biomes</i>	Room:	Holly
Presenter(s):	Erik Benton, Dawn Matton	Vendor:	School Specialty Science (FREY Scientific and CPO Science)
Description:	Concepts such as traits, alleles, phenotypes, genotypes, and heredity will come alive as you create crazy creatures and study their resulting populations		
Level(s):	Middle (6-8),High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations
Day:	Thursday	Time:	2:00:00 PM
Title:	<i>An Introduction to Using WeatherSTEM in the Classroom</i>	Room:	Lake
Presenter(s):	Melissa Griffin	Vendor:	WeatherSTEM
Description:	This engaging and entertaining presentation will demonstrate how to schools in Florida are		

	integrating lessons and data from WeatherSTEM in their classrooms.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	Earth Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	2:00:00 PM
Title:	<i>The Evolution of Public Health and Education Integration</i>	Room:	Maple
Presenter(s):	Mr. Evern Williams, Pioneer	Vendor:	
Description:	Excite your students with real world problem solving curriculum integration and STEM with teaching the principles of epidemiology and public health.		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	2:00:00 PM
Title:	<i>What's the Harm?</i>	Room:	Poplar
Presenter(s):	Renee Taylor	Vendor:	
Description:	Explore a Stem lesson written because of Georgia Tech Gift Fellowship experience in the Mechanical Engineering Department. This Stem lesson incorporated the arts as well as harmful bacteria.		
Level(s):	Upper Elementary (3-5)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Argumentation: Developing oral language skills through scientific inquiry gr. 3-5</i>	Room:	Rhododendron A
Presenter(s):	Marilyn Enoch and Kathy Armstrong	Vendor:	Delta Education/FOSS
Description:	Students (gr 3-5) can use evidence to make claims and arguments		
Level(s):	Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Biologically-Inspired Design</i>	Room:	Rhododendron B
Presenter(s):	Marc Weissburg, Ann Gerondelis, Raja Schaar, Will Hutchings, Tommy Molden, Usha Patke	Vendor:	
Description:	Learn how to use Biologically-Inspired Design to help students understand how nature's best ideas can be used to solve real world, human problems.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	2:00:00 PM
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Title:	<i>Middle Grades Share-a-thon</i>	Room:	Rotunda
Presenter(s):	Rachael Parr	Vendor:	
Description:	Middle school teachers are encouraged to bring and share quick activities and ideas		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Paving the Pathway to STEM Certification</i>	Room:	Summit
Presenter(s):	Gilda Lyon	Vendor:	
Description:	Learn how your school can begin and implement the STEM Certification process.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Mastery Learning with Differentiated Assessment Plans</i>	Room:	Willow
Presenter(s):	Michael Kelly	Vendor:	
Description:	Act on your formative assessment data to promote student growth as part of a mastery learning cycle using targeted, differentiated remediation and enrichment through DAPs.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	2:00:00 PM
Title:	<i>Engaging Elementary Learners in Science, Literacy, and Mathematics Using an Immersive Learning Environment</i>	Room:	Woodland
Presenter(s):	Georgia Hodge, Peggy McKay, Alex Turbyfield	Vendor:	
Description:	An immersive learning environment that integrates math, science, and literacy anchors for grades 3-5		
Level(s):	Upper Elementary (3-5)	Content:	Biology/Life Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	3:00:00 PM
Title:	<i>A Cognitive Approach to Enhancing Students' Critical Thinking</i>	Room:	Auditorium
Presenter(s):	Stephanie Slater	Vendor:	
Description:	Much of the rhetoric focused on improving science teaching calls for teachers to invoke a student-centered, inquiry-oriented approach to instruction. Clearly easier to say than to actually implement, one wonders if such a contemporary approach to the teaching of science can effectively enhance students' critical thinking. Recent research results in cognitive science now offer new pathways for teachers to build more effective and differentiated engaging learning experiences that directly target students' complex scientific conceptions by re-categorizing thinking into actionable targets.		
Level(s):		Content:	

Strand: Sci. & Eng. Practices:		Crosscutting Concepts:	
Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Building Literacy in Elementary Science</i>	Room:	Audubon
Presenter(s):	Sherry Martin	Vendor:	
Description:	The session will model integrating Literacy into the Science content through a hands on lesson for sound using the 5E Inquiry model.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	Physical Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Structure and Function
Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Gene Expression</i>	Room:	Balsam
Presenter(s):	Linda Culpepper	Vendor:	LAB-AIDS
Description:	Participants will explore gene expression and its connection to genetic engineering.		
Level(s):	Middle (6-8),High (9-12)	Content:	Biology/Life Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations
Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Integrating Bio-Inspired Design into the Science Classroom</i>	Room:	Birch
Presenter(s):	Tommy Molden	Vendor:	
Description:	Participants will be introduced to the concepts and real-world applications of bio-inspired design and how it can be easily incorporated into the Georgia Performance Standards.		
Level(s):	High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations
Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Build Your Personal Learning Network with Twitter</i>	Room:	Cherry
Presenter(s):	Amy Vitala	Vendor:	Cobb County School District
Description:	Twitter is an incredible and convenient way to network, learn, and lead. Join us to begin building your very own personal learning network!		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable
Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Using Interactive Notebooks to aid students with disabilities in content mastery</i>	Room:	Dogwood A
Presenter(s):	Tanya Flynn & Jill Frazier	Vendor:	
Description:	We will show session participants how to use interactive notebooks effectively with students with		

Level(s):	disabilities. Middle (6-8),High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Making the ISN work in middle school</i>	Room:	Dogwood B
Presenter(s):	Kristen Butera, Jennifer Duncan, Jennifer Scoggins	Vendor:	
Description:	Getting more out of the Interactive Student Notebook.		
Level(s):	Middle (6-8)	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Dinosaur Anatomy 101</i>	Room:	Gardenia
Presenter(s):	Cary Woodruff	Vendor:	
Description:	The guiding principals of comparative vertebrate anatomy dictate that all vertebrates have the same underlying anatomy. Dogs, sharks, and birds - while very different looking - all have the same anatomical components. The same goes for humans anddinosaurs! Comparative vertebrate anatomy is a wonderful way to simultaneously teach anatomy, morphology, physiology, and evolutionary biology. In this presentation we'll examine how we and dinosaurs (and other extinct animals) are similar on the inside, and how we can use comparative anatomy as an engaging tool for all levels of audiences.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College	Content:	Earth Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Integrating Chromebook™ with Vernier Technology</i>	Room:	Holly
Presenter(s):	David Carter	Vendor:	Vernier Software & Technology
Description:	This hands-on workshop will address data collection with Chromebook and Vernier technology, including LabQuest Mini. Experiments, such as “Boyle’s Law,” “Grip Strength Comparison,” and “Ball Toss,” wi		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	3:00:00 PM
Title:	<i>SunPower for Schools Solar Curriculum</i>	Room:	Lake
Presenter(s):	Michelle Z. Simmons, PE	Vendor:	Green Power EMC
Description:	I am requesting 2 sessions to introduce the SunPower for Schools solar curriculum.		
Level(s):	Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Food Detectives</i>	Room:	Maple
Presenter(s):	Debbie Paulson and Katy Stacy	Vendor:	
Description:	We've guided our student to conduct authentic STEM research.		
Level(s):	Lower Elementary (K-2)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	3:00:00 PM
Title:	<i>How to use art and acoustic mirrors to study sound?</i>	Room:	Poplar
Presenter(s):	Steven C. Thedford	Vendor:	
Description:	Acoustic Mirrors		
Level(s):	Middle (6-8),High (9-12)	Content:	Physics
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Scale, Proportion, and Quantity

Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Building a Foundation for Constructing Explanations in K-5</i>	Room:	Rhododendron A
Presenter(s):	Todd Bevis and Ellen Granger	Vendor:	
Description:	Constructing scientific explanations can help K-5 learners to make sense of science ideas. This session will explore how to develop explanations with young learners.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Not Applicable		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Science Fair Isn't Scary!</i>	Room:	Rhododendron B
Presenter(s):	Nick Zomer	Vendor:	
Description:	How to build a culture promoting Science Fair in your school.		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Engaging Students in Science and Engineering Practices</i>	Room:	Summit
Presenter(s):	Nicole Paulson	Vendor:	
Description:	The science and engineering practices described in the Framework provide a clear picture of how students use science to make sense of novel phenomena. These practices and their role in the classroom are an important dimension of the vision described in the Framework for K-12 Science Education. This session will engage participants in a science performance focused on the practices and the intersection of the three dimensions.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Thursday	Time:	3:00:00 PM
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Title:	<i>Phenomenal Science: Fostering & Assessing Student Learning</i>	Room:	Willow
Presenter(s):	Amy Peacock, Jeremy Peacock	Vendor:	
Description:	Teachers and students constantly call for real-world classroom connections. Investigating authentic phenomena answers this call and provides a context for both student learning and assessment.		
Level(s):	Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	3:00:00 PM
Title:	<i>Getting Kids Talking About Science</i>	Room:	Woodland
Presenter(s):	Christopher Kennedy	Vendor:	
Description:	What does discourse look like in the science classroom? How can we get our students to engage in meaningful conversations about science?		
Level(s):	High (9-12)	Content:	General
Strand:	Not Applicable		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Building Scientific Creativity for All Students</i>	Room:	Auditorium
Presenter(s):	Carolyn Hayes	Vendor:	
Description:	We can develop creative attitudes in science, technology, engineering and mathematics by implementing the three dimensions as found in NGSS and the Framework on K-12 Science Education, encouraging our students to be both divergent and convergent thinkers and teaching science as a process.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Science + Literacy= Scientific Literacy</i>	Room:	Audubon
Presenter(s):	Reshawndra Hutchins-Trapp, Justin Spurley	Vendor:	
Description:	Are you looking for ways to engage your class in science and help meet literacy standards? You will learn how to use fiction text to teach scientific principles and concepts.		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	Physical Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Farmer Grady's Challenge</i>	Room:	Balsam
Presenter(s):	Kelly Bodner	Vendor:	ETA Hand2Mind
Description:	How can you protect crops from a hail storm? Come use the engineering design process to design a solution to Farmer Grady's problem.		
Level(s):	Upper Elementary (3-5)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Structure and Function

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Dare to Disagree!</i>	Room:	Birch
Presenter(s):	Debbie Stuckey	Vendor:	
Description:	Learn how to teach students to engage in argument based on evidence. Use literacy to boost science instruction.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Patterns

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>NASA's Educational Programs</i>	Room:	Cherry
Presenter(s):	Dr. Lester Morales	Vendor:	
Description:	Learn and become aware of many NASA Educational Programs for potential opportunities for educators and students		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Vertical Teaming using the NGSS Three Dimensional Model</i>	Room:	Dogwood A
Presenter(s):	Rabieh Jamal Hafza	Vendor:	
Description:	This session will integrate NGSS Engineering Practices, Cross-cutting Concepts, and Disciplinary Core Ideas with current standards to create vertical teams that support students in science.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Supervisor/Leadership	Content:	General
Strand:	Not Applicable		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Patterns

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Technology and Problem-Based Learning Brings Molecular Bonding to Life</i>	Room:	Dogwood B
Presenter(s):	Dr. Aruna Kailasa	Vendor:	
Description:	Be a part of this novel problem-based learning case as we explore ways to invigorate your students in becoming self-motivated learners of general chemistry.		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB),College	Content:	Chemistry
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Systems and System Models

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Real Educators Teaching Real World Case Studies</i>	Room:	Gardenia
Presenter(s):	Christy Mullen, Lindsay Whiteman	Vendor:	
Description:	Strategies to engage all learners by incorporating real world case studies and PBL's to hook students and get them wondering about the world around them.		
Level(s):	High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		

Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations
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Day:	Thursday	Time:	4:00:00 PM
Title:	<i>What Causes Change of Motion? A STEM centered workshop</i>	Room:	Holly
Presenter(s):	Marilyn Enoch and Kathy Armstrong	Vendor:	Delta Education/FOSS
Description:	Use models to study/explain cause and effect		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Increasing Literacy in Science for ELL---KSU MSP</i>	Room:	Lake
Presenter(s):	Consuelo Weaver	Vendor:	
Description:	Using Reading Passages for Formative/Pre-Assessments		
Level(s):	High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Walk Through STEAM Like an Egyptian</i>	Room:	Maple
Presenter(s):	Dawn Hardy, Heidi Hines	Vendor:	
Description:	Utilizing Ancient Egyptian culture in order to advance student learning.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Pre-service/Early Career Teachers	Content:	Other
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Preparing effective science teaching through the development of the edTPA Teaching Portfolio (currently required of all pre-service teachers in Georgia)</i>	Room:	Poplar
Presenter(s):	George W. Stickel, Deniz Peker, & Pam Wetherington	Vendor:	
Description:	We show you how to improve your evaluation and analysis of your students' learning, to address their individual learning needs, by using edTPA Task 3, "Assessing"		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Teaching Science through a Public Health Lens (Centers for Disease Control and Prevention)</i>	Room:	Rhododendron A
Presenter(s):	Kelly Cordeira, Ralph Cordell	Vendor:	
Description:	Solve an outbreak with CDC using STEM concepts across disciplines. Learn how to use case-based,		

Level(s):	public health scenarios to engage your students in real-world science. Middle (6-8),High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Patterns

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Science and art from sand: Integrated activities for the elementary and middle school</i>	Room:	Rhododendron B
Presenter(s):	Olga Jarrett, Brian Williams, Robert Jarrett	Vendor:	
Description:	This workshop, focusing on the sands of Georgia, includes eight hands-on learning stations to explore. Make sand viewers and receive a handout of classroom ideas.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8)	Content:	Earth Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>Data Driven Instruction in a Science Classroom</i>	Room:	Willow
Presenter(s):	Amanda Palmer & Christine Jackson	Vendor:	
Description:	Using various assessment techniques to inform daily instruction.		
Level(s):	High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Not Applicable

Day:	Thursday	Time:	4:00:00 PM
Title:	<i>S.T.E.M (Science Teaching with Economical Materials</i>	Room:	Woodland
Presenter(s):	Carl Davis	Vendor:	Emmanuel College
Description:	Ideas for teaching STEM on a budget. Topics include: An inquiry approach to magnets/ electricity and an interdisciplinary unit "Bugtown" using mealworms.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Using Collaborative Web Tools to Support Three Dimensional Learning in Earth Science</i>	Room:	Audubon
Presenter(s):	Joann Beck, Kathleen Williams, Amy Peacock, Jeremy Peacock	Vendor:	
Description:	Experience a model lesson demonstrating how Google Apps and other online tools can support students as they gather, reason with, and communicate Earth science information.		
Level(s):	Middle (6-8)	Content:	Earth Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	8:00:00 AM
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Title:	<i>Fostering Learning Communities</i>	Room:	Balsam
Presenter(s):	Michael Bryant	Vendor:	Discovery Education
Description:	This session is designed to support educational leaders in their professional development and systems improvement efforts to dramatically improve student engagement and performance.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	Other
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Beyond The Lorax: Using Ecocriticism to Blend Environmental Science & Language Arts</i>	Room:	Birch
Presenter(s):	Benjamin K. Campbell, Marianne Snow Campbell	Vendor:	
Description:	Learn more about challenging your students' science, literacy, and critical thinking skills using a variety of captivating children's and middle grades literature.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),Pre-service/Early Career Teachers	Content:	Environmental Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Lessons Learned from Successful ES to HS Vertical Integration</i>	Room:	Cherry
Presenter(s):	John Murnan & Michelle Barthlow	Vendor:	
Description:	Successful Vertical Teaming between High School and Elementary School		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Physics for First-Timers: Graphing Motion</i>	Room:	Dogwood A
Presenter(s):	Eden Hunt, Jason Goodman, Jacquelyn Brennan	Vendor:	
Description:	Engaging graphing motion strategies to solve kinematics problems through inquiry-based activities.		
Level(s):	Middle (6-8),High (9-12)	Content:	Physics
Strand:	Not Applicable		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Differentiation-How to help Special Education Students</i>	Room:	Dogwood B
Presenter(s):	Barbara Clark Mullis	Vendor:	
Description:	This session will talk about how to differentiate between and among your lower level Special Education students.		
Level(s):	High (9-12)	Content:	General
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Science Language: Function, Demand, and Support</i>	Room:	Gardenia
Presenter(s):	Miriam Jordan, Cassie Carpine, Zack Cook, Michael Crawford, Bill Flory, Kelly Langford, Patrick McClanahan, Kristi Medford, Olivia Newman	Vendor:	
Description:	This session proposes a method for designing instruction that incorporates literacy practices seamlessly into science instruction.		
Level(s):	Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Race into Physics with the Energy Car</i>	Room:	Holly
Presenter(s):	Erik Benton, Dawn Matton	Vendor:	School Specialty Science (FREY Scientific and CPO Science)
Description:	Use technology and a virtually frictionless car to confirm Newton's Laws of Motion.		
Level(s):	Middle (6-8),High (9-12)	Content:	Physics
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	8:00:00 AM
Title:	<i>The Nitrogen Cycle in an Immersive Learning Environment that teachers monitor in real-time</i>	Room:	Lake
Presenter(s):	Georgia Hodges, Pam Perry, David Ducrest, and Tom Robertson	Vendor:	
Description:	The Nitrogen Cycle in 3-D with real-time formative assessment		
Level(s):	High (9-12),Advanced High (AP/IB),College	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Energize Biology-Minded Physics Students Using New Research in Stroke Treatment</i>	Room:	Maple
Presenter(s):	Becky Bundy	Vendor:	
Description:	Bring biology and physics together using a laboratory investigation based on the use of magnetically rotated nanorods to speed up treatment in stroke patients.		
Level(s):	High (9-12),Advanced High (AP/IB)	Content:	Physics
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Using Lego Robotics to Teach Scientific Inquiry</i>	Room:	Poplar
Presenter(s):	Terra McMillan	Vendor:	
Description:	Learn how to use Lego Robotics to have students work systematically through the scientific method.		
Level(s):	Middle (6-8)	Content:	Earth Science

Strand:	Speaking Up on Building STEM from Science	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations
Sci. & Eng. Practices:	Planning and Carrying Out Investigations		

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Mystery Illness</i>	Room:	Rhodendron B
Presenter(s):	Dr. Mashawn Duncan-Young & Mar De Kilcrease	Vendor:	
Description:	Participants will understand how to implement Problem Based Learning in the science classroom.		
Level(s):	Middle (6-8),High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Structure and Function

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Personal Science Story Podcasts</i>	Room:	Rhododendron A
Presenter(s):	Erica Hutchings, Shaun Matthews, Hannah Mattson, Shadeed Abdul-Salaam, Michael Seymour, Heather Wegenhart, Jennifer Frisch	Vendor:	
Description:	We will talk about writing and recording podcasts using our personal science stories and academic language, and how to get students to write their own.		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	Biology/Life Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Learning Targets & Other Formative Assessment Strategies</i>	Room:	Rotunda
Presenter(s):	Jennifer Barnes and Chelsea Sexton	Vendor:	
Description:	Need quick formative assessment strategies that actually work? Come join us - all levels and all areas!		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Building STEM from Science-Increasing academic performance through integration across the curriculum</i>	Room:	Summit
Presenter(s):	Bertina Banks	Vendor:	Atlanta Public Schools
Description:	This session highlights strategies such as using the 3D science framework to design, implement and assess teaching approaches that impact student learners.		
Level(s):	Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Interactive Notebooks: How do I start? This session is for beginning interactive notebooks.</i>	Room:	Willow
Presenter(s):	Tanya Flynn	Vendor:	
Description:	This session is designed to help teachers begin to use interactive notebooks in their classroom.		

Level(s):	Teachers will learn how to use the notebooks for formative and summative based assessments. Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	8:00:00 AM
Title:	<i>Integrating sySTEMic collaboration, equipping innovative leaders</i>	Room:	Woodland
Presenter(s):	Alecia Frizzell, Melissa Bridges, Clint Johnson, Mark Stallings	Vendor:	
Description:	Union County High School has created a STEM academy that uses an integrated approach. By integrating blended coursework, our STEM curriculum allows students to connect and apply their education.		
Level(s):	High (9-12),Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	Chemistry
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Design Thinking and Multimodal Learning in STEAM</i>	Room:	Auditorium
Presenter(s):	GA. Deputy Superintendent Dr. Caitlin Dooley	Vendor:	
Description:		Content:	
Level(s):			
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Gardening with Books & Butterflies</i>	Room:	Audubon
Presenter(s):	Steve Rich	Vendor:	
Description:	Discover the author's strategies for integrating multiple subjects with the NSTA Kids books My School Yard Garden and Mrs. Carter's Butterfly Garden, indoors and out.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	Environmental Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Friday	Time:	9:00:00 AM
Title:	<i>STEMscopes in High School Physical Science</i>	Room:	Balsam
Presenter(s):	Terry Talley	Vendor:	STEMscopes - Accelerate Learning
Description:	Join us for a hands-on preview of STEMscopes a digital curriculum designed to bring inquiry and achievement gains to your NGSS Life Science classroom.		
Level(s):	High (9-12)	Content:	Physics
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Think like a scientist. Write like a scientist. BE A SCIENTIST!</i>	Room:	Birch

Presenter(s):	Kendra Brooks	Vendor:	
Description:	Imagine a classroom where learners become scientists! Through hypothesizing, observing, and recording, learners will explore, as scientists, to generate theories that culminate in lab reports.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	Physical Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Building Partnerships to STEM the Gap</i>		
Presenter(s):	Marc Pedersen	Room:	Cherry
Description:	This session will discuss how partnerships were formed between one high school and several colleges, institutions and local agencies.		
Level(s):	High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Modeling/NGSS Students Learning Science by Doing Science</i>		
Presenter(s):	Frank Lock	Room:	Dogwood A
Description:	Examples from the Modeling pedagogy will be presented.		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	Physical Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Systems and System Models

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Can You Waterproof a Cookie?</i>		
Presenter(s):	Stephanie Miles	Room:	Dogwood B
Description:	Come explore how bacteria survive harsh conditions using PBL		
Level(s):	High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Structure and Function

Day:	Friday	Time:	9:00:00 AM
Title:	<i>FIRST for ALL!- Simple steps to build the next gen of networked students prepared to become industry leaders</i>		
Presenter(s):	Deborah Kauffman, Walton Robotics	Room:	Gardenia
Description:	Simple steps and networking benefits of a FIRST Robotics Program for all students k-12 with emphasis on underrepresented groups and girls in STEM		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	Engineering
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	9:00:00 AM
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Title:	<i>Using Science Notebooks to Impact Student Learning</i>	Room:	Holly
Presenter(s):	Marilyn Enoch and Kathy Armstrong	Vendor:	sponsored by Delta Education/FOSS
Description:	Interactive notebooking for the K-8 Classroom		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Gray Matter: Learning and Teaching Science with the Brain in Mind</i>	Room:	Lake
Presenter(s):	Carolyn A Hayes	Vendor:	
Description:	Experience through science activities how discoveries in cognitive neuroscience are applied to NGSS teaching strategies and the principles of how students learn science.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),College	Content:	General
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Creating Wildlife Habitat Outdoor STEM Areas</i>	Room:	Maple
Presenter(s):	Jerry hightower, Penny Costanzo	Vendor:	
Description:	Learn how to develop a campus wildlife habitat outdoor learning area that will serve as a science lab for hands on investigations.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	Biology/Life Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	9:00:00 AM
Title:	<i>NASA SOFIA Airborne Ambassadors</i>	Room:	Poplar
Presenter(s):	Susan Oltman, April Whitt	Vendor:	
Description:	Educator opportunities with NASA in astronomy, STEM connections, and classroom activities to teach about infrared radiation		
Level(s):	Middle (6-8),High (9-12)	Content:	Earth Science
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Systems and System Models

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Enhancing Quantitative Reasoning in High School Science</i>	Room:	Rhododendron A
Presenter(s):	Stephanie J. Slater	Vendor:	
Description:	This workshop provides secondary level science educators with active learning strategies to develop and enhance science students' quantitative reasoning skills.		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB),College	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Using Mathematical and Computational Thinking	Crosscutting Concepts:	Scale, Proportion, and Quantity

Day:	Friday	Time:	9:00:00 AM
Title:	<i>STEM IN SPACE</i>	Room:	Rhododendron B
Presenter(s):	Tammy Shiflett, Melanie Peterson, Melissa Dorsett, Angie Cox, Bonita Fallon	Vendor:	
Description:	Sensational space schemes soaring through several subjects are assimilated into stellar hands-on STEM sessions suitable for kindergarten through fifth grade.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Systems and System Models

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Biology/Anatomy Share-a-thon</i>	Room:	Rotunda
Presenter(s):	Jennifer Barnes	Vendor:	
Description:	Biology and Anatomy teachers are encouraged to bring and share quick activities and ideas		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Expeditionary Learning and STEM</i>	Room:	Summit
Presenter(s):	Chinita Allen	Vendor:	United Nations Association of Atlanta
Description:	Learn how to develop expeditionary learning experiences for students through an inquiry and technology based approach.		
Level(s):	Upper Elementary (3-5),Middle (6-8),Supervisor/Leadership	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Making Thinking Visible in the Science Classroom</i>	Room:	Willow
Presenter(s):	Nicole Paulson	Vendor:	
Description:	Engaging in Argument in from Evidence and Developing and Using Models are two science and engineering practices described in the Framework for K-12 Science Education. Discussion in this session will focus on the importance of making students' thinking visible through engaging in argument from evidence by developing and using models. Participants will analyze classroom discourse through a video case study of teacher and students' interactions focused on these practices woven together with disciplinary core ideas and crosscutting concepts		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Friday	Time:	9:00:00 AM
Title:	<i>Get the FACTs- Formative Assessment Classroom Techniques</i>	Room:	Woodland
Presenter(s):	Page Keeley	Vendor:	
Description:	THis session will present a harvets of various formative assessment classroom techniques (FACTs)		

Level(s):	that can be used to link assessment and instruction. Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	10:00:00 AM
Title:	<i>The Problem With Tomorrow's Scientists: A Paleontologist's View</i>	Room:	Auditorium
Presenter(s):	Cary Woodruff	Vendor:	
Description:	With the ever increasing demands and importance of science in our global society, STEM based education is at an all time high. Today's problems and tomorrow's crises will be solved by scientists. While our national stance is nowhere near as science oriented as it should be, we at least educationally stress its importance. And while it is wonderful that from an early age we promote the scientific laurels, and we have a plethora of scientific disciplines, in regards to the educational training for the next generation, we are severally lacking. What has happened to critical thinking skills, the investigative nature, and basic reading and writing abilities - the core foundations of all scientific disciplines? Is the lack of these basic scientific skill sets the fault of classroom teachers or college professors? The answer is both. To grow into a truly science domination global society, all avenues of the scientific educational ladder must work together. Higher and primary education must work together to develop the abilities and curricula needed to ensure true scientific success.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Friday	Time:	10:00:00 AM
Title:	<i>But there is NO time to teach Science</i>	Room:	Audubon
Presenter(s):	Trish DuBose	Vendor:	
Description:	Integrating science into the every day schedule of the elementary school.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Changing Earth</i>	Room:	Balsam
Presenter(s):	Terri George	Vendor:	Carolina Curriculum
Description:	Explore Earth's layers, plate tectonics, and patterns of change.		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	Earth Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Reciprocal Teaching strategies in the science classroom</i>	Room:	Birch
Presenter(s):	Danielle Armstrong	Vendor:	
Description:	Explore the use of Reciprocal teaching strategies to increase student retention in life and physical		

Level(s):	science classes Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Presidential Awards for Excellence in Mathematics and Science Teaching</i>	Room:	Cherry
Presenter(s):	Dr. Juan-Carlos Aguilar, Ms. Amanda Buice	Vendor:	
Description:	This session will provide participants with information about the PAEMST program.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8)	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Maximizing Student Engagement through Interactive Learning Centers</i>	Room:	Dogwood A
Presenter(s):	Charlease Kell-Jackson, Ed.D; Terri Daniels, Kaitlin Rogers; Rebekah Sauls; Olivia Theodore; Kaylie Augello; Conner Thompson; Hannah Alexander; Haley Putnam	Vendor:	
Description:	This share-a-thon will demonstrate how K-5 teachers can integrate developmentally appropriate science literacy and interactive learning centers into their science instruction.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Humor as a Doorway to Science</i>	Room:	Dogwood B
Presenter(s):	Marion Reeves	Vendor:	
Description:	How can we take advantage of the humor in children's literature to deepen science understanding? Examples and one fully developed unit are included in this presentation.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Tech tools in a problem based world</i>	Room:	Gardenia
Presenter(s):	Kelly Pate Melissa Kostyu	Vendor:	
Description:	integration of technology and problem based learning		
Level(s):	Middle (6-8),High (9-12)	Content:	Other
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Discovery Education Partner Resources, STEM, and CCRPI</i>	Room:	Holly

Presenter(s):	Monique Liles	Vendor:	Discovery Education
Description:	This session will focus on Discovery Education Partner Curriculum and CCRPI Resources		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Georgia Envirothon: an outdoor natural resource middle and high school competition</i>		
Presenter(s):	Josh Seehorn, Tyson Harty	Vendor:	
Description:	The Georgia Envirothon is an interactive, outdoor competition for middle and high school students in Wildlife, Forestry, Soils/Land Use, Aquatic Ecology, and Invasive Species.		
Level(s):	Middle (6-8),High (9-12)	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Systems and System Models

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Designing Inquiry - How Do You Do it?</i>		
Presenter(s):	Peter Fischer, Christopher Kennedy, Dr. Cassy Smith	Vendor:	
Description:	We will walk the participants through the process that we used to take an idea and develop it into a student-driven, inquiry activity.		
Level(s):	Middle (6-8),High (9-12)	Content:	General
Strand:	Not Applicable		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Stability and Change

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Sea Turtles: Creating Connections and Partnerships</i>		
Presenter(s):	Beth Palmer, Chantal Audran	Vendor:	Tybee Island Marine Science Center
Description:	Everyone loves sea turtles! Sea turtles are ambassadors of the ocean, serving to create connections with the public and conservation		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Putting the "E" in STEM via Interactive Graphic Organizers</i>		
Presenter(s):	Nancy Wisker	Vendor:	Dinah-Might Adventures, LLP
Description:	Transform a manila envelope and paper into clever interactive graphic organizers that explore engineering practices and introduce core ideas of engineering.		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	Engineering
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	10:00:00 AM
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Title:	<i>Until then...preparing for the implementation of the revised science standards</i>	Room:	Rhododendron B
Presenter(s):	Kenneth Linsley, GA DOE	Vendor:	
Description:	Full implementation of the revised science standards is at least one year away, but you can start preparing now with strategies presented in this session.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12), College, Supervisor/Leadership	Content:	General
Strand:			
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Environmental Science/Earth Science Share-a-thon</i>	Room:	Rotunda
Presenter(s):	Brandie Freeman	Vendor:	
Description:	Environmental Science and Earth Science teachers are encouraged to bring and share quick activities and ideas		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Friday	Time:	10:00:00 AM
Title:	<i>Differentiating STEM Instruction to Help All Students Reach Their Potential</i>	Room:	Summit
Presenter(s):	Dr. Cherry C. Brewton	Vendor:	
Description:	Experience STEM lessons designed to differentiate instruction and bridge the divide across disciplines and make real-world connections possible. Supporting science learning for all students will be		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	10:00:00 AM
Title:	<i>STEM will not grow among our youth unless we give them the tools to do so</i>	Room:	Woodland
Presenter(s):	Kareem S. Burney	Vendor:	
Description:	Hear and apply lessons from a young minority midcareer level engineer on how his passion of STEM was nurtured and developed by the Detroit Public School System, nonprofits and engineering firms.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	11:00:00 AM
Title:	<i>GSTA's Annual Business Meeting</i>	Room:	Auditorium
Presenter(s):	Business Meeting	Vendor:	
Description:	The current standing of the organization will be presented and the slate of candidates for the 2016 GSTA Board will be introduced.		

Level(s):		Content:
Strand:		
Sci. & Eng. Practices:	Crosscutting Concepts:	

Day:	Friday	Time:	11:30:00 AM
Title:	<i>Understanding a New Vision for Science Teaching and Learning</i>	Room:	Auditorium
Presenter(s):	Bret Moulding & Nicole Paulson	Vendor:	
Description:	The Framework for K-12 Science Education provides a new vision for science instruction. The translation of the vision presented in the Framework into classroom teaching and learning requires deep understanding of how children learn. This presentation will focus on understanding student science performances at the intersection of the science and engineering practices, crosscutting concepts, and disciplinary core ideas and provide useful ideas to translate the Framework into classroom instruction.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:	Crosscutting Concepts:		

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Keep Calm and Merge Science and Children's Literature</i>	Room:	Auditorium
Presenter(s):	Christine Royce	Vendor:	
Description:	Keeping calm with everything an educator needs to accomplish in a single day is asking a great deal. Literacy, mathematics, science and other areas all have a list of competencies that students are to meet by certain points in their educational progress. Merging or combining some of these strategies helps to show connections between topics, as well as, maximize instructional time. This presentation provide information on various strategies and ideas to help build student engagement and learning when you merge science and literacy competencies. Information on the supporting research available and recommendations for resources will be shared.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:	Crosscutting Concepts:		

Day:	Friday	Time:	12:30:00 PM
Title:	<i>NASA's Science and literature</i>	Room:	Audubon
Presenter(s):	Dr. Lester Morales	Vendor:	
Description:	Learn about NASA's collection of literature books available for classroom use		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8)	Content:	Environmental Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Building a Chemical Battery</i>	Room:	Balsam
Presenter(s):	Linda Culpepper	Vendor:	LAB-AIDS
Description:	Participants will create a wet cell battery, exploring the effects of using different metal electrodes.		
Level(s):	Middle (6-8)	Content:	Physical Science
Strand:	Not Applicable		

Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation
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Day:	Friday	Time:	12:30:00 PM
Title:	<i>Making Project-Based Learning Work in the High School Classroom</i>	Room:	Birch
Presenter(s):	Charles Eick, Lorie Moore	Vendor:	
Description:	Project-based learning can work in the high school science classroom by meeting standards through a focused question for study.		
Level(s):	Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	12:30:00 PM
Title:	<i>12 for Life: A model partnership</i>	Room:	Cherry
Presenter(s):	Rachel Sayer	Vendor:	
Description:	Come discover how Carroll County Schools has partnered with Southwire Company to improve the graduation rate and engage at-risk students in STEM.		
Level(s):	High (9-12)	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Sensational Science with Food!</i>	Room:	Dogwood A
Presenter(s):	Donita Legoas, Kristina Istre	Vendor:	
Description:	The way to a science student's brain is through his stomach! This session focuses on something kids of all ages enjoy: food!		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	General
Strand:	Not Applicable		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Sun Power for Schools Solar Energy Modules: Using real-time solar energy data to support student learning related to the role of energy in living systems</i>	Room:	Dogwood B
Presenter(s):	Gail Marshall	Vendor:	
Description:	An introduction, with hands on experiences, to a real time data website and lessons for life science/biology/and environmental science for middle and high school.		
Level(s):	Middle (6-8),High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Flipping for Science</i>	Room:	Gardenia
Presenter(s):	Michele Langhans	Vendor:	
Description:	This session will introduce you to flipping your classroom to maximize your instructional time.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	General

Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	12:30:00 PM
Title:	<i>National Geographic Explorers & STEM—From the World to your classroom!</i>	Room:	Holly
Presenter(s):	Tom Hinojosa	Vendor:	National Geographic Learning
Description:	National Geographic provides your students with exciting examples of an integration of disciplines that removes the traditional barriers between Science, Technology, Engineering, and Mathematics		
Level(s):	Lower Elementary (K-2), Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Integrating Engineering, Science, and Research in a Logical Progression</i>	Room:	Lake
Presenter(s):	Vicki Albritton, Anthony Valles	Vendor:	
Description:	Explore how to integrate multiple content areas and topics to provide hands-on STEM learning experiences for 6th -12th grade students.		
Level(s):	Middle (6-8), High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Stability and Change

Day:	Friday	Time:	12:30:00 PM
Title:	<i>BYOT: New Tools for Engagement</i>	Room:	Maple
Presenter(s):	Nick Zomer	Vendor:	
Description:	New and different ways to engage your students in learning and assessment.		
Level(s):	Upper Elementary (3-5), Middle (6-8)	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Real World Connections in STEM: Cross Curricular Project Planning</i>	Room:	Poplar
Presenter(s):	Becky Parker, William Walton	Vendor:	
Description:	Get students motivated by utilizing STEM practices to create Cross curricular projects that bring real world relevance and application into the classroom.		
Level(s):	High (9-12)	Content:	Other
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Scale, Proportion, and Quantity

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Science-Centered Language Development to Promote Scientific Understanding Gr K-5</i>	Room:	Rhododendron A
Presenter(s):	Marilyn Enochand Kathy Armstrong	Vendor:	Delta Education/FOSS

Description:	ELA Best Practices support learning & communication (K-5)		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Creating a MakerSpace for STEM in your Science Classroom</i>	Room:	Rhododendron B
Presenter(s):	Susan Wells, Pam Vesely, Nancy Gryder	Vendor:	
Description:	Turn your classroom into the ultimate STEM experience using MakerEd.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Stability and Change

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Chemistry Share-a-thon</i>	Room:	Rotunda
Presenter(s):	Dr. Donald White	Vendor:	
Description:	Chemistry teachers are encouraged to bring and share quick activities and ideas		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Sun Power for Schools Solar Energy Modules: Using real-time solar energy data to support student learning related to the role of energy in earth systems</i>	Room:	Summit
Presenter(s):	Judith Cox	Vendor:	
Description:	Teachers will be involved in real-world investigations centered around earth science/earth systems curriculum.		
Level(s):	Middle (6-8),High (9-12)	Content:	Earth Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Using Authentic Data Points as Formative Assessment</i>	Room:	Willow
Presenter(s):	Bob Kuhn	Vendor:	
Description:	Use new HHMI Data Points to formatively analyze and evaluate peer reviewed data.		
Level(s):	High (9-12),Advanced High (AP/IB),College	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	12:30:00 PM
Title:	<i>Uncovering K-5 STudents' Ideas Through the Literacy Capacities of Speaking, Listening, and Writing</i>	Room:	Woodland
Presenter(s):	Page Keeley	Vendor:	

Description:	This session will address how teachers can use formative assessment probes and strategies to uncover student thinking while supporting the literacy capacities of speaking, listening, and writing		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Where Do You Sit on the Teaching Spectrum?</i>	Room:	Auditorium
Presenter(s):	Tim Slater	Vendor:	
Description:	Science education researchers identify a broad continuum of teaching approaches ranging from interminable, monotonous lectures to contemporary lecture-free, flipped classrooms. Although most faculty generally exhibit characteristics placing them far from either end of the teaching spectrum, systematic education research strongly suggests that classroom teaching styles oriented farther from teacher-centered lectures and more toward student-centered intellectual engagement approaches consistently enhance both student achievement and attitudes. I describe the characteristic features along the spectrum and explain how one might move toward more modern teaching approaches.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Friday	Time:	1:30:00 PM
Title:	<i>3D Task: Georgia Mountain Formation</i>	Room:	Audubon
Presenter(s):	Donna Barrett	Vendor:	
Description:	Investigate how the Blue Ridge Mountains formed in this 3-D performance task that includes using the Claims, Evidence, Reasoning (CER) framework.		
Level(s):	Middle (6-8)	Content:	Earth Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Beat Masters: Analyzing the Energy of Sound Waves and Audio Engineering</i>	Room:	Balsam
Presenter(s):	Aubrey D. Crook	Vendor:	GYSTC-Kennesaw State University
Description:	Bring your laptop to learn this S.T.E.A.M approach to teaching sound energy as it relates to audio engineering in Georgia's booming Television and Film industry.		
Level(s):	Upper Elementary (3-5),Middle (6-8),Pre-service/Early Career Teachers	Content:	Physical Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Children, Books and STEM, OH MY!</i>	Room:	Birch
Presenter(s):	Sylvia Goggin, JoCasta Green	Vendor:	Coralwood / Dekalb County School District
Description:	This hands-on, project based presentation integrates early child/elementary curriculum with		

	books of every genre. Fables to fairy tales, pigs to planets, we turn loving books into STEM literacy.		
Level(s):	Lower Elementary (K-2)	Content:	Engineering
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Structure and Function

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Science Changes and Updates</i>	Room:	Cherry
Presenter(s):	Dr. Juan-Carlos Aguilar, Mr. Kenneth Linsley	Vendor:	
Description:	The session will provide participants information about the review process of the current science standards and their implications for instruction and assessment.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Exploring Photosynthesis and Cellular Respiration using Interactive Case Studies</i>	Room:	Dogwood A
Presenter(s):	Georgia Hodges, Matthew Baker, and Tom Robertson	Vendor:	
Description:	Using Interactive Case Studies to address Photosynthesis and Cellular Respiration in the biology classroom		
Level(s):	High (9-12),Advanced High (AP/IB),College	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Systems and System Models

Day:	Friday	Time:	1:30:00 PM
Title:	<i>What the Georgia Association of Marine Education (GAME) can do for you!</i>	Room:	Dogwood B
Presenter(s):	Beth Palmer, Kim Morris-Zarneke, Gail Sinkule	Vendor:	Georgia Association of Marine Education
Description:	Activities! Handouts! Resources! Learn how GAME and it's member organizations can help you teach marine education.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	Environmental Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Communicating Scientific Information Through Student-Created Digital Products</i>	Room:	Gardenia
Presenter(s):	R. Thomas Layfield, Rachael Parr, Tiffany Barnett	Vendor:	
Description:	Come see examples of technology-based science classroom experiences in which student communication of scientific information is enhanced through digital product creation.		
Level(s):	Middle (6-8)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		

Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable
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Day:	Friday	Time:	1:30:00 PM
Title:	<i>Updating the Tried and True</i>	Room:	Holly
Presenter(s):	Karol Stephens	Vendor:	Ward's Science and Sargent Welch
Description:	Building 3-D learning principles into a classic lab experience (owl pellets) can deepen understanding. General principles outlined and used can be employed in all courses.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	Biology/Life Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Chemistry Matters: A new interactive video series from Georgia Public Broadcasting</i>	Room:	Lake
Presenter(s):	Dr. Wes McCoy, Laura Evans	Vendor:	Georgia Public Broadcasting
Description:	Chemistry Matters is a new, interactive instructional video series incorporating the latest science practices and crosscutting concepts for HS students, with differentiation & engineering design challenges.		
Level(s):	High (9-12),Advanced High (AP/IB)	Content:	Chemistry
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Using Culturally Relevant Pedagogy in Science Classrooms</i>	Room:	Maple
Presenter(s):	Suzanna Roman, Katherine Wade, Justin Spurley, Melissa Schoene, Yotah Koulagna	Vendor:	
Description:	This session is geared towards Georgia Educators who teach students from diverse backgrounds and are interested in using culturally relevant pedagogy as a framework for their curriculum.		
Level(s):	Middle (6-8),High (9-12)	Content:	Other
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	1:30:00 PM
Title:	<i>A Private Universe redux: Do recent college grads know the reasons for the seasons?</i>	Room:	Poplar
Presenter(s):	Josh Pfiester	Vendor:	
Description:	This presentation revisits (at a recent Georgia college graduation) the famous findings from the A Private Universe film		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	Earth Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Systems and System Models

Day:	Friday	Time:	1:30:00 PM
Title:	<i>10 Ways to Get a C in STEM</i>	Room:	Rhododendron A
Presenter(s):	Michael Bryant	Vendor:	Discovery Education

Description:	In this session, we'll take a look at practical ways for students to Collaborate, Communicate, Create and think Critically through a STEM lens.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Supervisor/Leadership	Content:	Other
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Biology on a Budget</i>	Room:	Rhododendron B
Presenter(s):	Julie Scott, Marissa Rondina	Vendor:	
Description:	Biology labs that can be done without expensive materials can be tough to pull off. Come see how to get your students involved, engaged, and bio-pumped without breaking the budget. Ideas you can use tomorrow will be shared.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Physics/Physical Science Share-a-thon</i>	Room:	Rotunda
Presenter(s):	Brian Butler	Vendor:	
Description:	Physics and Physical Science teachers are encouraged to bring and share quick activities and ideas		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Friday	Time:	1:30:00 PM
Title:	<i>The InVenture Challenge: Integrating STEM through invention and entrepreneurship</i>	Room:	Summit
Presenter(s):	Roxanne Moore	Vendor:	
Description:	How do you create an authentic challenge that integrates content from all 4 STEM disciplines? Using invention and entrepreneurship, students can learn content while engaging in authentic engineering.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Getting Physical with Your Gradebook</i>	Room:	Willow
Presenter(s):	Tracy Robinson	Vendor:	n/a
Description:	Who and what are grades for? What and when do I grade? How do I make my gradebook standard based? If these are your questions come on in for a basic standard based blueprint for your gradebook.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	1:30:00 PM
Title:	<i>Small World Data - The Power of Student Data</i>	Room:	Woodland
Presenter(s):	Larry Morris	Vendor:	Hexational Software
Description:	A new free online and mobile website that lets teachers design data entry forms for students to collect and analyze real-world data!		
Level(s):	Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	3:00:00 PM
Title:	<i>Disciplinary Core Ideas in Science Performances</i>	Room:	Audobon
Presenter(s):	Brett Moulding	Vendor:	
Description:	Student science performances require students to use key Disciplinary Core Ideas to support construction of explanations and develop arguments from evidence. This session will engage educators in a science performance that will serve as a springboard to discuss an essential set of core ideas to use to support explanations of other science phenomena.		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Friday	Time:	3:00:00 PM
Title:	<i>STEMscopes in High School Life Science</i>	Room:	Balsam
Presenter(s):	Terry Talley	Vendor:	STEMscopes - Accelerate Learning
Description:	Join us for a hands-on preview of STEMscopes a digital curriculum designed to bring inquiry and achievement gains to your NGSS Life Science classroom.		
Level(s):	High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Structure and Function

Day:	Friday	Time:	3:00:00 PM
Title:	<i>Building Up STEAM in Elementary</i>	Room:	Birch
Presenter(s):	Amber Hoke, Beth Perryman	Vendor:	
Description:	Come learn how one elementary school is involving Art, Music, PE, Math, Technology and Science teachers to implement STEAM schoolwide		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Supervisor/Leadership	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	3:00:00 PM
Title:	<i>Motivating Teachers to Do STEM</i>	Room:	Cherry
Presenter(s):	Donald White	Vendor:	
Description:	In this fast-paced, engaging session, techniques and strategies will be shared on how to get your colleagues to do "one more thing" with STEM in the classroom.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Supervisor/Leadership	Content:	General

Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	3:00:00 PM
Title:	<i>Compete, Collaborate, Celebrate</i>	Room:	Dogwood A
Presenter(s):	Juliana Texley	Vendor:	
Description:	Opportunities for individual students or groups to excel		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	3:00:00 PM
Title:	<i>Three-dimensional teaching: Integrating nature of science, practices, and biology</i>	Room:	Dogwood B
Presenter(s):	Renee Schwartz	Vendor:	
Description:	This session provides examples of integrated lessons for teaching biology concepts and nature of science while engaging learners in scientific practices of questioning, modeling, and argumentation.		
Level(s):	Middle (6-8),High (9-12),Pre-service/Early Career Teachers	Content:	Biology/Life Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Systems and System Models

Day:	Friday	Time:	3:00:00 PM
Title:	<i>A Drop in My Drink – Diving into Water Activities through Trade Books</i>	Room:	Gardenia
Presenter(s):	Christine Anne Royce	Vendor:	
Description:	Dive into elementary and intermediate grade investigations that help explore watersheds and water quality		
Level(s):	Upper Elementary (3-5)	Content:	Environmental Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	3:00:00 PM
Title:	<i>How Dirty is Your Windshield? - Foldable Formative Assessment</i>	Room:	Holly
Presenter(s):	Nancy Wisker	Vendor:	Dinah-Might Adventures, LLP
Description:	Fold, cut, and more as you discover how Notebook Foldables can be used as alternative assessments. Leave with practical ideas ready to use immediately.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	3:00:00 PM
Title:	<i>Georgia Association of Marine Education</i>	Room:	Lake
Presenter(s):	Trish DuBose	Vendor:	

Description:	GAME inland meeting	Content:	General
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership,Pre-service/Early Career Teachers		
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	3:00:00 PM
Title:	<i>Documenting historic carvings at Stone Mountain</i>	Room:	Maple
Presenter(s):	Pamela J. W. Gore, Cynthia Taylor	Vendor:	
Description:	Learn about historic carvings at Stone Mountain, made by visitors over more than 100 years. This project brings together science, history, and art.		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB),College	Content:	Earth Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	3:00:00 PM
Title:	<i>Lab Practicals and Other Effective Classroom Assessment</i>	Room:	Poplar
Presenter(s):	Darby E. Steele	Vendor:	
Description:	Using Lab Practicals in the Science Classroom		
Level(s):	High (9-12)	Content:	Chemistry
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Scale, Proportion, and Quantity

Day:	Friday	Time:	3:00:00 PM
Title:	<i>Sun Power for Schools Solar Energy Modules: Exploring the fundamentals of waves, energy, circuits, and solar cells</i>	Room:	Rhododendron A
Presenter(s):	Tyson Harty, Sharmistha Dutt	Vendor:	
Description:	Solar energy will be vital for humanity's future, yet its fundamentals can be confusing to students. Explore hands-on methods to integrate waves, circuits, and energy.		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Friday	Time:	3:00:00 PM
Title:	<i>Island Time Inquiry</i>	Room:	Rhododendron B
Presenter(s):	Missy Bennett, Yasar Bodur, Heather Scott, Vicki Albritton, Jessica Bragdon, Jan Bryant, Christie Durden, Josh Howard, Laura Ike, Patrick LaPollo, Erin Miller, Cecilia Nix, Lauren Stallard, Sherry Tur	Vendor:	
Description:	Find out more about a summer workshop to enhance teaching with Inquiry		
Level(s):	Middle (6-8),High (9-12)	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	3:00:00 PM
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Title:	<i>Building STEM With Technology in the Middle and High Science Classrooms.</i>	Room:	Summit
Presenter(s):	Misty Eastlake, Sharyl Eastlake, Patrick Eastlake	Vendor:	
Description:	Middle and High School Science Teachers will introduce Apps, Programs, and Activities to use in the Science Classroom		
Level(s):	Middle (6-8),High (9-12)	Content:	Physical Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Friday	Time:	3:00:00 PM
Title:	<i>Engaging Formative Assessment in The Science Classroom: Tech Tools You Can Use Tomorrow</i>	Room:	Willow
Presenter(s):	Amy Vitala	Vendor:	
Description:	Join this fast-paced session as we discuss how to leverage several engaging technology to promote engaging and meaningful formative assessment in the science classroom!		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	3:00:00 PM
Title:	<i>So You Found A Dinosaur Bone...Now What?</i>	Room:	Woodland
Presenter(s):	Cary Woodruff	Vendor:	
Description:	How Do Paleontologists Know All These Things About Dinosaurs?		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College	Content:	Earth Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Structure and Function

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Fun, Weird Science!</i>	Room:	Auditorium
Presenter(s):	Ronnie Thomas	Vendor:	
Description:	Welcome to Fun Weird Science! Partake in a interactive conversation on the ever increasing need to our students to become proficient in all areas of S.T.E.A.M. as they embark into a competitive global economy. Our session will address teacher efficacy using media clips, dialogue, laughter and hands on learning!		
Level(s):		Content:	
Strand:			
Sci. & Eng. Practices:		Crosscutting Concepts:	

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Writing and Argumentation to Support Learning</i>	Room:	Balsam
Presenter(s):	David Pauli	Vendor:	
Description:	Teachers will participate in and inquiry-based activity to see how writing and argumentation can support student learning.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	Physical Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		

Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Patterns
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Day:	Friday	Time:	4:00:00 PM
Title:	<i>Constructed Response Using STEM and Science Content</i>	Room:	Birch
Presenter(s):	Cheri Jones	Vendor:	
Description:	Motivate and improve written responses in science and other subjects using a variety of strategies.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Building a Presence for Science in your Community</i>	Room:	Cherry
Presenter(s):	Barbara King; Alexandria Robinson	Vendor:	
Description:	Partnerships with community members benefits all as we try to maximize resources. Learn how one district is building partnerships for science and STEM with a lasting impact on education.		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Systems and System Models

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Augmented Reality 101: Bringing Science to Life!</i>	Room:	Dogwood A
Presenter(s):	Amy Vitala	Vendor:	
Description:	Bring science learning to life for your students with augmented reality! If you have never seen AR, you do not want to miss this!		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),Pre-service/Early Career Teachers	Content:	General
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Synergizing Science and Literacy Instruction</i>	Room:	Dogwood B
Presenter(s):	Melony Allen, Lacey Huffling, Sarah Fuller, Abbie Kemp, Misty Moore, Courtney Olgesby, Courtney Sheffield, Rebecca Stewart	Vendor:	
Description:	Learn how lessons that integrate science and literacy allow for seamless connections across the two disciplines. Lesson plans and activities will be provided.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Slow Motion Physics</i>	Room:	Gardenia
Presenter(s):	Nicholas Mayhew	Vendor:	
Description:	Hands-on experience of using slow motion Direct Measurement Videos to investigate physics		

Level(s):	concepts as an alternative to textbook problems High (9-12)	Content:	Physics
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Systems and System Models

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Tech-Savvy Chemistry Lesson Development</i>	Room:	Holly
Presenter(s):	Amanda Amos, Rebekah Cordeiro, Erica Peddi, Yolanda Peyton, Chelsea Scruggs, Cheree Vaughn	Vendor:	
Description:	Using Technology in every component of a Chemistry Lesson		
Level(s):	High (9-12),Advanced High (AP/IB)	Content:	Chemistry
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Developing and Using Models	Crosscutting Concepts:	Structure and Function

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Revolutionizing Labs for STEM</i>	Room:	Lake
Presenter(s):	Marc Pedersen	Vendor:	
Description:	This session will discuss how to change and improve labs to make them more engaging and relevant for students.		
Level(s):	High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Patterns

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Literacy in Science for All</i>	Room:	Maple
Presenter(s):	Ravonda Hardy, Arlene Moguel, John Lacy, Kandis Tate, Natalie Mahon, Patrice Peters, Constance Clopton, Elaine Long, Charlie Fluellen	Vendor:	
Description:	Using Literacy Strategies in the science classroom		
Level(s):	Middle (6-8)	Content:	Biology/Life Science
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Systems and System Models

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Family STEM Night on a Shoestring</i>	Room:	Poplar
Presenter(s):	Babs Tate	Vendor:	
Description:	Engaging students and their families in a STEM exploration night on a shoestring budget		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Argumentation: Developing oral language skills through scientific inquiry gr K-2</i>	Room:	Rhododendron A
Presenter(s):	Marilyn Enoch and Kathy Armstrong	Vendor:	Delta Education/FOSS
Description:	K-2 Students can use evidence to make claims and arguments		
Level(s):	Lower Elementary (K-2)	Content:	General

Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Do you FLiP?</i>	Room:	Rhododendron B
Presenter(s):	Billi Faust, Jennifer Edwards, Voneeta Holloman, and Reginald Dennard	Vendor:	
Description:	This presentation aims to help increase student achievement in Science using the Flexible Learning Program.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	4:00:00 PM
Title:	<i>All Aboard the STEM Train-Connecting Language Arts, Social Studies and Math</i>	Room:	Summit
Presenter(s):	Janice Mitchell	Vendor:	
Description:	The workshop will show science teachers how to help their team (language arts, social studies, math) connect to STEM.		
Level(s):	Middle (6-8),High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Data Driven Instruction</i>	Room:	Willow
Presenter(s):	Gaganjot Singh	Vendor:	
Description:	Teachers continually gather, analyze information about individual student readiness. This session shares instructional strategies and educational technology tools that makes classroom student centered		
Level(s):	High (9-12)	Content:	General
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Friday	Time:	4:00:00 PM
Title:	<i>Developing a Field Studies Program in Your Middle or High School</i>	Room:	Woodland
Presenter(s):	Robert Hodgdon	Vendor:	
Description:	A Field Studies Program creates opportunities for students and staff to participate in authentic ecological surveys, monitoring, and research in the field with scientists.		
Level(s):	Middle (6-8),High (9-12)	Content:	Biology/Life Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Stability and Change

Day:	Saturday	Time:	8:30:00 AM
Title:	<i>BATTY ABOUT BATS</i>	Room:	Birch
Presenter(s):	Vicky Beckham Smith	Vendor:	A-Z ANIMALS

Description:	Teachers will be introduced to the world of bats and meet live bats. They will be given a CD of lesson plans, crafts and resources.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Pre-service/Early Career Teachers	Content:	Biology/Life Science
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Saturday	Time:	8:30:00 AM
Title:	<i>Using Case Studies to Promote Technical Literacy in an Anatomy and Physiology Class</i>		Room: Cherry
Presenter(s):	Shari Weaver	Vendor:	
Description:	Participate in an immunology case study to explore how this pedagogical method engages students in real-world medical scenarios while strengthening their technical literacy.		
Level(s):	High (9-12),College	Content:	Human Anatomy & Physiology
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Structure and Function

Day:	Saturday	Time:	8:30:00 AM
Title:	<i>Integrated Learning for a Changing Planet</i>		Room: Dogwood A
Presenter(s):	Terri Clark	Vendor:	
Description:	Participate in hands-on activities that apply math and science skills to tackle major global challenges, including human population pressures, finite natural resources and climate change.		
Level(s):	Middle (6-8),High (9-12)	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Analyzing and Interpreting Data	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Saturday	Time:	8:30:00 AM
Title:	<i>Writing Grants for STEM</i>		Room: Dogwood B
Presenter(s):	Brenda Hornaday	Vendor:	
Description:	This session will help teachers prepare a grant before they leave the session		
Level(s):	Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Stability and Change

Day:	Saturday	Time:	8:30:00 AM
Title:	<i>Enhancing assessment performance in Biology courses: Exploring note taking strategies to support comprehension, retention and recall</i>		Room: Gardenia
Presenter(s):	Erin Duckett, and Danilo M. Baylen	Vendor:	University of West Georgia
Description:	Presentation focus on improving comprehension, retention and recall of concepts in college-level Biology courses science using multiple note-taking strategies.		
Level(s):	Middle (6-8),High (9-12),Pre-service/Early Career Teachers	Content:	Biology/Life Science
Strand:	Speaking Up on Effective Classroom Assessment		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information	Crosscutting Concepts:	Not Applicable

Day:	Saturday	Time:	8:30:00 AM
Title:	<i>Futures in Histotechnology and Plastination</i>	Room:	Maple
Presenter(s):	Shirley Powell, HT(ASCP)HTL	Vendor:	
Description:	Futures available in the field of Histotechnology	Content:	Biology/Life Science
Level(s):	High (9-12),Advanced High (AP/IB),College		
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Saturday	Time:	8:30:00 AM
Title:	<i>Clearing the Fog on Teaching Clouds</i>	Room:	Poplar
Presenter(s):	Dannell Custred	Vendor:	
Description:	This presentation will lead teachers through a truly integrated STEMs unit on clouds. It will "wow" students and leave them begging for more.	Content:	Earth Science
Level(s):	Upper Elementary (3-5)		
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Energy and Matter: Flows, Cycles, and Conservation

Day:	Saturday	Time:	8:30:00 AM
Title:	<i>Arguments & Explanations: Same? Different? Does It Matter?</i>	Room:	Rotunda
Presenter(s):	Jeremy Peacock, Amy Peacock, Paul Blais	Vendor:	
Description:	Argumentation and explanation are science and literacy practices that foster deep student learning. Learn to support your students in understanding and engaging in these practices.	Content:	General
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Supervisor/Leadership,Pre-service/Early Career Teachers		
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Saturday	Time:	8:30:00 AM
Title:	<i>VCE STEM Matters -- A Community Service Approach to STEM</i>	Room:	Willow
Presenter(s):	Laurie Edwards, Kristan Riedinger	Vendor:	
Description:	Celebrate STEM at your school by fostering a community service mind set. Partner with local organizations to create design challenges for elementary students.	Content:	Engineering
Level(s):	Upper Elementary (3-5)		
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Saturday	Time:	9:30:00 AM
Title:	<i>Circuit Building Workshop</i>	Room:	Birch
Presenter(s):	Susannah Lomant	Vendor:	
Description:	Build circuits using breadboards and common household items.	Content:	Physics
Level(s):	High (9-12),Advanced High (AP/IB),College		
Strand:	Not Applicable		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Not Applicable

Practices:	Concepts:
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Day:	Saturday	Time:	9:30:00 AM
Title:	<i>Enhancing Classroom Learning Through Digital Dissection</i>	Room:	Cherry
Presenter(s):	Samantha Suiter, M.A.	Vendor:	
Description:	This session includes hands-on experience with dissection software programs, covering educational efficacy, economic benefits and current laws/policies regarding the use of animals in science.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),College,Pre-service/Early Career Teachers	Content:	Biology/Life Science
Strand:	Not Applicable	Crosscutting Concepts:	Not Applicable
Sci. & Eng. Practices:	Not Applicable		

Day:	Saturday	Time:	9:30:00 AM
Title:	<i>Save Our Pollinators! Garden Grants, STEAM, and More!</i>	Room:	Dogwood A
Presenter(s):	Donna L. Gast	Vendor:	
Description:	Your students can help endangered pollinators by creating a grant-funded garden in this STEAM activity. Get grant info, garden designs, plant lists, and relevant texts.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Saturday	Time:	9:30:00 AM
Title:	<i>Network: Everyone is invited to join this community of educators!</i>	Room:	Dogwood B
Presenter(s):	Juliana Texley	Vendor:	
Description:	NSTA's Learning Center is an amazing community		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Not Applicable		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Saturday	Time:	9:30:00 AM
Title:	<i>Innovation Hour: Inquiry-based Learning</i>	Room:	Gardenia
Presenter(s):	Kevin Wallace, Deidre Tinsley	Vendor:	
Description:	Demonstrates how to help students be inventive, better at problem solving, and how to communicate effectively.		
Level(s):	Middle (6-8)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Not Applicable

Day:	Saturday	Time:	9:30:00 AM
Title:	<i>5E Instructional Model in Studio Physics Class</i>	Room:	Maple
Presenter(s):	Ozden Sengul, Ruili Wang, Renee Schwartz	Vendor:	
Description:	We will explore the strategies to incorporate 5E learning cycle into college physics instruction, and specifically focus on teaching "Magnetic Fields."		
Level(s):	College	Content:	Physics
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		

Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Patterns
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Day:	Saturday	Time:	9:30:00 AM
Title:	<i>Struggling Middle School Readers</i>	Room:	Poplar
Presenter(s):	Melissa Davis, Tonya Sims	Vendor:	
Description:	The session will include a hands-on implementation of literacy strategies including close reading, vocabulary development, note-taking, graphic organizers, and science journals.		
Level(s):	Middle (6-8)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Saturday	Time:	9:30:00 AM
Title:	<i>Fun, Weird Science</i>	Room:	Rotunda
Presenter(s):	Ronnie Thomas	Vendor:	
Description:	Science is something that students have to DO. Come DIVE into this OPPORTUNITY to interact with the Fun Weird Science team as we model engaging learning experiences guaranteed to keep your students hooked. Attending teachers will also be provided with online access to additional hands on science resources.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:			
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Saturday	Time:	9:30:00 AM
Title:	<i>Magnets Or Magic: Using Science to Teach Argumentative Writing</i>	Room:	Willow
Presenter(s):	Katie Lynn Brkich, Tamra Lamb	Vendor:	
Description:	We discuss using the concepts of magnets, light, and sound to engage and excite our elementary students to practice skills needed in argumentative writing.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),College,Supervisor/Leadership,Pre-service/Early Career Teachers	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Saturday	Time:	10:30:00 AM
Title:	<i>Teach Like a Scientist: Building Inquiry in STEM</i>	Room:	Birch
Presenter(s):	Heidi Southcombe	Vendor:	
Description:	Learn how to run an inquiry based elementary classroom and integrate multiple STEM areas.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Saturday	Time:	10:30:00 AM
Title:	<i>Inventing to Learn in Science Classes</i>	Room:	Cherry
Presenter(s):	Katherine Wade, Jonathan Cohen	Vendor:	
Description:	This session address the use of maker / inventing technologies in science classroom, with practical		

Level(s):	applications. Upper Elementary (3-5),Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Scale, Proportion, and Quantity

Day:	Saturday	Time:	10:30:00 AM
Title:	<i>Physics for First-Timers: Newton's Third Law</i>	Room:	Dogwood A
Presenter(s):	Justin Harvey, Phil Heier, Naoman Malik	Vendor:	
Description:	Engaging demos, inquiry-based labs, and effective strategies for teaching Newton's 3rd Law will be presented. Student misconceptions toward forces are emphasized.		
Level(s):	Middle (6-8),High (9-12)	Content:	Physics
Strand:	Not Applicable		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations

Day:	Saturday	Time:	10:30:00 AM
Title:	<i>Gears, Wheels, and Critical Thinking</i>	Room:	Dogwood B
Presenter(s):	Sharon Augustine, Phil McCreanor	Vendor:	
Description:	Pairs will compete against one another to predict vehicle's performance, speed, and strength.		
Level(s):	Middle (6-8)	Content:	Physics
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Not Applicable

Day:	Saturday	Time:	10:30:00 AM
Title:	<i>Sumo Robot League and the Maker Space Movement</i>	Room:	Gardenia
Presenter(s):	Grace Belangia, Eric Parker, Will ASHby, Eric Harrison	Vendor:	HACK Augusta
Description:	Maker Spaces are great partners for bringing thought leaders, equipment and innovative STEM projects to the classroom. Learn how Sumo Robots can add to your students STEM experience in the classroom.		
Level(s):	Middle (6-8),High (9-12)	Content:	General
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		
Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable

Day:	Saturday	Time:	10:30:00 AM
Title:	<i>Interdisciplinary Planning: The Bicycle Project</i>	Room:	Maple
Presenter(s):	Zach Strother, T.J. Edwards, Robin Mathews	Vendor:	
Description:	Three teachers outline the strategies they used to design and execute an interdisciplinary STEM unit around redesigning the bicycle.		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	Physics
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Not Applicable

Day:	Saturday	Time:	10:30:00 AM
Title:	<i>Hydroponics on a Budget</i>	Room:	Poplar
Presenter(s):	Shina Johnson, Edonna Koon, Stacey edison-Bryson	Vendor:	Educators
Description:	We will be teaching educators how to create gardening system without soil.		
Level(s):	Upper Elementary (3-5),Middle (6-8)	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		

Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Cause and Effect: Mechanisms and Explanations
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Day:	Saturday	Time:	10:30:00 AM
Title:	<i>Using Argumentation Laboratories to Improve Literacy</i>	Room:	Rotunda
Presenter(s):	Patrick Enderle	Vendor:	
Description:	This session provide teachers with tools and strategies for implementing argumentation into their classrooms to help their students improve their science and literacy proficiency.		
Level(s):	Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB)	Content:	General
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Engaging in Argument from Evidence	Crosscutting Concepts:	Systems and System Models

Day:	Saturday	Time:	10:30:00 AM
Title:	<i>Gorongosa: A Case Study in Conservation</i>	Room:	Willow
Presenter(s):	Bob Kuhn	Vendor:	
Description:	Gorongosa National Park in Mozambique is used as a case study for real-world conservation. Participants will use HHMI BioInteractive resources and citizen science to connect ecology with conservation.		
Level(s):	Middle (6-8),High (9-12),Advanced High (AP/IB),College	Content:	Environmental Science
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Stability and Change

Day:	Saturday	Time:	11:30:00 AM
Title:	<i>Engineering Design for Grades K–2</i>	Room:	Birch
Presenter(s):	Terri George	Vendor:	Carolina Curriculum
Description:	K-2 lessons examples and strategies for engineering design will be experienced.		
Level(s):	Lower Elementary (K-2)	Content:	Engineering
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Asking Questions and Defining Problems	Crosscutting Concepts:	Systems and System Models

Day:	Saturday	Time:	11:30:00 AM
Title:	<i>Visualizing Science Learning: Integrating Visual Media in Designing Engaging Elementary Science Experiences</i>	Room:	Cherry
Presenter(s):	Danilo M. Baylen, Andrea Carter, Aletha Cherry, Janice Smith-Johnson, Shanique Worthey, Myra Biundo	Vendor:	University of West Georgia, Ronald E. McNair Discovery Learning Academy (DeKalb), Beecher Hills ES (APS), Fickett Elementary (APS)
Description:	Panel discussion by elementary teachers focused on improving science teaching using visual media and the positive changes experienced after returning to their classrooms with students.		
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Pre-service/Early Career Teachers	Content:	Physics
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations	Crosscutting Concepts:	Patterns

Day:	Saturday	Time:	11:30:00 AM
Title:	<i>Bad hair Day unit</i>	Room:	Dogwood A
Presenter(s):	kathylee mcelroy	Vendor:	
Description:	Stem/Steam engineering unit on Tornado/hurricanes	Content:	Earth Science
Level(s):	Middle (6-8)	Crosscutting Concepts:	Not Applicable
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions		

Day:	Saturday	Time:	11:30:00 AM
Title:	<i>Inquiry Education for Elementary Education Teachers in the Standard Based Classroom</i>	Room:	Dogwood B
Presenter(s):	Kathryn R. Mullen	Vendor:	
Description:	Come learn how to integrate inquiry education into all levels of an elementary school classroom. Try several hands on activities. Discuss how inquiry relates to science fair.	Content:	General
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5)	Crosscutting Concepts:	Not Applicable
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Planning and Carrying Out Investigations		

Day:	Saturday	Time:	11:30:00 AM
Title:	<i>Starting a Competition Robotics Club and Team from Scratch</i>	Room:	Gardenia
Presenter(s):	Robert Bennett, Andrew Adams	Vendor:	
Description:	This session will detail our experiences starting a competition robotics team and club from nothing, including the direct benefits to students and the community.	Content:	Engineering
Level(s):	High (9-12)	Crosscutting Concepts:	Not Applicable
Strand:	Speaking Up on Building STEM from Science		
Sci. & Eng. Practices:	Not Applicable		

Day:	Saturday	Time:	11:30:00 AM
Title:	<i>Share My Science!: Making Literacy Real & Relevant</i>	Room:	Maple
Presenter(s):	Caroline Sumners	Vendor:	
Description:	Learn how to build opportunities for authentic communication. Get students excited to share their scientific learning with parents, scientists, and the local and global community.	Content:	General
Level(s):	Middle (6-8)	Crosscutting Concepts:	Not Applicable
Strand:	Speaking Up on Integrating Literacy to Advance Science Instruction		
Sci. & Eng. Practices:	Obtaining, Evaluating, and Communicating Information		

Day:	Saturday	Time:	11:30:00 AM
Title:	<i>How has educational technology impacted teacher responsibilities?</i>	Room:	Poplar
Presenter(s):	Nancy Gryder, Pam Vesely, Susan Wells	Vendor:	
Description:	Educational technology offers increased learning opportunities and increased levels of responsibility. We will address specific teacher responsibilities with concrete strategies.	Content:	Other
Level(s):	Lower Elementary (K-2),Upper Elementary (3-5),Middle (6-8),High (9-12),Advanced High (AP/IB),Supervisor/Leadership,Pre-service/Early Career Teachers		
Strand:	Speaking Up on Developing Partnerships, Leadership, and Policy		

Sci. & Eng. Practices:	Not Applicable	Crosscutting Concepts:	Not Applicable
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Day:	Saturday	Time:	11:30:00 AM
Title:	<i>The Benefit to Informal Afterschool STEM Education - FIRST Robotics</i>	Room:	Willow
Presenter(s):	Connie Haynes	Vendor:	Georgia FIRST Robotics
Description:	Where do we inspire our next generation of STEM leadders? In the hands-on, real-word relavent experience of afterschool STEM programs such as FIRST Robotics.		
Level(s):	High (9-12)	Content:	Engineering
Strand:	Not Applicable		
Sci. & Eng. Practices:	Constructing Explanations and Designing Solutions	Crosscutting Concepts:	Not Applicable