

Primary (Last Name)	Primary (First Name)	Day	Time	Room	Title	Presenter(s)	Description	Level	Strand	Content	Science & Engineering Practices	Crosscutting Concepts
0	0	Friday	11:00-11:30	Exhibit Hall B	GSTA Annual Meeting	0	0	0	0	0	0	0
Adkins	Stanley	Saturday	10:00-11:50	313	Engineering the Periodic Table, An Arts Integration Unit	Stanley Adkins	Students collaboratively construct a three-dimensional visual representation of the periodic table.	High	Integrated STEM Education	Chemistry	Developing and Using Models	Patterns
Ahlborn	Eleanor	Friday	3:00-4:50	308	Make Motion Physics Engaging and Accessible with Robots	Dr. Tom Hsu	Hands-on workshop uses extraordinary classroom robot to teach speed, acceleration, graphs, vectors, and more. Come apply physics to STEM challenges such navigating a real maze.	High, AP/IB	GPS Within the Framework	Physics	Constructing Explanations and Designing Solutions	Cause and Effect: Mechanisms and Explanations
Ahlborn	Eleanor	Saturday	10:00-10:50	309	Lighten Your STEM Load with Color and Optics	Dr. Tom Hsu	Insightful experiments, lessons, and tools to teach light and optics. Hands-on session covers color, energy, reflection, refraction, magnification, telescopes, microscopes and even quantum light!	High, AP/IB	Integrating Science Within the CCGPS	Physics	Developing and Using Models	Energy and Matter: Flows, Cycles, and Conservation
Ahlborn	Eleanor	Saturday	11:00-11:50	309	The Delightful STEM Science of Music and Sound Waves	Dr. Tom Hsu	Ears-on exploration of sound using real and recorded instruments. Learn about resonance, wavelength, interference, voice recognition, and the science and technology of sound waves.	High, AP/IB	Integrating Science Within the CCGPS	Physics	Constructing Explanations and Designing Solutions	Patterns
Ajasin	Carnellia	Saturday	8:00-9:50	308	Learning Technology	Carnellia Ajasin and Kina Champion	Computer Science in the Class	Middle, High	Integrated STEM Education	Other	Asking Questions and Defining Problems	Systems and System Models
Akin	Jamie	Friday	9:00-9:50	313	AP Chemistry for All	Jamie H. Akin	Strategies to teach both Chemistry and AP Chemistry so that all students will have an opportunity to do well on the AP exam.	High, AP/IB	NA	Chemistry	Planning and Carrying Out Investigations	NA
Akin	Jamie	Friday	1:00-2:50	313	Fun with Science!!!	Jamie H. Akin	Demonstrations for physics and chemistry can be fun for the kiddies as well as an awesome learning experience. I'll be sharing and doing lots of excellent demos and labs. Bring a flash drive and a	High	NA	Physics	NA	NA
Albritton	Vicki	Saturday	11:00-11:50	Magnolia CD	Coastal Connections	Vicki Albritton	Explore how to integrate technology and the outdoors to teach about our Georgia coast and its creatures.	Middle	NA	Environmental Science	NA	NA
Alford	Ann	Saturday	10:00-10:50	Magnolia B	Classroom websites	Ann Alford, Tanya Flynn	It's easy as 1. 2. 3..How to set up a website for your class	Upper Elementary, Middle, High, AP/IB	GPS Within the Framework	General	NA	NA
Allen	Joyce	Thursday	8:00-8:50	313	Nanoscale Science as an Avenue to STEM in Elementary and Middle Schools	Joyce Allen	This hands-on workshop will support student learning of nanoscale science and increase student interest in STEM for grades 3-8.	Upper Elementary, Middle	Integrated STEM Education	General	Constructing Explanations and Designing Solutions	NA
Anderson	Erin	Thursday	10:00-10:50	Ballroom A	Ready, Set, Go STEM	Erin Anderson	Experience an interactive example of a life science STEM activity and receive resources and examples for use in your own classroom.	Middle	Integrated STEM Education	Biology/Life Science	Developing and Using Models	Structure and Function
Ansberry	Karen	Thursday	9:00-10:50	Ballroom B	Picture Perfect Placeholder	Karen Ansberry, Emily Morgan	0	Lower Elementary, Upper Elementary	Integrating Science Within the CCGPS	0	0	0
Ansberry	Karen	Thursday	1:00-2:50	Ballroom B	Picture Perfect Placeholder	Karen Ansberry, Emily Morgan	0	Lower Elementary, Upper Elementary	Integrating Science Within the CCGPS	0	0	0
Ansberry	Karen	Friday	9:00-11:50	Ballroom B	Picture Perfect Placeholder	Karen Ansberry, Emily Morgan	0	Lower Elementary, Upper Elementary	Integrating Science Within the CCGPS	0	0	0
Ansberry	Karen	Friday	3:00-4:50	Ballroom B	Picture Perfect Placeholder	Karen Ansberry, Emily Morgan	0	Lower Elementary, Upper Elementary	Integrating Science Within the CCGPS	0	0	0
Baker-Eady	Monica	Friday	3:00-3:50	313	Show that you know	Monica Baker-Eady	Show that you know-long term and short term projects	Middle, High	GPS Within the Framework	General	Obtaining, Evaluating, and Communicating Information	NA
Barber	Paul	Friday	9:00-9:50	Grand Salon A	Mitosis and Meiosis, Let's List It	Paul Barber, Jefferey Hargrove	A hands on strategy to make mitosis and meiosis tangible	Upper Elementary, Middle, High	GPS Within the Framework	Biology/Life Science	Developing and Using Models	NA
Barnes	Jennifer	Thursday	1:00-1:50	Grand Salon B	Turning Labs into Arguments	Jennifer Barnes	Argumentation & communication are two Science & Engineering Practices in the NGSS. Bring a lab that you can turn into an argument-based inquiry during this session.	High, AP/IB	GPS Within the Framework	General	Engaging in Argument from Evidence	NA
Barnes	Jennifer	Thursday	3:00-3:50	Grand Salon B	Beak of the Finch - Evolution + Math	Jennifer Barnes	Continuity & Change - an ironic concept seen within Evolution. Come work through an activity from HHMI Biointeractive that integrates science, math and argumentation.	AP/IB	GPS Within the Framework	Biology/Life Science	Analyzing and Interpreting Data	Patterns
Barnes	Jennifer	Thursday	4:00-4:50	Exhibit Hall A	High School Share-a-thon	0	0	High, AP/IB	0	General	NA	NA
Barnes	Jennifer	Friday	9:00-9:50	Grand Salon B	Classroom Redesign Pt. 1: Putting the Framework into Practice in Middle School and High School Life Science	Jennifer Barnes, Chelsea Sexton, Jeremy Peacock, Zoe Evans	How can you incorporate the science and engineering practices and crosscutting concepts into your life science classroom? See the three-dimensional approach of the Framework in action in a model life science investigation.	Middle, High, AP/IB	GPS Within the Framework	Biology/Life Science	Multiple	Multiple
Barnes	Jennifer	Friday	10:00-10:50	Grand Salon B	Classroom Redesign Pt. 2: Putting the Framework into Practice in Middle School and High School Life Science	Jennifer Barnes, Chelsea Sexton, Jeremy Peacock, Zoe Evans	How can you incorporate the science and engineering practices and crosscutting concepts into your life science classroom? Come and translate your favorite biology lab into a student-centered, three-dimensional investigation.	Middle, High, AP/IB	GPS Within the Framework	Biology/Life Science	Multiple	Multiple
Barnes	Jennifer	Friday	2:00-2:50	Grand Salon B	Gene Regulation & the Evolution of the Stickleback	Jennifer Barnes	Wondering how to teach eukaryotic gene regulation? Participate in a modeling activity that goes through how genes are regulated in the Stickleback Fish, and how this relates to Evolution.	AP/IB	GPS Within the Framework	Biology/Life Science	Developing and Using Models	Cause and Effect: Mechanisms and Explanations
Baron	Polly	Thursday	8:00-8:50	Grand Salon A	Web 2.0 Tools and You!	Polly baron	Free, fast, and fun!	Lower Elementary, Upper Elementary, Middle, High, AP/IB, Pre-service/Early Career Teachers	GPS Within the Framework	General	NA	NA

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Barrett	Donna	Friday	8:00-8:50	306	Life jackets, density, & STEM	Donna Barrett	In this STEM activity, you will design life jackets for a toy soldier; experience an application of density, and the inverse relationship between volume and density.	Middle, High	Integrated STEM Education	Physical Science	Using Mathematical and Computational Thinking	Scale, Proportion, and Quantity
Barthlow	Michelle	Friday	10:00-10:50	Ballroom A	Fostering STEM collaboration and preparedness between high school and elementary school teachers	Mr. John Murnan and Dr. Michelle Barthlow	Insights from a workshop led by HS teachers for ES teachers that fostered collaboration and communication to increase future student preparedness for HS STEM courses.	Lower Elementary, Upper Elementary, Middle, High	GPS Within the Framework	General	Engaging in Argument from Evidence	Cause and Effect: Mechanisms and Explanations
Bateman	Marjorie	Thursday	3:00-4:50	Magnolia A	Integrate the Basics First! 3 Main Elements for Effective Classroom Management	Marjorie Bateman M.Ed.	Participants will learn the critical elements to developing a classroom management style that communicates to students observable behaviors that will help them be successful.	Lower Elementary, Upper Elementary, Middle, High, Supervisor/Leadership, Pre-service/Early Career Teachers	Preservice & Early Career Teachers	Other	NA	NA
Beck	Joanna	Saturday	10:00-11:50	324	Mars Colony STEM	Joanna Beck, Timothy Lees, Katie Williams	Integrating STEM through an IB project about landing and living on Mars	Middle	Integrated STEM Education	Earth Science	Planning and Carrying Out Investigations	Structure and Function
Bergozza	Michelle	Friday	9:00-9:50	Magnolia A	Survival Guide for New Science Teachers	Michelle Bergozza	Hidden Resources Revealed	Lower Elementary, Upper Elementary, Pre-service/Early Career Teachers	Preservice & Early Career Teachers	General	NA	NA
Bergozza	Michelle	Saturday	10:00-10:50	Ballroom B	Scientific Explanation in Elementary Classrooms	Michelle Bergozza	Teaching students to talk and write about science	Lower Elementary, Upper Elementary	Integrating Science Within the CCGPS	General	Constructing Explanations and Designing Solutions	NA
Berman	Elise	Friday	8:00-8:50	Magnolia B	Learning Power - Home As A System	Cedric Sheffield	The Home as a system lesson addresses the natural forces of Heat, Air, and Moisture through the lenses of physical science, environmental science, and economics.	High	Integrated STEM Education	Physical Science	Developing and Using Models	Systems and System Models
Bevis	Todd	Thursday	1:00-2:50	Ballroom C	Developing and Using Models in the Science Classroom	Todd Bevis, Ellen Granger	Explore and compare the development of scientific and mathematical models as tools for learning core disciplinary content in science classrooms.	Middle, High, AP/IB, Supervisor/Leadership	GPS Within the Framework	General	Developing and Using Models	Systems and System Models
Bowie	Maria	Thursday	9:00-9:50	313	Making a School Garden Grow	David Knauf, Maria Bowie, Judy Hibbs, Susan Reinhardt	The UGA Extension School Garden website is a resource center for educators, parents and community members who are looking to start a garden at their school or expand an existing garden.	Lower Elementary, Upper Elementary, Middle	Integrated STEM Education	General	Obtaining, Evaluating, and Communicating Information	NA
Brewton	Cherry	Friday	3:00-4:50	303	Creating and Implementing Effective Watersheds of Georgia Lessons for All Students: Use of Brain-based Learning Stations and Next Generation Science Standards' Appendix D and Case Studies	Cherry C. Brewton, Ed.D.	Putting together GPS, CCGPS, and STEM for ALL students. Rotate through hands-on, Watershed Stations. Collect data; make scientific claims. Brain-based and NGSS "All Standards, All Students" emphasi	Lower Elementary, Upper Elementary, Middle, High, AP/IB	Integrated STEM Education	Earth Science	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Brim	Nancy	Friday	1:00-1:50	310	Solutions in Chemistry: a GPS Unit Plan	Nancy Brim	Go through the solutions unit in chemistry - labs, demos,	High	GPS Within the Framework	Chemistry	NA	Stability and Change
Brkich	Katie	Saturday	9:00-9:50	313	Focusing on Change Across the Curriculum	Katie Brkich, Tamra Lamb	We will share our experience developing and implementing a yearlong 2nd grade cross-content project focused on integrating "Change" as a cross-cutting concept across the curriculum.	Lower Elementary, Upper Elementary, Pre-service/Early Career Teachers	GPS Within the Framework	General	NA	Stability and Change
Brown	Tom	Thursday	10:00-10:50	Grand Salon A	Top 10 High-Tech Formative Assessment Strategies for Science	Tom Brown, Mike Eby	This session will explore the top BYOD tools and apps that can be used to enhance engagement, rekindle curiosity, and monitor comprehension.	Middle, High	Integrated STEM Education	General	Obtaining, Evaluating, and Communicating Information	Cause and Effect: Mechanisms and Explanations
Buchanan	Mariah	Saturday	10:00-11:50	Ballroom E	Integrating the Art of Nanotubes	Dr. Mariah S. Buchanan	Explaining the importance of nanotubes in today's world and showing how it connects to art.	High	Integrated STEM Education	Engineering	Developing and Using Models	Structure and Function
Burrell	Sue	Thursday	2:00-2:50	Grand Salon B	Show me what you've Learned-Part 2	Sue L Burrell, Barbara Mullis	Using inexpensive, easy to construct manipulative learning "kits", students are able to demonstrate their knowledge while the teacher, through purposeful questioning, increases depth of knowledge.	Middle, High	GPS Within the Framework	Biology/Life Science	NA	NA
Burrell	Sue	Friday	8:00-8:50	Grand Salon B	Notebooking for HS Biology	Sue L Burrell, Barbara Mullis	Notebooks used for the development and inclusion of visuals and foldables to help students organize, visualize, and make connections with their learning. An excellent tool to incorporate science lite	High	GPS Within the Framework	Biology/Life Science	NA	NA
Burrell	Sue	Friday	10:00-10:50	Magnolia A	The Elephant in the Room	Sue L Burrell	Everyone knows it's there but no one addresses it...ineffective instruction. Presentation reviews classroom management research, styles, practices, and procedures to enhance instruction.	Middle, High	Preservice & Early Career Teachers	General	NA	NA
Burton	Linnell	Saturday	10:00-11:50	310	Got CSI?	Linnell Burton	Homemade investigative techniques	Middle, High, AP/IB, College, Supervisor/Leadership, Pre-service/Early Career Teachers	Integrated STEM Education	Forensic Science	Planning and Carrying Out Investigations	Patterns
Bush	Michael	Friday	2:00-2:50	306	STEM: Engineering Design Process	Michael Bush	Participants will learn how to implement the steps of the Engineering Design Process by utilizing engineering concepts in the classroom.	Lower Elementary, Upper Elementary	Integrated STEM Education	General	Planning and Carrying Out Investigations	Structure and Function

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Butler	Brian	Thursday	1:00-1:50	Ballroom D	Speaking Up for Science Education in Georgia	Brian Butler, Jeremy Peacock, T.J. Kaplan	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.	Lower Elementary, Upper Elementary, Middle, High, AP/IB, College, Administrators, Supervisor/Leadership, Pre-service/Early Career Teachers	NA	Advocacy & Leadership	NA	NA
Butler	Brian	Saturday	9:00-9:50	Ballroom C	Work Smarter Not Harder: Making Learning Targets and Formative Assessment Work in the Classroom	Brian Butler, Julie Scott, Lisa Thompson	Strategies you can implement tomorrow to make your assessments more meaningful. Learning targets and formative assessments make your teaching easier not more complex. Learn how.	Middle, High	NA	General	NA	NA
Butler	Venetia	Friday	1:00-2:50	Exhibit Hall A	And the Tide Comes In	Venetia Butler	Teaching science concepts is easier and more fun when taught through experiential learning and books and activities focused on Georgia's own coast.	Lower Elementary, Upper Elementary, Middle	Integrating Science Within the CCGPS	Environmental Science	Evaluating, and Communicating Information	Stability and Change
Campbell	Benjamin	Friday	9:00-9:50	312	A layered way to think about science: Using multiple frameworks to represent science concepts	Ben Campbell, Ryan Nixon	Participants in this session will be introduced to and discuss multiple frameworks for reconsidering biology, chemistry, and physics concepts for their teaching.	Middle, High	NA	General	Constructing Explanations and Designing Solutions	NA
Cauffiel	Colleen	Thursday	1:00-2:50	306	Getting Started with STEM in the Elementary Classroom	Colleen Cauffiel	Teachers will learn how to integrate math and science concepts at the elementary level.	Lower Elementary, Upper Elementary	Integrated STEM Education	General	Planning and Carrying Out Investigations	NA
Champion	Kina M.	Friday	2:00-2:50	324	S.T.E.A.M. Re-imagined: Integrating Agricultural Education in the STEM Framework	Kina M. Champion, Patricia N. Glover, Stephanie Davis, Shamecqua Thompson, Mary LaCue	Learn how one urban school is leveraging community partnerships to redefine S.T.E.A.M. education. Participants will engage in a hands-on investigation--designing a model irrigation system. Dig in!	Upper Elementary, Middle	Integrated STEM Education	Environmental Science	Planning and Carrying Out Investigations	Systems and System Models
Chassereau	Karen	Saturday	9:00-9:50	Grand Salon A	Guided Inquiry and Digital Video Technologies in Physical Science	Karen Chassereau, Lucy Green	Student-created video projects developed within the framework of guided inquiry, help learners shift from a focus on abstract, scientific concepts to practical scientific applications.	Middle, High	NA	Physical Science	Obtaining, Evaluating, and Communicating Information	Systems and System Models
Chovanec	Sherrie	Thursday	8:00-8:50	Magnolia CD	Accommodation and Modifications: Creating Successful Classroom (for all)	Sherrie Chovanec and Peter Fischer	As the science classroom becomes more diverse in ability levels, accommodation and modifications and blending of differentiated practices has become necessary for a successful classroom.	Middle, High	NA	Other	NA	NA
Chovanec	Sherrie	Friday	1:00-1:50	Magnolia CD	Successful Ideas for Co-teaching and Collaboration	Sherrie Chovanec and Peter Fischer	Collaboration and co-teaching between special education/science teachers is not an option, but necessary. Learn about successful practices to meet the needs of individual students.	Middle, High	NA	Other	NA	NA
Clark	Lynette	Saturday	8:00-8:50	Ballroom C	Integrating science with confidence	Lynette Clark, Rochelle Mungin	Middle school teachers incorporate science in daily reading and math lessons for elementary schools.lessons to a	Lower Elementary, Upper Elementary	GPS Within the Framework	General	Planning and Carrying Out Investigations	NA
Cobb	Deketa	Friday	3:00-3:50	Magnolia A	Save the drama for your Mama.	Deketa Cobb	Keep student drama on the stage and out of your classrooms! Here are some strategies and tools to significantly reduce classroom drama and discipline issues.	Lower Elementary, Upper Elementary, Middle, High, Supervisor/Leadership, Pre-service/Early Career Teachers	Preservice & Early Career Teachers	General	NA	NA
Cola	Jamila	Saturday	8:00-8:50	Grand Salon A	Georgia Tech's RET: Creating K-12 STEAM Lesson Plans Based on Engineering Research	Jamila Cola	Learn about Georgia Tech's paid summer internship to develop arts-integrated engineering lessons	Upper Elementary, Middle, High	Integrated STEM Education	General	NA	Scale, Proportion, and Quantity
Collins	Susan	Thursday	10:00-10:50	324	STEM (STREAM) and Sea Turtles	Susan Collins, Caitlin Crews, Jessica Timms	Despite teachers' best efforts, STEM activities are often abstractions of our world. Leave this presentation with STEM classroom activities based on real world experiences.	Upper Elementary	Integrated STEM Education	Environmental Science	Asking Questions and Defining Problems	NA
Collins	Susan	Thursday	1:00-1:50	Grand Salon A	Using Governmental Agencies as a Classroom Resource	Susan Collins,	The mystery is solved; pennies are saved. You will be given web sites, see samples of free materials, and walkaway with some "freebies!"	Upper Elementary	NA	General	NA	NA
Collins	Susan	Thursday	2:00-2:50	Ballroom A	Science and Math Nights- Using STEM	Susan Collins, Anita Vanbrackle, Morgan Gordon, Amie Sorrow	Have you ever wanted to get parents involved in your students' school activities? See how hands-on STEM activities get parents included in their child's education.	Lower Elementary, Upper Elementary	Integrated STEM Education	General	NA	NA
Cordeira	Kelly	Friday	9:00-11:50	Magnolia B	The Centers for Disease Control and Prevention (CDC): The why, what, and how of teaching epidemiology and public health science in middle and high school	Ralph Cordell, Kelly Cordeira	CDC will outline the rationale for teaching public health in high school, present NGSS-aligned standards to guide course development, and discuss how to adapt CDC resources for classroom use.	Middle, High, AP/IB, College, Supervisor/Leadership, Pre-service/Early Career Teachers	Integrated STEM Education	Other	Analyzing and Interpreting Data	Patterns
Cordeiro	Rebekah	Thursday	1:00-1:50	Magnolia A	Don't Just Survive!Conquer Your First Year!	Drew Adams, Rebekah Cordeiro, Rebecca Mortensen	Second-year KSU Noyce teaching fellows host a session to share productive ideas to overcome bad days and make more good ones in your first years.	Pre-service/Early Career Teachers	Preservice & Early Career Teachers	General	NA	NA
Cox	John	Saturday	9:00-9:50	309	Bring STEM into Your Classroom with Datalogging	Dr Alan Gorlin (N Cobb HS), John Cox & Joe Bruton	Datalogging allows any student to apply technology in the science classroom. Participate in NGSSS correlated, hands-on lessons and try your hand at digital data collection.	Upper Elementary, Middle	Integrated STEM Education	General	Planning and Carrying Out Investigations	Scale, Proportion, and Quantity
Cox	Judy	Friday	8:00-8:50	Exhibit Hall A	Poster Session from Earth Systems Teacher Quality Workshop	Judy Cox, Stephanie Miles, Cobb County Teachers	Poster Session from Earth Systems Teacher Quality Workshop	Middle, High, College	NA	Earth Science	NA	NA

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Creel	Sally	Thursday	1:00-1:50	Ballroom A	Say NO to STEMwashing	Kelly Bodner, Colleen Cauffiel, Sally Creel	Unsuspecting teachers are STEMwashing across the state. Activities, labs, and more are being labeled "STEM" just because student are building something. Children as young kindergarten can successfully participate in STEM challenges that incorporate the engineering design process. Come and learn how to avoid STEMwashing in your classroom. Sample STEM challenges correlated to GPS standards will be shared.	Lower Elementary, Upper Elementary	Integrated STEM Education	General	NA	NA
Cummings	Kristina	Thursday	12:00-12:50	Grand Salon A	What's the hardest concept for you to teach?: Ideas from an MSP cohort	Kristina Cummings, Amanda Erceg, Lonessa Harris, Holley Stejskal, Allison Walker, Dana Winborne	Activities, models, and labs to address some of the most challenging K-5 concepts are presented. Participants will receive hand-outs for each one.	Lower Elementary, Upper Elementary, Pre-service/Early Career Teachers	GPS Within the Framework	General	NA	NA
Curtis	Angela	Thursday	12:00-12:50	Ballroom E	The Engineering and Design Process in Kindergarten? Absolutely!	Angie Curtis	Come experience strategies to incorporate the engineering and design process with kindergarten.	Lower Elementary	Integrated STEM Education	Physical Science	Constructing Explanations and Designing Solutions	Structure and Function
Davis	Alana	Friday	8:00-8:50	Ballroom A	ENGAGE, EMPOWER, and EXCEL with Integrated STEM In Your Classroom!	Alana Davis	Many educators might think that you can't integrate your STEM challenges with the other subjects, well you are WRONG! YOU CAN and it's easy!	Lower Elementary, Upper Elementary, Pre-service/Early Career Teachers	Integrated STEM Education	General	Planning and Carrying Out Investigations	NA
Davis	Alana	Saturday	8:00-8:50	Ballroom A	Just Go With the Flow! Classroom STEM Integration in an Inclusion Setting	Alana Davis	Learn how to integrate weekly STEM challenges in your inclusion classroom with ideas on how to plan, manage, and follow-through with engaging STEM challenges!	Upper Elementary	Integrated STEM Education	Engineering	Planning and Carrying Out Investigations	NA
Davison	Heather	Friday	10:00-10:50	Ballroom E	Using Interactive Science Notebooks in the Gifted Classroom	Heather Davison, Denise Finley	Middle school science teachers will learn how to use ISN in a gifted science classroom as a way for students to demonstrate mastery of the content.	Middle	GPS Within the Framework	Physical Science	Asking Questions and Defining Problems	NA
Dias	Michael	Thursday	10:00-10:50	Ballroom E	Watershed Conservation Curriculum	M Dias & B Ensign with B Cook, G Davis, A Dennis, K Gibson, J Gustin, S Horzewski, K Jackson, C Johnson, D LaVigne, B McClain, M Pedersen, A Pierce, B Schmidt, J Stanhope, R Tumlin, J Wolf	High school biology/environmental science teachers provide guided-inquiry lessons based on fieldwork and data analysis from monitoring activities in the Etowah and Chattahoochee watersheds.	High, AP/IB	Integrating Science Within the CCGPS	Environmental Science	Analyzing and Interpreting Data	Energy and Matter: Flows, Cycles, and Conservation
Dockery	Jeremy	Saturday	9:00-9:50	Ballroom A	Using Contextualized STEM to Engage At-Risk Students	Dr. Jeremy Dockery	Exploring STEM careers, tools, and technologies in an innovative online platform.	Middle, High	Integrated STEM Education	General	Obtaining, Evaluating, and Communicating Information	Cause and Effect: Mechanisms and Explanations
Drummer	Shiona	Thursday	9:00-9:50	Grand Salon B	Chain of Food	Shiona Drummer	Everyone along the Farm-to-Table Continuum plays a major role in keeping our food safe. If a link in this continuum is broken, our nation's food supply can be threatened.	Middle	GPS Within the Framework	Biology/Life Science	Asking Questions and Defining Problems	NA
Dubick	Ann Marie	Thursday	10:00-10:50	313	Models in the Physical Sciences	Ann Marie Dubick	Learn and practice strategies on how to incorporate models with students to promote better understanding of content standards in the physical sciences with LEGOs™, drawings, diagrams, and computer sim	Upper Elementary, Middle, High	GPS Within the Framework	Physical Science	Developing and Using Models	Systems and System Models
Duncan	Mashawn	Saturday	8:00-9:50	Magnolia CD	"Hot Doughnuts Now" Integrating Scientific Literacy and Problem Based Learning	Dr. Mashawn Duncan-Young, Dr. Franklin-Jones, Mari-De Kilcrease	This hands-on engaging session will embed scientific literacy and Problem Based Learning in High School Biology.	High	Integrating Science Within the CCGPS	Biology/Life Science	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Dunton	Ouida	Friday	3:00-3:50	Ballroom C	Ranking Activities for Science	Rie Cowan, Ouida Dunton	Reinforce content and expose misconceptions using ranking activities in secondary sciences. Activities in chemistry/physical science, biological sciences, & earth science will be presented.	High, AP/IB	GPS Within the Framework	General	Engaging in Argument from Evidence	Patterns
Eales	Sarah	Friday	2:00-2:50	Magnolia CD	Teaching genetics with case-based learning	Sarah Eales, Laura Kohnke, Amy Maxwell, Christine Wahl	Come see how a group of biology teachers have integrated case-based learning into a genetics unit.	High	NA	Biology/Life Science	Analyzing and Interpreting Data	Patterns
Evans	Zoe	Thursday	2:00-2:50	Ballroom D	Enacting Teacher Leadership to Support Science for All	Zoe Evans, Jeremy Peacock	Meaningful change in science education in Georgia can only be accomplished through the efforts of teacher leaders throughout the state. Learn how you can leverage your teaching practice to promote change in your school and district leading to excellent science education for all students.	Lower Elementary, Upper Elementary, Middle, High, AP/IB, College, Administrators, Supervisor/Leadership, Pre-service/Early Career Teachers	NA	Advocacy & Leadership	NA	NA
Evans	Zoe	Friday	3:00-4:50	Grand Salon B	Moving Beyond the Candy Cell: Bringing Authentic Modeling Into the Science Classroom	Zoe Evans, Jeremy Peacock	Teachers and students are familiar with tactile, 3D models but often lack experience with other types of scientific models. Yet, modeling lies at the center of both a crosscutting concept and a science and engineering practice in A Framework for K-12 Science Education. This session will use a hands-on task to help you answer these questions: What are authentic scientific models? Why are they important? and How can you bring them into your teaching?	Lower Elementary, Upper Elementary, Middle, High, AP/IB	GPS Within the Framework	General	Developing and Using Models	Systems and System Models

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Ferro	Michelle	Friday	10:00-10:50	Magnolia CD	CPALMS: Thousands of Free, Vetted Resources	Michelle Ferro, Meghan Hauptli, Rabieh Razzouk	Looking for free high-quality resources? CPALMS was built primarily for Florida's educators but transformed to a global resource. Find out what CPALMS can offer you!	Lower Elementary, Upper Elementary, Middle, High	NA	General	NA	NA
Findlay	Lucas	Saturday	9:00-9:50	Ballroom E	Integrating a STEM Day and STEM Lessons	Lucas Findlay	Instructors and schools that are new to STEM are encouraged to attend to receive ideas on the integration of a STEM day and STEM lessons.	Upper Elementary	Integrated STEM Education	Engineering	Constructing Explanations and Designing Solutions	NA
Flores	Paige	Friday	3:00-3:50	310	Composting and the Next Generation Science Standards	Paige Flores	Integrate science and engineering practices with the GPS through composting! Learn how students can design and build their own compost bins to optimize the decomposition process.	Middle, High	GPS Within the Framework	Environmental Science	Planning and Carrying Out Investigations	Energy and Matter: Flows, Cycles, and Conservation
Flynn	Tanya	Thursday	4:00-4:50	Grand Salon B	Interactive Notebooks: How to get ALL students to succeed	Tanya Flynn, AnnMarie Alford	Using notebooks to enhance mastery along the Science Standards	Middle, High, Supervisor/Leadership, Pre-service/Early Career Teachers	GPS Within the Framework	Biology/Life Science	Analyzing and Interpreting Data	NA
Flynn	Tanya	Saturday	8:00-8:50	306	Coteaching: How to make the marriage work	Tanya Flynn	How to be an effective team	Middle, High	GPS Within the Framework	General	NA	NA
Freeman	Brandie	Friday	8:00-8:50	Ballroom E	Flipping the Classroom in Advanced Placement Environmental Science	Brandie Freeman	Take home a year's worth of ready-to-use discussion prompts, reading strategy ideas, and meaningful ways to get your APES students to do their homework! Tips for math in APES will also be provided.	High, AP/IB	NA	Environmental Science	Obtaining, Evaluating, and Communicating Information	Energy and Matter: Flows, Cycles, and Conservation
Garland	Karen	Friday	2:00-2:50	Grand Salon A	Biodiversity Big and Small: Exploring Georgia's Flora and Fauna	Karen Garland	Bring diverse ecological concepts to life by exploring various Georgia ecosystems. Explore engaging hands-on activities to complete seasonal science projects for the indoor and outdoor classroom.	Lower Elementary, Upper Elementary	GPS Within the Framework	Biology/Life Science	Planning and Carrying Out Investigations	Systems and System Models
George	Terri	Thursday	10:00-10:50	303	STEM—Early Childhood Style!	Terri George	Come experience STEM investigations, designs, and products related to Ga. weather standards.	Lower Elementary	Integrated STEM Education	Earth Science	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
George	Terri	Thursday	1:00-2:50	303	Integrating Literacy Strategies Into Middle School Life Science	Terri George	Come experience literacy MS strategies with investigations of the black worm!	Middle	Integrating Science Within the CCGPS	Biology/Life Science	Planning and Carrying Out Investigations	Scale, Proportion, and Quantity
George	Terri	Friday	9:00-11:50	303	Focus and Explore Wave Energy and STEM Education K-8	Terri George	Come explore alternative energy sources for K-8 STEM.	Lower Elementary, Upper Elementary, Middle	Integrated STEM Education	Earth Science	Developing and Using Models	Energy and Matter: Flows, Cycles, and Conservation
George	Terri	Friday	1:00-1:50	303	STEM—Early Childhood Style!	Terri George	Come experience STEM investigations, designs, and products related to Ga. weather standards.	Lower Elementary	Integrated STEM Education	Earth Science	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Gibson	Shandreka	Friday	9:00-9:50	310	"It's not all Black and White! Implementing R.A.C.E. in the Science classroom."	Shandreka Gibson, Travis Phelps, Felicia Poole, Daphne Todd.	Using the R.A.C.E. strategy in our classrooms to help students with critical aspects of writing in science: engaging in a task, understanding a prompt, and transitioning to writing under the CCGPS.	Middle, High	Integrating Science Within the CCGPS	General	Obtaining, Evaluating, and Communicating Information	NA
Gilbert	Amy	Thursday	9:00-9:50	306	Outstanding Mastery Guides for Science - Creating a Reference Resource for Middle School Students	Amy Gilbert, Ph.D.	In this workshop participants create part of an Outstanding Mastery Guide – curriculum that in its entirety supports students with Disciplinary Core Ideas of NGSS.	Middle	Integrating Science Within the CCGPS	Physical Science	NA	NA
Gilbert	Amy	Saturday	11:00-11:50	Ballroom A	The Work of an Engineer	Amy Gilbert, Katie Wade	Do you need a "hook" for the year? This SE teaches science and engineering practices that students can apply all year.	Middle, High	Integrated STEM Education	Engineering	Planning and Carrying Out Investigations	NA
Giunta	Joey	Saturday	9:00-9:50	310	Breathe easy with hands-on STEM for Middle School.	Joseph Giunta, Gretchen Gigley	Breathe easy with this STEM-based service-learning activity for grades 3rd-8th.	Upper Elementary, Middle	Integrated STEM Education	Environmental Science	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Giunta	Joey	Saturday	11:00-11:50	Ballroom D	Get There Green: Transportation Challenge	Joseph Giunta, Gretchen Gigley	The environmental science competition puts high school students in the shoes of a transportation planner as they investigate air quality, traffic, and behavior choices.	High, AP/IB	Integrated STEM Education	Environmental Science	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
goodman	debi	Thursday	12:00-12:50	308	Hands on STEM in Action: Ron's Habitat Adventure	Debi Goodman	build an understanding of animal needs and habitats	Lower Elementary	Integrated STEM Education	Biology/Life Science	Planning and Carrying Out Investigations	Structure and Function
goodman	debi	Friday	9:00-9:50	308	STEM In Action-Sidewalk Safety Exploration	Debi Goodman	build understanding of slopes and speeds	Lower Elementary	Integrated STEM Education	Physical Science	Analyzing and Interpreting Data	Cause and Effect: Mechanisms and Explanations
Gorlin	Alan	Saturday	11:00-11:50	Magnolia B	Using Descriptive Drawings to improve understanding of biological concepts	Alan Gorlin, Katrina Beasley, Lauren Billak	Biology includes processes that students' find difficult to learn. To better assess their level of understanding, students need opportunities to draw their own descriptive illustrations.	High	NA	Biology/Life Science	NA	NA
Governor	Donna	Thursday	2:00-2:50	309	Utilizing the NSTA Learning Center for Professional Development	Donna Governor	The NSTA Learning Center is online professional development portal to help you address your professional needs. Use the nearly 12,000 online resources (most free) to help meet your individual professi	Lower Elementary, Upper Elementary, Middle, High, AP/IB, College, Supervisor/Leadership, Pre-service/Early Career Teachers	NA	General	NA	NA
Governor	Donna	Thursday	3:00-3:50	Grand Salon A	There's an App for That!	Donna Governor	Discover free apps with real-time data students can use to explore earth science concepts. Explore STEM integrated activities using your smart phone in this session.	Upper Elementary, Middle, High	Integrated STEM Education	Earth Science	Analyzing and Interpreting Data	Patterns

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Grace	Monica	Thursday	2:00-2:50	324	STEM is Literacy: Using Evidence from Collaborative Conversations to Construct a Response	Monia Grace, Jessica Holden, Jen Johnston, Lesley Grimes	This session will equip teachers with literacy routines that promote critical thinking, questioning, and problem-solving, so students have a deeper understanding of science concepts.	Middle	Integrating Science Within the CCGPS	Earth Science	Engaging in Argument from Evidence	Cause and Effect: Mechanisms and Explanations
Graham	Joan	Friday	8:00-8:50	312	From Biology to Bio-engineering: Changing Paradigm and Practice	Joan Graham	The purpose of this session is to share the experience infusing Biology with engineering, math, and technology.	High	Integrated STEM Education	Biology/Life Science	Obtaining, Evaluating, and Communicating Information	Structure and Function
Grammens	Patti	Saturday	11:00-11:50	Ballroom C	STEM overhaul for your classroom	Patti Grammens, Lilly Turpin	Two dynamic educators will lead you through ways to incorporate STEM into your classroom	Upper Elementary, Middle, High, Pre-service/Early Career Teachers	Integrated STEM Education	General	Planning and Carrying Out Investigations	Structure and Function
Granger	Ellen	Thursday	9:00-10:50	Ballroom C	Integrating Science and Engineering	Ellen Granger, Todd Bevis	Integrating engineering within the science classroom is a new challenge for science instructors. This session is an introduction to integrated science and engineering lessons.	Middle, High, AP/IB, Supervisor/Leadership	GPS Within the Framework	Engineering	Developing and Using Models	Cause and Effect: Mechanisms and Explanations
Granger	Ellen	Friday	1:00-2:50	Ballroom C	Argumentation in the Science Classroom	Ellen Granger, Todd Bevis	An introduction to argumentation in the science classroom. This instructional technique includes all of the Practices of Science.	Middle, High, AP/IB, Supervisor/Leadership	GPS Within the Framework	General	Constructing Explanations and Designing Solutions	Patterns
Greer	Kania	Thursday	10:00-10:50	312	Post-Secondary Partnerships: Utilizing Resources	Kania Greer	Partnering with Post-secondary schools creates a win-win for everyone. But how do we do it effectively?	Lower Elementary, Upper Elementary, Middle, High, AP/IB, College, Supervisor/Leadership, Pre-service/Early Career Teachers	Integrated STEM Education	Other	NA	NA
Grooms	Jonathon	Friday	9:00-11:50	Ballroom C	Using Argument-Driven Inquiry to Support Students' Science Proficiency	Jonathon Grooms	Teachers and administrators will experience Argument-Driven Inquiry by participating in an investigation that emphasizes the essential practices of science and discipline specific writing skills.	High, Supervisor/Leadership	GPS Within the Framework	Physical Science	Engaging in Argument from Evidence	Energy and Matter: Flows, Cycles, and Conservation
Grossman	Sabrina	Thursday	4:00-4:50	303	Project-Based Inquiry Learning (PBIL): Science Teaching and Learning for the 21st Century	Sabrina Grossman	Learn how to incorporate Project-Based Inquiry Learning and critical thinking skills in your classroom through participation in online professional development through the Georgia STEM Incubator	Upper Elementary, Middle, High, AP/IB, Supervisor/Leadership, Pre-service/Early Career Teachers	Integrated STEM Education	General	Planning and Carrying Out Investigations	Systems and System Models
Hafza	Rabieh	Thursday	4:00-4:50	312	Vertical Teaming: Using NGSS to Give Students Tools for Success in Advanced Secondary STEM Classes	Rabieh Jamal Hafza	This session will focus on the implementation of the NGSS physical science core ideas as students progress from elementary through high school, focusing on diversity.	Lower Elementary, Upper Elementary, Middle, High, AP/IB	Integrated STEM Education	Physics	Using Mathematical and Computational Thinking	Patterns
Hagan	Claudia	Thursday	4:00-4:50	324	This is not your mother's environmental science class.	Claudia Hagan	This isn't your mother's environmental science course. Wait. She didn't have one. You probably didn't either. Tips and Tricks to teach today's environmental science class.	High	GPS Within the Framework	Environmental Science	Analyzing and Interpreting Data	Energy and Matter: Flows, Cycles, and Conservation
Hagan	Claudia	Friday	8:00-8:50	Magnolia A	If Neville can do it, so can you.	Claudia Hagan	In this interactive presentation, teachers will gain resources and strategies to conquer their first year in the science classroom.	High, Pre-service/Early Career Teachers	Preservice & Early Career Teachers	General	NA	NA
Hamilton	Gladys	Thursday	8:00-8:50	Ballroom C	Incorporating Literature : Using Scenarios to Teach Math and Science Concepts	Gladys Hamilton	Enhance student literacy skills by using scenarios and current events in Math and Science	Middle	GPS Within the Framework	General	Asking Questions and Defining Problems	NA
Hampton	Larry	Saturday	8:00-8:50	Ballroom E	A Science Intensive Program at the Satit Kaset International Program School, Bangkok, Thailand	Larry K. Hampton; Dr. Naruemon Yutakom; David Papero; Darryl Brease; Hannah Elaine James	A discussion on the experiences of four Georgia science teachers participating in a novel approach to science education at the Satit Kaset IP School in Bangkok, Thailand.	High, Supervisor/Leadership	Integrated STEM Education	General	Developing and Using Models	NA
Hardy	Dawn	Thursday	8:00-8:50	Ballroom D	Ancient Egypt...it's All Elementary!	Dawn Hardy & Heidi Hines	Come and learn what place value, hieroglyphs and mummies have to do with Elementary STEM. hands on integrated study within a topic.	Lower Elementary, Upper Elementary	Integrated STEM Education	Other	NA	NA
Hardy	Susan	Thursday	9:00-9:50	309	Build the Bridge from Hands-on Experiences to Scientific Understanding through FOSS Science-Centered Language Development	Marilyn Enoch and Kathy Armstrong	How to incorporate best practices in language arts instruction to support students' understanding of science concepts and their ability to communicate that understanding	Lower Elementary, Upper Elementary, Supervisor/Leadership	Integrating Science Within the CCGPS	General	Obtaining, Evaluating, and Communicating Information	NA
Hardy	Susan	Thursday	10:00-10:50	309	Science and Engineering Practices and STEM come alive in the Middle School Science Classroom	Kathy Armstrong & Marilyn Enoch	Incorporate STEM with the Science & Engineering Practices in your classroom using FOSS Middle School Modules	Middle, Supervisor/Leadership	Integrated STEM Education	General	Constructing Explanations and Designing Solutions	Systems and System Models
Hardy	Susan	Thursday	1:00-1:50	309	What Causes Change of Motion? A STEMrific perspective	Marilyn Enoch and Kathy Armstrong	Create conceptual and physical models to explain how something works and look at cause/effect	Upper Elementary, Supervisor/Leadership	Integrated STEM Education	Engineering	Asking Questions and Defining Problems	Cause and Effect: Mechanisms and Explanations
Hardy	Susan	Thursday	3:00-3:50	309	How to combine the Engineering Practices, Cross Cutting Concepts, ELA , Math, Inquiry and the Disciplinary Core Ideas all together in a fun STEM lesson for the primary classroom without losing your m	Marilyn Enoch and Kathy Armstrong	A recipe to teach it all: STEM, Engineering Practices, Disciplinary Core Ideas, Cross Cutting Concepts, ELA and Math with FOSS Next Generation Modules.	Lower Elementary, Supervisor/Leadership, Pre-service/Early Career Teachers	GPS Within the Framework	Engineering	Planning and Carrying Out Investigations	Systems and System Models
Hardy	Susan	Friday	8:00-8:50	309	Crosscutting Concepts: What Do They Look Like in an Elementary Classroom?	Kathy Armstrong and Marilyn Enoch	Learn how utilizing crosscutting concepts can deepen student's understanding across the science disciplines. Engage in experiences exposing cause and effect, patterns, and structure and function.	Lower Elementary, Upper Elementary, Supervisor/Leadership	GPS Within the Framework	General	Constructing Explanations and Designing Solutions	Patterns

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Hardy	Susan	Friday	10:00-10:50	309	Motion, Engineering, Design and Redesign for the Primary Classroom	Marilyn Enoch and Kathy Armstrong	A study in different ways to produce and predict rotational motion while communicating, comparing, predicting and recording data	Lower Elementary	Integrated STEM Education	Engineering	Planning and Carrying Out Investigations	Systems and System Models
Hardy	Susan	Friday	1:00-1:50	309	Engineering Design with FOSS Next Generation!	Marilyn Enoch and Kathy Armstrong	FOSS Next Generation modules provide students with opportunities to engage in engineering experiences, develop solutions to problems, construct and evaluate models, and use systems thinking.	Upper Elementary	GPS Within the Framework	Engineering	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Hardy	Susan	Friday	2:00-2:50	309	Using Science Notebooks to Impact Student Learning for Middle School	Kathy Armstrong & Marilyn Enoch	Using active investigations see how science notebooks impact student achievement; develop conceptual understanding, aid in gathering evidence and facilitate argumentation.	Middle, Supervisor/Leadership	GPS Within the Framework	General	Obtaining, Evaluating, and Communicating Information	NA
Harmony	Sheila	Friday	8:00-8:50	310	Morphing Physics and Engineering	Sheila Harmony	Traditional 9th grade physics and engineering courses are morphed into what is known today as PhysEng in hopes of accomplishing three major teaching and learning goals.	High	GPS Within the Framework	Physics	Constructing Explanations and Designing Solutions	NA
Harris	Tynisha	Saturday	8:00-8:50	312	Sisters in Science	Tynisha Harris	Sisters in Science- Promoting gender advancement in science-related fields by increasing the number of female role models girls encounter and creating an environment that promotes curiosity.	College, Pre-service/Early Career Teachers	Integrated STEM Education	General	Planning and Carrying Out Investigations	NA
Harty	Tyson	Thursday	3:00-4:50	313	Mechanisms of Solar Energy: Exploring the fundamentals of waves, energy, circuits, and solar cells	Tyson Harty Ph.D., Sharmistha Basu-Dutt Ph.D.	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.	Middle, High, AP/IB	Integrated STEM Education	General	Planning and Carrying Out Investigations	Energy and Matter: Flows, Cycles, and Conservation
Harty	Tyson	Friday	10:00-10:50	313	NASA Powers of Ten: Scaling the Universe	Tyson Harty Ph.D.	How big is big? How small is small? Help your students "Scale the Universe" as we investigate the Powers of Ten with free NASA materials.	Upper Elementary, Middle, High, AP/IB	Integrating Science Within the CCGPS	General	Using Mathematical and Computational Thinking	Scale, Proportion, and Quantity
Hayes	Heather	Friday	1:00-1:50	312	Incorporating ELA into Science labs (K-5)	Heather Hayes and Heidi Morea	Incorporate writing in your Science block	Lower Elementary, Upper Elementary	Integrating Science Within the CCGPS	General	Obtaining, Evaluating, and Communicating Information	NA
Henriquez	Lisa	Friday	8:00-8:50	Ballroom D	Using apps for student presentations	Lisa Henriquez, Erin Wood, Sheila McKee	Several apps students can use during presentations	Lower Elementary, Upper Elementary, Middle	Integrated STEM Education	General	Obtaining, Evaluating, and Communicating Information	NA
Henriquez	Lisa	Saturday	8:00-8:50	Ballroom D	Fast, easy and CHEAP STEM	Lisa Henriquez, Erin Wood, Sheila McKee	Fast, easy and cheap ways to incorporate STEM activities at your school	Lower Elementary, Upper Elementary, Middle	Integrated STEM Education	General	Planning and Carrying Out Investigations	NA
Hightower	Jerry	Friday	1:00-2:50	Magnolia B	Plants of the Muck & Mire	Jerry Hightower, Penny Costanzo	Teachers investigate the external and internal structures of hydrophytic plants by dissecting, sketching and recording notes in provided field journals.	Upper Elementary, Middle, High	NA	Biology/Life Science	Planning and Carrying Out Investigations	NA
Hodges	Georgia	Thursday	10:00-10:50	Grand Salon B	Integrated Curriculum: Using Case Studies in Elementary School to Teach Science, Language and Literacy, and Mathematics	Georgia W. Hodges, Peggy McKay, & Alex Turbyfield	Researchers will share developed case studies that seamlessly align science, Language and Literacy, and Mathematics	Upper Elementary	Integrated STEM Education	Biology/Life Science	Analyzing and Interpreting Data	Cause and Effect: Mechanisms and Explanations
Hodges	Georgia	Friday	1:00-1:50	Grand Salon B	Using Interactive Case Studies in the Biology Classroom: Leveraging Technology to teach the Scientific Practices and Crosscutting Concepts	Georgia W. Hodges, Sophia Jeong, Peggy McKay, & Matt Baker	Bring your laptop and experience newly created interactive case studies that address the NGSS framework and the GPS.	High, AP/IB	GPS Within the Framework	Biology/Life Science	Obtaining, Evaluating, and Communicating Information	Cause and Effect: Mechanisms and Explanations
Hoke	Amber	Thursday	12:00-12:50	Ballroom D	Earth Science Investigation Stations	Amber Hoke	Use inquiry to provide learning stations for hands-on investigations in elementary Earth Science	Lower Elementary, Upper Elementary	Integrating Science Within the CCGPS	Earth Science	Analyzing and Interpreting Data	Systems and System Models
Hoke	Amber	Friday	4:00-4:50	Exhibit Hall A	Elementary Science Olympiad - No Experience Necessary!	Amber Hoke	Whether starting a team at your school, or using events for a Science Fun Day, Science Olympiad promotes cooperative problem solving and a love for Science.	Upper Elementary	NA	General	NA	NA
Holden	Jessica	Thursday	8:00-8:50	Ballroom A	Leveraging Literacy for K-5 STEM	Jessica Holden, Jen Johnston, Monica Grace, Lesley Grimes	Come see how children's literature can frame a STEM lesson. Participants will experience content integration through the engineering design process with a culminating literacy piece.	Lower Elementary, Upper Elementary, Supervisor/Leadership, Pre-service/Early Career Teachers	Integrated STEM Education	Physical Science	Developing and Using Models	Energy and Matter: Flows, Cycles, and Conservation
Holmes	Christopher	Saturday	10:00-10:50	Ballroom C	See.Do. Experience	Christopher Holmes	Focusing of the intentional implementation of the instructional frameworks by establishing teacher roles, learning targets, performance and cognitive demand of science content via modes of instruction	Lower Elementary, Upper Elementary, Middle, High	GPS Within the Framework	General	Asking Questions and Defining Problems	Structure and Function
Hood	Christina	Thursday	9:00-9:50	Ballroom D	Science Smash Up!	Christina Hood, Cindy Gay	Looking for a quick lab, effective applications / programs, interactive notebook setup ideas, timesaving grading and time management tips? Come and visit Science Smash Up!	Middle	Integrated STEM Education	General	Planning and Carrying Out Investigations	Energy and Matter: Flows, Cycles, and Conservation
Hott	Adam	Saturday	8:00-8:50	Magnolia A	Touching Triton	Adam Hott	0	High, AP/IB	NA	Biology/Life Science	NA	NA
Hoy	Sarida	Friday	9:00-9:50	Ballroom D	Got Bones?	Sarida Hoy	Participants will identify a set of "human bones" in this cross-curricular lesson that incorporates science, math, social studies and literacy. This lesson can be implemented/modified for any level.	Upper Elementary, Middle, High	Integrating Science Within the CCGPS	Biology/Life Science	Asking Questions and Defining Problems	Structure and Function
Hoy	Sarida	Friday	1:00-1:50	Ballroom D	Take a Bite out of Data Analysis!	Sarida Hoy	Can bite marks assist in identifying an individual? Let's find out by making our own bite impressions. Inexpensive materials, yet effective in introducing statistics to your student's data analysis.	Middle, High	Integrating Science Within the CCGPS	Forensic Science	Asking Questions and Defining Problems	Structure and Function
Hoy	Sarida	Friday	2:00-2:50	Ballroom D	Who Are You?	Sarida Hoy	Use fingerprint patterns in a cross-curricular lesson that incorporates science, math, literacy, and social studies. This lesson can be modified for use from elementary through high school level.	Upper Elementary, Middle, High	Integrating Science Within the CCGPS	Biology/Life Science	Asking Questions and Defining Problems	Structure and Function

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Hudson	Cheryl	Saturday	8:00-9:50	Ballroom B	Quick Literacy Strategies that Increase Student Engagement	Cheryl Hudson	How can you support literacy development in science and increase engagement simultaneously? Three strategies will be modeled and practiced that are easy to implement and incorporate technology.	High	Integrating Science Within the CCGPS	General	Obtaining, Evaluating, and Communicating Information	Stability and Change
Jackson	Christine	Friday	4:00-4:50	Magnolia A	Incorporating Google Classroom into Inquiry-Based Learning	Christine Jackson and Amanda Palmer	Students use inquiry and technology to discover relationships between shore birds, horseshoe crabs, and humans.	Middle, High, Pre-service/Early Career Teachers	Integrated STEM Education	Biology/Life Science	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Jarrett	Olga	Saturday	10:00-11:50	303	Science from sand: Integrated activities for the elementary and middle school	Olga S. Jarrett, Brian Williams, Robert Jarrett	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.	Lower Elementary, Upper Elementary, Middle, Pre-service/Early Career Teachers	NA	Earth Science	Analyzing and Interpreting Data	Scale, Proportion, and Quantity
Jarrett	Sherri	Thursday	12:00-12:50	312	Where the Wild Things Are - K-3 Arts Integrated STEAM Unit	Sherri Jarrett, Emilee Black, Tonya Rogers	Turn STEM into STEAM by integrating the arts this delightful elementary unit - connect critical areas with arts practices for an entire pallet of learning.	Lower Elementary	Integrated STEM Education	Engineering	Planning and Carrying Out Investigations	NA
Jenkins	Deb	Friday	3:00-4:50	Grand Salon A	Teaching STEM through Birds	Deb Jenkins, Melanie Furr, Area Teachers	How teachers have used Learning About Birds bilingual curriculum to teach STEM.	Lower Elementary, Upper Elementary, Middle, High, AP/IB, Pre-service/Early Career Teachers	Integrated STEM Education	Biology/Life Science	Planning and Carrying Out Investigations	Energy and Matter: Flows, Cycles, and Conservation
Jenkins	Deb	Saturday	8:00-8:50	Grand Salon B	Capturing Students for Science through Photography	John Behr, Deb Jenkins, Melanie Furr	Take and modify bird photographs to help teach GPS standards	Upper Elementary, Middle, High	GPS Within the Framework	Biology/Life Science	NA	NA
Johnson	Lauren	Thursday	3:00-4:50	308	PINEMAP Southeastern Forest and Climate Change Curriculum	Lauren C. Johnson, Janet Forrest Kent	PINEMAP Southeastern Forest and Climate Change Curriculum; a FREE curriculum for middle and high school teachers.	Middle, High, AP/IB, College	Integrated STEM Education	Earth Science	Analyzing and Interpreting Data	Stability and Change
Johnston	Jen	Thursday	3:00-4:50	Ballroom A	STEM the "Right Way": Building Collaboration with Vital Team Members	Jessica Holden, Monica Grace, Lesley Grimes, Lisa Lee & Jen Johnston	Identifying and recruiting the right people for your STEM team will foster collaboration across the content areas and ensure program success.	Lower Elementary, Upper Elementary, Middle, High	Integrated STEM Education	General	Planning and Carrying Out Investigations	NA
Kareem	Bejanae	Thursday	9:00-9:50	Magnolia B	Go Virtual! Field Trips for the Millennial Learner	Bejanae Kareem, Tommy Clay	Limited funding for field trips? Go Virtual! This session explores web-based technologies such as Skype, Google Earth, 360Cities and Discovery Education to provide virtual field trips.	Lower Elementary, Upper Elementary, Middle, High, Pre-service/Early Career Teachers	Integrated STEM Education	General	Obtaining, Evaluating, and Communicating Information	NA
Kareem	Bejanae	Thursday	10:00-10:50	Magnolia B	Engineering Made Easy	Bejanae Kareem	This session will demonstrate the engineering process and characteristics of quality engineering design challenges through a hands-on demonstration and list of resources.	Lower Elementary, Upper Elementary, Middle, Pre-service/Early Career Teachers	Integrated STEM Education	Engineering	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Kareem	Bejanae	Thursday	1:00-2:50	Magnolia B	Moving Full STEAM Ahead!	Bejanae Kareem, Shermaine Perry, Dharm Stevens	Curious about STEAM Education? Interested in learning STEAM best practices? This session will focus on the integration of STEAM across the curriculum. Attendees will garner strategies through small group collaboratives.	Lower Elementary, Upper Elementary, Middle, High, Administrators, Pre-service/Early Career Teachers	Integrated STEM Education	General	NA	NA
Kareem	Bejanae	Friday	3:00-4:50	Magnolia B	Science Driven Interactive Writing	Bejanae Kareem, Tommy Clay	This session will demonstrate how to integrate science, writing and technology through a hands-on demonstration and list of resources.	Lower Elementary, Upper Elementary, Middle, Pre-service/Early Career Teachers	Integrating Science Within the CCGPS	General	Obtaining, Evaluating, and Communicating Ideas	NA
Kauffman	Deborah	Friday	4:00-4:50	310	Energizing your students with Robotics, Sponsors and Resources	Walton Robotics	Description of all levels of FIRST Robotics and supporting information about funding/resource support	Lower Elementary, Upper Elementary, Middle, High, AP/IB, Supervisor/Leadership, Pre-service/Early Career Teachers	Integrated STEM Education	Engineering	NA	NA
Kelly	Michael	Thursday	8:00-8:50	312	But I don't teach Language Arts! Reading and writing with document based argumentation in the science classroom	Michael Kelly	Learn to create science literacy mini units including sourcing text, choosing reading strategies, and developing writing prompts.	Upper Elementary, Middle, High	Integrating Science Within the CCGPS	General	Engaging in Argument from Evidence	NA
King	Lawrence	Friday	10:00-10:50	312	Approaches to Attract underrepresented students into STEM career learning pathways	Lawrence King	Review of economic need, examles of successful programs, and suggestions for improvement	Upper Elementary, Middle, High, AP/IB, Supervisor/Leadership	Integrated STEM Education	General	Engaging in Argument from Evidence	NA
King	Steven	Saturday	10:00-10:50	Ballroom A	Stemulating Science Lessons for the Elementary Science Classroom	Steven King	STEM-based Science Lessons and Classroom Ideas for K-5 Science Classes	Lower Elementary, Upper Elementary	Integrated STEM Education	General	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Koval	Jayma	Thursday	12:00-12:50	Ballroom B	Scientific Argumentation Through Explicit Inquiry and Immersion	Jayma Koval, Beth Kostka, Sabrina Grossman, Mike Ryan	Experience how to imbed scientific argument into your secondary science classroom using a one-week argument tutorial plus immersion model. Engage in inquiry activities and receive access to NSF-develo	Middle	Integrating Science Within the CCGPS	General	Engaging in Argument from Evidence	Cause and Effect: Mechanisms and Explanations
kumar	sudeep	Saturday	8:00-8:50	309	Science E Learning tool for parents and Teachers	Sudeep	How to improve science in education system	Lower Elementary, Upper Elementary, Middle, High	Integrated STEM Education	General	Obtaining, Evaluating, and Communicating Information	Systems and System Models
Lane	Pamela	Thursday	9:00-9:50	Ballroom E	Science On a Shoestring	Pamela Lane	Cheap middle grade science activities will be demonstrated and discussed. Participants will get to complete some hands-on experiments. Handouts are provided.	Middle	GPS Within the Framework	General	NA	NA

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Langhans	Michele	Thursday	4:00-4:50	Ballroom D	How to Flip Your Science Classroom	Michele Langhans	Do you want to flip your classroom, but have no idea how to start? Then my session will help you by providing you a list of tools that I use to flip my class.	Middle	NA	Physical Science	NA	NA
Langhans	Michele	Friday	3:00-3:50	312	Project-Based Learning Partnership between Language Arts and Science	Michele Langhans	The session will include how one middle school has integrated Language Arts and Science in a PBL environment.	Middle, College	Integrating Science Within the CCGPS	Physical Science	Obtaining, Evaluating, and Communicating Information	Energy and Matter: Flows, Cycles, and Conservation
Larsen	Lynn	Thursday	9:00-9:50	324	Differentiation and STEM...a Win-Win Situation	Lynn Larsen, Dean Laskey	Explore the wonderful world of weather while constructing various weather instruments using STEM protocol.	Lower Elementary, Upper Elementary	Integrated STEM Education	Earth Science	Constructing Explanations and Designing Solutions	Cause and Effect: Mechanisms and Explanations
Larsen	Lynn	Thursday	10:00-10:50	306	Making the Most of Interactive Notebooks	Lynn Larsen	All teachers love for their students to be organized! Using simple interactive notebooks helps with the organizational skills needed.	Lower Elementary, Upper Elementary, Middle	NA	General	NA	NA
Leachman	April	Saturday	10:00-10:50	Magnolia CD	A Vacation Through the Solar System	April Leachman	How to incorporate FREE NASA and AGI curriculum materials into your classroom. Learn how to video conference with NASA Scientists using the Digital Learning Network.	Middle	Integrated STEM Education	Earth Science	Analyzing and Interpreting Data	Systems and System Models
Legoas	Donita	Thursday	3:00-4:50	306	STEM-Sational Science	Donita Legoas and Kristina Istre	With almost 20 years of teaching experience each, the "Science Sisters" will share some of their cheap, easy, and tried-and-true hands-on ideas for teaching science and STEM in your classroom.	Lower Elementary, Upper Elementary, Middle, Pre-service/Early Career Teachers	Integrated STEM Education	General	Planning and Carrying Out Investigations	NA
Lester	Denise	Thursday	4:00-4:50	309	Activities for High School Biology- POGIL	Denise Lester	Process Oriented Guided Inquiry Learning is a group-learning, researched based instructional strategy.	High	GPS Within the Framework	Biology/Life Science	Obtaining, Evaluating, and Communicating Information	Structure and Function
Linsley	Kenneth	Friday	8:00-8:50	Grand Salon A	Let's Talk About Science: Engaging Students in Productive Science Talk	Kenneth Linsley, Jeremy Peacock	Helping students become scientific thinkers requires that we help them get their science ideas out into the open for reinforcement or revision. Productive, evidence-based discussions in the science classroom allow students to clarify their own thinking and draw their peer's thinking. This session will demonstrate several "talk moves" that will help you move from basic Q&A sessions to in-depth discussions that support science learning.	Lower Elementary, Upper Elementary, Middle, High, AP/IB	GPS Within the Framework	General	Engaging in Argument from Evidence	Cause and Effect: Mechanisms and Explanations
Linsley	Kenneth	Friday	10:00-10:50	Grand Salon A	Solving Science Mysteries	Kenneth Linsley	Students often struggle to provide a scientific explanation of the phenomena that experience in their everyday lives. This session will introduce participants to the C-E-R (Claim, Evidence, Reasoning) Framework.	Lower Elementary, Upper Elementary	Integrating Science Within the CCGPS	General	Engaging in Argument from Evidence	NA
Lock	Frank	Friday	4:00-4:50	Ballroom C	Equations Don't Fall from the Ceiling, or Anywhere Higher	Frank Lock	Strategies used in the modeling pedagogy to develop mathematical models (equations) that enable students to make predictions about how nature works will be introduced.	Middle, High	GPS Within the Framework	General	Developing and Using Models	Systems and System Models
Lomant	Susannah	Saturday	10:00-11:50	308	Breadboards are Not Just for Kitchens!	Susannah Lomant	Learn how to integrate breadboard and circuit concepts into your STEM classroom.	Middle, High, AP/IB, College	Integrated STEM Education	Physics	Planning and Carrying Out Investigations	NA
Luft	Julie	Thursday	9:00-9:50	Magnolia A	Supporting newly hired science teachers: What the research says	Julie A. Luft	A review of research reveals what areas are important in supporting newly hired science teachers.	Middle, High, College, Supervisor/Leadership, Pre-service/Early Career Teachers	Preservice & Early Career Teachers	General	NA	NA
Lyon	Gilda	Thursday	12:00-12:50	Ballroom A	The Model of STEM in Georgia	Gilda Lyon, Juan Carlos Aguilar	The Ga DOE will define what a STEM classroom should look like K-12.	Lower Elementary, Upper Elementary, Middle, High, AP/IB, Supervisor/Leadership	Integrated STEM Education	Advocacy & Leadership	Engaging in Argument from Evidence	NA
Maley	Dan	Friday	2:00-2:50	312	Clueless No More	Dan Maley	Getting underachievers engaged with forensic science	High	NA	Forensic Science	Engaging in Argument from Evidence	Cause and Effect: Mechanisms and Explanations
Marinake	John	Thursday	9:00-9:50	303	Genetics and incorporating STEM with CPO Crazy Traits Kit	Erik Benton	Reinforce vocabulary and concepts while performing hands-on genetics activities based on probability and heredity.	Middle, High	Integrated STEM Education	Biology/Life Science	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Marinake	John	Thursday	3:00-3:50	303	CPO Science Wind Turbine with a focus on STEM	Erik Benton	Apply key science concepts, technology, and math to engineer a wind turbine.	Middle, High	Integrated STEM Education	Engineering	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Marinake	John	Friday	8:00-8:50	303	Chemistry and the Atom: Atom Building and the Periodic Table	Erik Benton	Our understanding of matter is so abstract that students have a hard time making sense of these fascinating concepts.	Middle, High	Integrated STEM Education	Physical Science	Developing and Using Models	Structure and Function
Marinake	John	Friday	9:00-9:50	309	Building an Electric Motor the STEM way with CPO Science	Erik Benton	Use the highly versatile CPO Science Electric Motor to change variables in a hands-on learning environment.	Middle, High	Integrated STEM Education	Physical Science	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Matthews	Philip	Friday	1:00-1:50	Grand Salon A	Creating a Blended Learning Environment	Kelly Ingle, Philip Matthews	We will discuss how we have transformed our classes from traditional, lecture-based to a student-centered environment with an online component.	Middle, High, AP/IB	NA	General	NA	NA

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Matthews	Philip	Friday	4:00-4:50	313	Student-Centered Physics Activities that Promote Engagement and Conceptual Understanding	Jason Goodman, Philip Matthews	Explore various methods of ensuring engagement in a student-centered physics classroom.	High, AP/IB	NA	Physics	Using Mathematical and Computational Thinking	Systems and Model
McCrary	Moneak	Thursday	12:00-12:50	Ballroom C	Constructing Explanations in Science to build an Academically Challenging Environment (TKES Standard 8)	Moneak McCrary	Learn how to guide elementary students to construct scientific explanations. We will discuss approaches to support students in talk and writing associated with scientific explanations.	Upper Elementary	GPS Within the Framework	General	Constructing Explanations and Designing Solutions	Cause and Effect: Mechanisms and Explanations
McDonald	Louisa	Thursday	2:00-2:50	Magnolia A	Teach science and stay sane!	Louisa McDonald, Alan McGough, Jenna Harvey	Tame that paper monster!	Middle, High, Pre-service/Early Career Teachers	Preservice & Early Career Teachers	General	NA	NA
Milam	Martha	Thursday	10:00-10:50	Ballroom D	STEM Teacher Leadership	Martha Milam	Develop your role as a STEM Leader for your school. Take advantage of your own strengths (and weaknesses) to support, train, and encourage other educators to create and improve STEM opportunities. All teachers can serve as informal leaders to develop a thriving STEM culture within your school.	Lower Elementary, Upper Elementary, Middle, High, Supervisor/Leadership	Integrated STEM Education	Advocacy & Leadership	NA	NA
Miles	Stephanie	Friday	8:00-8:50	324	Earth Science Sure Fire Winners!	Stephanie Miles and Brandie Freeman	Walk away will several Earth Science sure fire activities	Middle, High	NA	Earth Science	NA	NA
Miller	Doug	Friday	8:00-8:50	308	Streamline Your Preparation & Presentation with Student Notebooks	Doug Miller	Explore science notebooking strategies and learn how to efficiently prepare your instruction to meet the latest standards. Participants will receive free samples and lesson plans.	Middle, High, Supervisor/Leadership, Pre-service/Early Career Teachers	GPS Within the Framework	General	Obtaining, Evaluating, and Communicating Information	NA
Moore	Kim	Thursday	12:00-12:50	306	Camp Invention and Invention Project--Be a Part of Something BIG!	Kim Moore	Inspired by the inductees at the National Inventors Hall of Fame, Camp Invention (K-5) and Invention Project (6-8) provide an opportunity for young inventors to live their dreams.	Lower Elementary, Upper Elementary, Middle, Supervisor/Leadership	Integrated STEM Education	General	Constructing Explanations and Designing Solutions	NA
Morales	Lester	Thursday	12:00-12:50	Magnolia B	NASA Remote Sensing Tools for Educators	Dr. Lester Morales	NASA provides Educators with the ability to participate in National and International Earth Systems programs that Utilize Remote Sensing for investigative Research	Lower Elementary, Upper Elementary, Middle	Integrating Science Within the CCGPS	Earth Science	Developing and Using Models	Systems and Model
Morales	Lester	Friday	8:00-8:50	Magnolia CD	K-5 NASA Education Resources	Dr. Lester Morales	Learn about NASA's vast resources for K-5 Educators from books, websites, videos, and NASA missions.	Lower Elementary, Upper Elementary	Integrated STEM Education	General	Developing and Using Models	Cause and Effect: Mechanisms and Explanations
Morales	Lester	Friday	9:00-11:50	324	Lunar and Meteorites Disk Program	Dr. Lester Morales	Provide students the opportunity to work with Moon and Meteorites rock samples	Lower Elementary, Upper Elementary, Middle, High	Integrating Science Within the CCGPS	Earth Science	Analyzing and Interpreting Data	Patterns
Muir	Martha	Friday	9:00-9:50	Exhibit Hall A	Enrich Your STEM Curriculum with Ham Radio I	Martha Muir, Chuck Catledge, Jim Stafford, John Kludt, Mike Cohen, Wes Lamboley (all members of the North Fulton Amateur Radio League)	Ham Radio provides a means to vastly increase the STEM curriculum at your school. We'll show you how and why! This session will give attendees hands on exposure to the topics "Electricity is Magnetic!," "Components That Make Radios Work," and "Ham Radio = Science."	Upper Elementary, Middle, High	Integrated STEM Education	Engineering	Obtaining, Evaluating, and Communicating Information	Structure and Function
Muir	Martha	Friday	10:00-10:50	Exhibit Hall A	Enrich Your STEM Curriculum with Ham Radio II	Martha Muir, Chuck Catledge, Jim Stafford, John Kludt, Mike Cohen, Wes Lamboley (all members of the North Fulton Amateur Radio League)	Ham Radio provides a means to vastly increase the STEM curriculum at your school. We'll show you how and why! This session will give attendees hands on exposure to the topics "On the Air with Ham Radio!" and "Ham Radio is Digital." Computers have not replaced ham radio, they enhance it!	Upper Elementary, Middle, High	Integrated STEM Education	Engineering	Obtaining, Evaluating, and Communicating Information	Structure and Function
Muir	Martha	Friday	3:00-3:50	Exhibit Hall A	Enrich Your STEM Curriculum with Ham Radio III	Martha Muir, Chuck Catledge, Jim Stafford, John Kludt, Mike Cohen, Wes Lamboley (all members of the North Fulton Amateur Radio League)	Ham Radio provides a means to vastly increase the STEM curriculum at your school. We'll show you how and why! This session will give attendees hands on exposure to the topics "Space the Final Frontier: ARISS, FUNcube, Radio Jove and Other Adventures," and "Resources to Support Your Use of Wireless Technology in the Classroom." Take your classroom into space with ham radio!	Upper Elementary, Middle, High	Integrated STEM Education	Engineering	Obtaining, Evaluating, and Communicating Information	Structure and Function
Palmer	Beth	Friday	9:00-9:50	Magnolia CD	Shark Trackers: Utilizing STEM to Connect Research and Education	Chantal Audran	An exploration of the latest OCEARCH tracking technology is implemented into learning basic skills and methods of conducting scientific research.	Upper Elementary, Middle, High	Integrated STEM Education	Biology/Life Science	Analyzing and Interpreting Data	Patterns
Parr	Rachael	Thursday	8:00-8:50	324	Accelerating Science Through Learning Labs	Rachael Parr, Tiffany Barnett	Through our Learning Acceleration Lab we are able to integrate Science within the CCGPS and give students authentic learning experiences.	Middle	Integrating Science Within the CCGPS	Environmental Science	Constructing Explanations and Designing Solutions	Energy and Matter: Flows, Cycles, and Conservation
Parr	Rachael	Thursday	1:00-1:50	324	Science Exposition to the Rescue!	Rachael Parr, Thomas Layfied, Tiffany Barnett	Come and learn how we turned the Science Fair into a Science Exposition! It was a totally new and exciting way for students to display projects and have fun!	Middle	Integrated STEM Education	General	Asking Questions and Defining Problems	NA
Parr	Rachael	Thursday	3:00-3:50	324	Secrets in the Garden	Rachael Parr, Jenny Buley	Engage your students in reading, writing, and thinking about science concepts through investigations in your school garden.	Upper Elementary, Middle	Integrating Science Within the CCGPS	General	Planning and Carrying Out Investigations	Energy and Matter: Flows, Cycles, and Conservation
Parsons	Christopher	Thursday	12:00-12:50	313	Group Intelligence	Martha Grover, Ariel Fristoe, Christopher Parsons	a classroom MP3 activity to demonstrate concepts of chemical evolution	High, AP/IB, College	NA	Chemistry	NA	Stability and Change

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Patterson	Whitney	Friday	8:00-8:50	Ballroom B	Literacy in Science	Whitney Patterson, Janee Smith, Ashli Jay	Printable literacy strategies	Upper Elementary, Middle	Integrating Science Within the CCGPS	General	Obtaining, Evaluating, and Communicating Information	Patterns
Patterson	Whitney	Friday	1:00-1:50	Ballroom B	Technology in Science	Whitney Patterson, Janee Smith, Ashli Jay	Integrating technology	Upper Elementary, Middle, High	Integrating Science Within the CCGPS	General	Developing and Using Models	NA
Peddi	Erica	Thursday	3:00-3:50	Ballroom D	Using pHETs in the Classroom and Writing them Too	Erica Peddi	Understanding how to use and work through the PHET simulation site and the process of writing an assignment and submitting it for them.	Middle, High, AP/IB	Integrated STEM Education	Chemistry	Analyzing and Interpreting Data	Systems and System Models
Peddi	Erica	Saturday	10:00-10:50	Ballroom D	What's "App"ening With You?	Erica Peddi	This session will highlight apps and websites to use in many different science classrooms.	Upper Elementary, Middle, High, AP/IB, Pre-service/Early Career Teachers	NA	General	Developing and Using Models	Systems and System Models
Pedersen	Marc	Thursday	12:00-12:50	Grand Salon B	Biotechnology in the Classroom: A Study of the Clonality of Bristle Worms in Aquaria using Randomly Amplified Polymorphic DNA (RAPD) Fingerprinting	Marc Pedersen	The presenter will describe an authentic inquiry-based project that utilizes cutting edge biotechnology and science to explore the genetic diversity of a marine polychaete worm.	High	GPS Within the Framework	Biology/Life Science	Planning and Carrying Out Investigations	Patterns
Pedersen	Marc	Saturday	9:00-9:50	Grand Salon B	How to Revolutionize Ordinary Labs	Marc Pedersen	This session will describe how one teacher was able to completely revolutionize his labs to increase rigor and inquiry in the classroom.	High	Integrated STEM Education	Biology/Life Science	Planning and Carrying Out Investigations	NA
Perry	Freddy	Saturday	8:00-8:50	313	PBL What? A Newbie's Journey.	Mr. Freddy A Perry	A brief presentation of our school and our struggle/success implementing STEAM/PBL lessons	Upper Elementary, Middle	NA	General	NA	NA
Peterson	Melanie	Thursday	8:00-8:50	310	Motivating Students: Wrapped Up in Motion	Bonita Fallon, Pepper Misinco, Melanie Peterson, Tammy Shiflett	Participants will be involved in hands-on activities. Stations will be force and motion related with STEM connections.	Lower Elementary, Upper Elementary	Integrating Science Within the CCGPS	Physical Science	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Powell	Shirley	Friday	10:00-10:50	310	Futures in Histotechnology and Plastination	Shirley Powell, HT(ASCP)HTL, Technical Director	Histology is the study of tissue; Pathology is the study of disease. Tissues removed in the hospital Operating Room or clinics, in the doctor's office, or at autopsy have to be examined by a Pathologist grossly and microscopically, in order to make a diagnosis to help the clinicians to treat the patient correctly. Histotechnology is an allied Health Field that is widely overlooked for students looking for a future profession. Medical Technology is more familiar to them. There is a worldwide shortage of histotechnologist that could be eased by informing students of the existence and training avenues available for them. This presentation with discuss the profession, the requirements to achieve certification, as well as a little background of what happens to specimens that arrive at the histology laboratory. The second part of this presentation will cover Plastination, what it is, its use in medical education, veterinary medicine, as well as archiving museum specimens. Examples of Plastinated specimens from Mercer University Medical School will be shown to participants.	Middle, High, AP/IB	NA	Biology/Life Science	NA	NA
Powell	Shirley	Friday	2:00-2:50	310	Futures in Histotechnology and Plastination	Shirley Powell, HT(ASCP)HTL, Technical Director	Histology is the study of tissue; Pathology is the study of disease. Tissues removed in the hospital Operating Room or clinics, in the doctor's office, or at autopsy have to be examined by a Pathologist grossly and microscopically, in order to make a diagnosis to help the clinicians to treat the patient correctly. Histotechnology is an allied Health Field that is widely overlooked for students looking for a future profession. Medical Technology is more familiar to them. There is a worldwide shortage of histotechnologist that could be eased by informing students of the existence and training avenues available for them. This presentation with discuss the profession, the requirements to achieve certification, as well as a little background of what happens to specimens that arrive at the histology laboratory. The second part of this presentation will cover Plastination, what it is, its use in medical education, veterinary medicine, as well as archiving museum specimens. Examples of Plastinated specimens from Mercer University Medical School will be shown to participants.	Middle, High, AP/IB	NA	Biology/Life Science	NA	NA
Pratt	Bonnie	Saturday	9:00-9:50	306	Fully Integrated Problem and Place-Based Projects	Bonnie Pratt and Nancy Cobb	An overview of how our STEM Cohort team integrates math and science with a "workshop" session to develop P3BL's	High	Integrated STEM Education	General	Planning and Carrying Out Investigations	Scale, Proportion, and Quantity
Pruitt	Stephen	Friday	11:30-12:30	Exhibit Hall B	Stephen Pruitt Placeholder	Stephen Pruitt	0	Lower Elementary, Upper Elementary, Middle, High, AP/IB, College, Administrators, Supervisor/Leadership, Pre-service/Early Career Teachers	NA	Advocacy & Leadership	NA	NA

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Rajasekaran	Renuka	Thursday	1:00-2:50	310	Mechanochemical Phenomena in Blood Part 1: A STEAM Lesson	Dr. Renuka Rajasekaran, accompanied by her 5 students: Ashley Johnson, Shailyn Moore, Shaena Carter, Jahmar Jordan, and Myka Lowery	The mechanochemical phenomena in Blood are learned by modeling in a STEAM integrated Chemistry Lesson	High	Integrated STEM Education	Chemistry	Developing and Using Models	Structure and Function
Rajasekaran	Renuka	Thursday	3:00-4:50	310	Mechanochemical Phenomena in Blood Part 2: A STEAM Lesson	Dr. Renuka Rajasekaran, accompanied by her 5 students: Ashley Johnson, Shailyn Moore, Shaena Carter, Jahmar Jordan, and Myka Lowery	The mechanochemical phenomena in Blood are learned by modeling in a STEAM integrated Chemistry Lesson	High, AP/IB	Integrated STEM Education	Engineering	Developing and Using Models	Cause and Effect: Mechanisms and Explanations
Ramey	Kelly	Thursday	12:00-12:50	310	Visualization Activities for Chemistry and Physical Science	Kelly Ramey	Presentation of a classroom activity to help students understand basic terminology and the correlation between atoms/molecules and what we see in real life.	Middle, High	NA	Chemistry	Developing and Using Models	Structure and Function
Rascoe	Barbara	Thursday	3:00-4:50	Ballroom C	Integrating Engineering Standards, Common Core ELA Standards, Common Core Mathematics Standards, and Elementary Science Performance Standards	Barbara Rascoe	This session will provide methodologies for designing science instruction for elementary teachers that comply with integrating common core, science performance standards, and engineering standards.	Upper Elementary, Middle	GPS Within the Framework	Engineering	Constructing Explanations and Designing Solutions	Cause and Effect: Mechanisms and Explanations
Reeves	Marion	Saturday	8:00-8:50	310	Are science courses changing again?????	Marion Reeves	Science is science right? No starting over is needed. Rethinking the best GPS lessons will move smoothly into the three strands of NGSS lessons	Middle, High	GPS Within the Framework	General	NA	NA
Regassa	Laura	Friday	1:00-2:50	Ballroom A	STEMstars: Explore STEM resources generated from a long-standing university-school district partnership	Laura Regassa, Missy Bennett, partner teachers (TBD), and science fellows (TBD)	Join STEMstars faculty, graduate students and partner teachers for a highly interactive, hands-on session exploring inquiry-based STEM classroom activities.	High, AP/IB, Supervisor, Leadership, Pre-service/Early Career Teachers	Integrated STEM Education	General	NA	NA
Rejmer	Amy	Thursday	8:00-8:50	303	POST-it: Vocabulary fit for 5E's classrooms	Amy Rejmer	An authentic vocabulary strategy for 5E/ inquiry-based classrooms	Upper Elementary, Middle, High	Integrating Science Within the CCGPS	General	Obtaining, Evaluating, and Communicating Information	Cause and Effect: Mechanisms and Explanations
Rich	Steve	Friday	8:00-8:50	Ballroom C	Teaching Outdoor Science with Children's Literature	Steve Rich	Discover resources from the author of Outdoor Science, My School Yard Garden, & Mrs. Carter's Butterfly Garden. Free seeds.	Lower Elementary, Upper Elementary, Middle	GPS Within the Framework	Environmental Science	Analyzing and Interpreting Data	Energy and Matter: Flows, Cycles, and Conservation
Ries	Jim	Thursday	12:00-12:50	Magnolia CD	Plastic and Recycling Awareness Curriculum	Carter Ries, Olivia Ries (OMG Founders), Jim Ries President	Plastic Pollution is considered one of the largest preventable environmental threats facing us all. Now is the time to teach our next generation how they can be the solution.	Lower Elementary, Upper Elementary, Middle	Integrated STEM Education	Environmental Science	Obtaining, Evaluating, and Communicating Information	Cause and Effect: Mechanisms and Explanations
Roberson	Melinda	Friday	10:00-10:50	308	Science Reimagined: Using Claims, Evidence, and Reasoning to Promote Literacy in Science	Melinda Roberson	Evidence-based argumentation is a cornerstone concept across CC, NGSS, and GPS frameworks. Come explore C-E-R strategies that can boost student literacy and achievement in science.	Upper Elementary, Middle, High	Integrating Science Within the CCGPS	General	Engaging in Argument from Evidence	NA
Robinson	Ann	Thursday	1:00-2:50	313	Viewing the Invisible	Ann Robinson, Sharon Kirby, Dave Todd	Participants will discover a cost-effective method of introducing static electricity. A series of experiments will produce a "hair raising" experience and reveal static electricity phenomenon.	Upper Elementary, Middle, High	Integrated STEM Education	Physical Science	Planning and Carrying Out Investigations	Systems and System Models
robinson	tracy	Friday	9:00-9:50	Ballroom E	Getting Physical with I-Pads	Tracy Robinson	If you are currently wanting to increase the rigor and relevance through technology via I-Pads, google classroom and google drive this is the session for you.	Middle	Integrated STEM Education	Physical Science	Obtaining, Evaluating, and Communicating Information	NA
Rogers	Annette	Thursday	9:00-10:50	308	Destination Imagination - Innovation STEMs from Creativity	Annette Rogers	An interactive overview of the Destination Imagination program.	Lower Elementary, Upper Elementary, Middle, High, AP/IB, College, Pre-service/Early Career Teachers	Integrated STEM Education	Environmental Science	Obtaining, Evaluating, and Communicating Information	NA
Ryan	Mike	Thursday	12:00-1:50	Exhibit Hall A	Teaching Physical Science through Robotics and Engineering Design	Mike Ryan, Sabrina Grossman, Jayma Koval, Jason Fiorito, Lynn Torrance, Russell Johnson	Experience how to use LEGO® robotics to integrate engineering into middle school physical science classes. Engage in inquiry activities and receive access to NSF-developed materials.	Middle	GPS Within the Framework	Physical Science	Planning and Carrying Out Investigations	Systems and System Models
Rykowski	Carrie Beth	Thursday	1:00-2:50	Ballroom E	Making Sense of Sensors: A Hands-On Exploration	Carrie Beth Rykowski	Have you ever turned a shoe box into a space rover? Come learn how you can easily incorporate mechanical engineering and nanotechnology in the classroom with cool STEAM lessons for Earth Science.	Middle	Integrated STEM Education	Earth Science	NA	Patterns
Salomon	Kari	Friday	4:00-4:50	Ballroom D	Host a STEAM Summer Camp at your Middle School	Kari Salomon, David Schoenrock	Planning and Strategies for a successful STEAM Summer Camp	Middle	Integrated STEM Education	Engineering	Constructing Explanations and Designing Solutions	Structure and Function
Sauve	Angela	Saturday	8:00-8:50	324	READY! OUT OF THE BOX and ON TO THE Science Lab TABLE	Stephen Csukas, Desmond Lee, Angela Sauve'	How do you keep them interested? Try using student-tested/evaluated, teacher- tweaked/ revised earth science lessons. Participate in activities; receive science kits and lessons.	Middle	GPS Within the Framework	Earth Science	NA	NA
Schafer	John	Friday	3:00-4:50	309	21st Century Instruction: Problem-Based Learning in the Middle and High School Classroom	John Schafer	PBL is a curricular methodology that begins with real-world problems, progresses through cooperative learning, and concludes with potential solutions.	Middle, High, AP/IB	Integrated STEM Education	General	NA	NA

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Schulte	Dylan	Saturday	9:00-9:50	312	The Effects of Grouping Students Within the Classroom Based on Multiple Intelligences	Dylan Schulte, Michelle Walsh, and Lindsay Moneypenny	Our presentation will investigate how grouping students within the classroom based upon Howard Gardner's Theory of Multiple Intelligences will impact student teamwork and achievement.	Lower Elementary, Upper Elementary, Middle, High, Supervisor/Leadership, Pre-service/Early Career Teachers	NA	General	NA	NA
Scott	Heather	Friday	4:00-4:50	312	Using Interdependence to Foster Inquiry	Heather Scott, Missy Bennett, Christine Jackson, Sandy Kent, Amanda Palmer	Classroom teachers share their experiences from a summer course immersed in inquiry.	Middle, High	Integrated STEM Education	Environmental Science	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Seehorn	Josh	Friday	4:00-4:50	324	Georgia Envirothon: an outdoor natural resource high school competition	Josh Seehorn, Tyson Hartly	The Georgia Envirothon is an interactive, outdoor competition for high school students in the areas of Wildlife, Forestry, Soils/Land Use, Aquatic Ecology, and Current Issue.	Middle, High, AP/IB	Integrated STEM Education	Environmental Science	Constructing Explanations and Designing Solutions	Cause and Effect: Mechanisms and Explanations
Sexton	Chelsea	Thursday	10:00-10:50	Magnolia A	What Am I Really Getting Myself Into: New Teacher Panel	Chelsea Sexton, Nicholas Mayhew, and others.	Bring your questions as this panel first- and second-year teachers share their experiences and advice.	Pre-service/Early Career Teachers	Preservice & Early Career Teachers	General	NA	NA
Shepherd	Marshall	Thursday	11:00-11:50	Exhibit Hall B	Marshall Shepherd Placeholder	Marshall Shepherd	0	Lower Elementary, Upper Elementary, Middle, High, AP/IB, College, Administrators, Supervisor/Leadership, Pre-service/Early Career Teachers	NA	Earth Science	NA	NA
Shirley	Adam	Thursday	3:00-4:50	Ballroom B	Using a Technology-Enhanced 5E Learning Cycle to Support Literacy in the Science	Adam Shirley, Jeremy Peacock	Technology can both engage student interest and support scientific thinking. At the same time, the 5E learning cycle provides a research-based approach to inquiry-based science teaching. Engage in a model lessons that shows how you can combine these strategies to move your students' learning forward.	Lower Elementary, Upper Elementary, Middle, High, AP/IB	Integrating Science Within the CCGPS	General	NA	NA
Shoushtarian	Joannah	Friday	10:00-10:50	Ballroom D	Robotic Bee and Bugs- Let's Learn About Our Environment!!	Joannah Shoushtarian	Can K-2 learn to program robotic bees? I believe so and show you how to teach students to love the environment while learning basic logo path programming.	Lower Elementary	Integrated STEM Education	Biology/Life Science	Developing and Using Models	Stability and Change
Smith	Randy	Thursday	9:00-9:50	Grand Salon A	Are You Out Of Your Flipping Mind?	Randy Smith	Utilizing flipped classroom strategies to maximize student engagement.	Upper Elementary, Middle, High, AP/IB, College, Supervisor/Leadership	Integrated STEM Education	General	Obtaining, Evaluating, and Communicating Information	NA
Snow	Tresa	Thursday	8:00-8:50	Ballroom B	Literature Comes ALIVE!	Tresa Snow and Devon Chodos	Use everyday books and use hands on activities to design and build characters or setting!	Lower Elementary, Upper Elementary	Integrating Science Within the CCGPS	General	Planning and Carrying Out Investigations	Structure and Function
Son	Hyunjin	Friday	8:00-8:50	313	A Paradigm Shift: Redefining Traditional High School Physics Using the Engineering Design Process	Hyunjin Son	The journey one high school embarked upon to provide equal access to STEM experiences for their 11th grade physics students emphasizing rigor, relevance, and relationships.	High, Supervisor/Leadership	Integrated STEM Education	Physics	NA	NA
Songer	Belynda	Saturday	11:00-11:50	Grand Salon B	Science Virtually	Belynda Songer	Science (STEM) teaching in a virtual world. Live synchronous lessons for full time online students or integrated online for traditional classrooms.	Middle, High, AP/IB, College	Integrated STEM Education	Biology/Life Science	Constructing Explanations and Designing Solutions	Structure and Function
Spaid	Dr. Randy	Saturday	10:00-10:50	Grand Salon B	"Meet me at your iPad?" Rich, differentiated environments for active learning	Amber Morgan, Randall Spaid, Michael Ryan	In this session, we will describe how we create Personal Learning Environments and demonstrate effective strategies to increase student learning using technology iPads, iBook Author, and Prezi	Middle, High	GPS Within the Framework	Biology/Life Science	Constructing Explanations and Designing Solutions	Systems and System Models
Stephens	Karol	Thursday	1:00-1:50	308	Getting the Most Out of Middle Schoolers Integrating Science and Math with Data	Karol Stephens	Data is a natural integration point for math and science. Technology tools can increase the rigor and provide meaningful integration opportunities.	Middle	Integrated STEM Education	Physical Science	Analyzing and Interpreting Data	Energy and Matter: Flows, Cycles, and Conservation
Stephens	Karol	Thursday	2:00-2:50	308	Yes They Can! Elementary Students Can Do Data!	Karol Stephens	Elementary students can collect, use, and interpret data to better understand math and science. It's all about making it relevant, using available technology, and providing a purpose.	Upper Elementary	Integrated STEM Education	General	Analyzing and Interpreting Data	Energy and Matter: Flows, Cycles, and Conservation
STEWART	ROSLYNN	Saturday	10:00-11:50	Grand Salon A	I AM SOME BODY	ROSLYNN STEWART	This activity include the science, technology, engineering, and mathematic components. Student groups plan, create, and construct the 11 human body system on a 20" paper boy or girl doll.	Middle	Integrated STEM Education	Biology/Life Science	Developing and Using Models	Systems and System Models
Stickel	George	Thursday	12:00-12:50	Magnolia A	How You Are Evaluated? The State of Teaching Science in an Age of Accountability	George W. Stickel	How to be a good science teacher & navigate through accountability? Understand TKES, edTPA, InternKeys, ethics, etc.—all the assessments required of you & new colleagues.	Lower Elementary, Upper Elementary, Middle, High, AP/IB, College, Supervisor/Leadership, Pre-service/Early Career Teachers	Preservice & Early Career Teachers	General	Obtaining, Evaluating, and Communicating Information	Stability and Change
Stuckey	Debbie	Thursday	12:00-12:50	303	STEM Now--How?	Debbie Stuckey	Participants will learn more about STEM and how to implement it into their classrooms effectively.	Lower Elementary, Upper Elementary	Integrated STEM Education	General	Planning and Carrying Out Investigations	Patterns

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Switzer	Kathy	Thursday	12:00-12:50	324	Guided Inquiry or Just Inquiry ? Physics Labs Redesigned	Kathy Switzer	A presentation of classic physics labs redesigned and reworked to encourage student directed inquiry.	High, AP/IB	NA	Physics	Planning and Carrying Out Investigations	Cause and Effect: Mechanisms and Explanations
Teare Ketter	Catherine	Friday	1:00-2:50	Ballroom E	Using hands-on water activities to teach physical and earth science concepts in elementary and middle grades.	Catherine A. Teare Ketter (and students)	Participants will use water to demonstrate concepts such as friction, density, and wave morphology using everyday items.	Upper Elementary, Middle, Pre-service/Early Career Teachers	Integrating Science Within the CCGPS	General	Planning and Carrying Out Investigations	Systems and System Models
Teare Ketter	Catherine	Friday	3:00-4:50	Ballroom E	Biotechnology Tool Box	Catherine A. Teare Ketter, John Rose, Ina Claire Webb, & Chip Pollard	Basic Biotechnology lab skills and content alignment will be highlighted.	High, AP/IB	Integrated STEM Education	Biology/Life Science	NA	Structure and Function
Thomas	Ronnie	Thursday	12:00-12:50	309	Fun Weird Science	Ronnie Thomas	Interactive Science engagement demonstration with content explanation	Lower Elementary, Upper Elementary, Middle	GPS Within the Framework	General	Developing and Using Models	Cause and Effect: Mechanisms and Explanations
Thomas	Ronnie	Saturday	10:00-11:50	306	Robots on the Move	Ronnie Thomas, Reggie Oneil, Tommy Clay	Teachers will engage in programming the robotic ball Sphero to complete task	Lower Elementary, Upper Elementary, Middle, High, AP/IB, College, Supervisor/Leadership, Pre-service/Early Career Teachers	Integrated STEM Education	Physics	Using Mathematical and Computational Thinking	Cause and Effect: Mechanisms and Explanations
Thompson	Naomi	Thursday	3:00-4:50	Magnolia B	Georgia Rocks and Minerals	Naomi Thompson, Donna Mullenax	Participate in map activities and rock observation to learn about the regions of Georgia and the rocks, minerals, and sand that can be collected. Takeaway your own samples for classroom use.	Upper Elementary, Middle, High	GPS Within the Framework	Earth Science	Planning and Carrying Out Investigations	Patterns
Thurmond	Maria	Friday	9:00-9:50	Ballroom A	Teaching STEM through Literacy for All	Maria Thurmond	Science Literacy is a critical component of education for all students. However, teacher struggle to meet the needs of all students within the general education classroom. By utilizing formative ass	High	Integrated STEM Education	General	Obtaining, Evaluating, and Communicating Information	NA
Thurmond	Maria	Friday	1:00-1:50	324	Using STEAM to teach Chemistry NGSS	Maria Thurmond, Beth Feustel	Building permanent products are a great way for high school students to apply chemistry concepts. Come and build flotation devices, decontamination devices, and pollution control apparatus designed t	High	Integrated STEM Education	Chemistry	Constructing Explanations and Designing Solutions	NA
Thurmond	Maria	Friday	3:00-3:50	324	Moleo makes Stoichiometry easy!	Maria Thurmond, Beth Feustel	Moleo is a teacher created graphic organizer that is used as a teaching tool so that students can learn the math reasoning involved in stoichiometric conversion.	High	NA	Chemistry	Using Mathematical and Computational Thinking	Patterns
Tierce	Marlee	Thursday	8:00-8:50	Magnolia A	First Timers Sessions	Marlee Tierce	0	0	Preservice & Early Career Teachers	0	NA	NA
Tierce	Marlee	Thursday	1:00-2:50	312	A Taste of Dragons	Marlee Tierce	Children come to school filled with curiosity. Their imaginations color everything. A goal for teachers is to keep that curiosity alive and foster it-A Thematic Unit based on Dragons.	Lower Elementary, Upper Elementary	NA	General	Asking Questions and Defining Problems	Structure and Function
Ucciferri	Patricia	Thursday	3:00-4:50	Ballroom E	Stuck Like Glue: Integrated STEM challenge	Patricia Ucciferri	Work through an integrated STEM challenge designed for second grade matter.	Lower Elementary	Integrated STEM Education	Physical Science	Planning and Carrying Out Investigations	NA
Vajda	Peter	Friday	1:00-2:50	Magnolia A	Classroom Management-Is this piece missing from your science education puzzle?	Peter Vajda, Ph.D	Proven research-based classroom management strategies to reduce discipline issues by 70% or more	Lower Elementary, Upper Elementary, Middle, High, AP/IB	Preservice & Early Career Teachers	Other	NA	NA
Verma	Sid	Friday	1:00-2:50	308	MDJunior - An Integrated Afterschool STEM Program	Sid Verma, Shaun Verma, Deepa Ranganathan MD	MDJunior - "Inspiring Selfless Service through Mentorship" with Knowledge, Skills and Attitude sessions that exemplify a truly integrative approach to learning the Science of Medicine	Middle, High, AP/IB, Supervisor/Leadership	Integrated STEM Education	General	NA	NA
Visaggi	Christy	Saturday	9:00-9:50	324	Using Maps, Fossils, and Place-Based Learning To Explore the History of Life in Georgia	Christy Visaggi, Rebecca Pickering, Laura Streib, Jessica Martinez, Matthew Toro	This session will examine the paleontology of Georgia through our physiographic regions as based on a 2014 workshop organized by the Georgia Geographic Alliance.	Lower Elementary, Upper Elementary, Middle, High, AP/IB, College, Supervisor/Leadership, Pre-service/Early Career Teachers	Integrated STEM Education	Earth Science	Analyzing and Interpreting Data	Stability and Change
Walker	Deborah	Saturday	10:00-10:50	312	Teaching 21st Century Reasoning Skills Through an Interdisciplinary STEM Research Experience	Deborah Walker, Robert Mayes	How teachers are using Place-based Education, Problem Based Learning and UbD to design authentic, real-world experiences that develop 21st Century reasoning skills will be shared.	Middle, High, AP/IB, Supervisor/Leadership	Integrated STEM Education	General	Asking Questions and Defining Problems	Systems and System Models
Watson	Nathan	Thursday	3:00-3:50	Exhibit Hall A	Middle School Share-a-thon	0	0	Middle	0	General	NA	NA
Webb	Denise	Thursday	2:00-2:50	Exhibit Hall A	Elementary Share-a-thon	0	0	Lower Elementary, Upper Elementary	0	General	NA	NA
Webb	Denise	Friday	3:00-3:50	Ballroom D	Engineering in Elementary Grades Where do I start?	Denise Webb and Amber Hoke	Engage K-5 students in engineering design activities with real world applications. Packet full of Ideas and resources you can use in your classroom right away with low cost materials is provided.	Lower Elementary, Upper Elementary	Integrated STEM Education	Engineering	Developing and Using Models	NA
Webb	Denise	Saturday	9:00-9:50	Ballroom D	Science Ambassadors	Donna Governor and Denise Webb	Looking for a way to have Science and Engineering night at your school and don't know where to start? Come to our session and we will share how to utilize high school students to run your program.	Lower Elementary, Upper Elementary, High	Integrated STEM Education	General	Developing and Using Models	NA

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Weber	Lynn	Friday	2:00-2:50	303	Interested? Tell me about it!	Lynn Weber	Elicit questions, start conversations, facilitate discussions and encourage argumentation all while doing science. Let's ask questions, talk about what you know and get our "hands on" science!	Lower Elementary, Upper Elementary	Integrating Science Within the CCGPS	Biology/Life Science	Constructing Explanations and Designing Solutions	NA
Weber	Lynn	Friday	3:00-3:50	306	Modeling: A Scientific Beauty Contest	Lynn Weber	What do you think of when you hear the word "model"? A pie plate cell? A globe? A supermodel? Learn how scientific models explain a phenomenon.	Middle	GPS Within the Framework	Physical Science	Developing and Using Models	Systems and System Models
Wetherington	Jonathon	Friday	3:00-4:50	Ballroom A	Integrated STEM Instruction through Project Based Learning	Michael Reilly, Bonnie Driscoll, Jonathon Wetherington	This session will immerse participants in a STEM experience that will help teachers connect Science, Technology, Engineering, and Mathematics in an interdisciplinary way through project based learning	Lower Elementary, Upper Elementary, Middle, High	Integrated STEM Education	Engineering	NA	NA
Wheeler-Toppen	Jodi	Friday	2:00-2:50	Ballroom B	Reading a Test is Hard Work!	Jodi Wheeler-Toppen	Standardized tests represent a reading genre that challenges many students. Join the author of NSTA Press' Once Upon a Science Book series to learn a fun way to help your students read this genre.	Middle, High	Integrating Science Within the CCGPS	General	NA	NA
Whitlock	Laura	Saturday	11:00-11:50	312	Physics Labs: Starting from Scratch	Laura A. Whitlock, Ioana Beldeanu	A set of physics labs were developed, without the limitations of prior equipment or manuals, but with the new standards in mind.	High, AP/IB	Integrating Science Within the CCGPS	Physics	Analyzing and Interpreting Data	Cause and Effect: Mechanisms and Explanations
Wilde	Heather	Friday	4:00-4:50	306	Argumentation and Discourse in the STEM Classroom	Heather Wilde	Building the Skills of Argumentation and Collaboration in STEM	Lower Elementary, Upper Elementary, Middle, High	GPS Within the Framework	General	Engaging in Argument from Evidence	NA
Williams	Brian	Saturday	8:00-9:50	303	Making music: Exploring the nature of sound	Brian Williams, Olga S. Jarrett	Following physics of sound demonstrations, participants will make and experiment with wind, percussion, and stringed instruments. Experiment with sound and music. Take away handouts.	Lower Elementary, Upper Elementary, Pre-service/Early Career Teachers	NA	Physics	Constructing Explanations and Designing Solutions	Patterns
Williams	Evern	Thursday	9:00-10:50	310	Teaching High School Epidemiology	Evern Williams, Pioneer	The Evolution of Public Health and Education Integration	High, AP/IB, College, Supervisor/Leadership	Integrated STEM Education	Biology/Life Science	Constructing Explanations and Designing Solutions	Cause and Effect: Mechanisms and Explanations
Wilson	Janelle	Thursday	9:00-10:50	Exhibit Hall A	NOAA Fisheries Research in the Engineering Classroom	Janelle Wilson	Compete in an engineering design challenge, and learn how NOAA's Teacher at Sea experience aboard the Henry Bigelow led to new understanding of engineering practices.	Middle, High	Integrated STEM Education	Engineering	Developing and Using Models	Structure and Function
Wisker	Nancy	Friday	9:00-11:50	306	Building Science Vocabulary via Notebook Foldables*	Nancy Wisker	Time flies in this session on as you create Notebook Foldables* that can help your instruction of, and student retention of, science vocabulary.	Upper Elementary, Middle, High, AP/IB	GPS Within the Framework	General	NA	NA
Wisker	Nancy	Friday	1:00-1:50	306	The Envelope Please...Creating Science Projects that Pop!	Nancy Wisker	How can a simple manila envelope be transformed into a science project that pops? Discover how in this hands-on session and watch the possibilities unfold!	Lower Elementary, Upper Elementary, Middle, High	NA	General	NA	NA
Witherspoon	William	Thursday	3:00-3:50	312	Applying the GPS to Stabilize Earth Hazards	Bill Witherspoon, Pamela J.W. Gore	From the Leaning Tower of Pisa to the LBJ Rocks on Jekyll Island, spice up your lessons with real-world problems caused by Earth phenomena.	Upper Elementary, Middle, High, AP/IB, College, Pre-service/Early Career Teachers	GPS Within the Framework	Earth Science	Constructing Explanations and Designing Solutions	Stability and Change
Wolfe	Stacy	Thursday	9:00-9:50	312	THE EFFECTS OF FIELD EXPERIENCES UPON STUDENTS' OUTLOOK TOWARD ENVIRONMENTAL AND ECOLOGICAL CONSERVATION	Stacy Wolfe	Combating Nature Deficit Disorder, this session will focus on strategies to get students interested in nature and off the couch!	Middle, High, AP/IB, Supervisor/Leadership	Integrating Science Within the CCGPS	Environmental Science	Asking Questions and Defining Problems	Patterns
Wood	Karan	Thursday	9:00-10:50	Magnolia CD	Eco-Tech: Tools and Resources for Integrating Technology in Outdoor Learning	Captain Planet Foundation	Explore exciting opportunities at the intersection of the "Maker" movement, STEM, and Environmental Science. Discover how enthusiasm for technology can be channeled into standards-based learning.	Lower Elementary, Upper Elementary, Middle, High, AP/IB	Integrated STEM Education	Engineering	Using Mathematical and Computational Thinking	Cause and Effect: Mechanisms and Explanations
Wood	Karan	Thursday	1:00-2:50	Magnolia CD	Citizen Science Sampler	Donna Barrett and Karan Wood	Join Captain Planet Foundation and Metro RESA to explore Citizen Science! Engage students in field investigations and data collection shared with scientists doing exciting, authentic research.	Upper Elementary, Middle, High, AP/IB	Integrated STEM Education	General	Planning and Carrying Out Investigations	Stability and Change
Wood	Karan	Thursday	3:00-4:50	Magnolia CD	Learning Gardens: Transforming Your Schoolyard into an Outdoor STEM Lab	Captain Planet Foundation	Explore standards-based activities that turn school gardens into outdoor STEM labs; learn tips for managing students productively outdoors; and discover ways to make gardens sustainable.	Lower Elementary, Upper Elementary, Middle	Integrated STEM Education	General	Planning and Carrying Out Investigations	Energy and Matter: Flows, Cycles, and Conservation
Wood	Karan	Friday	3:00-4:50	Magnolia CD	Environmental Stewardship: 5 Engaging Project-Based Learning Activities	En	Empower your class to solve real-world environmental problems through stewardship projects such as restoring wildlife habitat, designing and building rain gardens, mitigating pollution with mushrooms	Upper Elementary, Middle, High, AP/IB	Integrated STEM Education	General	Planning and Carrying Out Investigations	Systems and System Models
Wood	Karan	Saturday	8:00-9:50	Magnolia B	Field Testing SAGES: an Engaging Environmental Pathway through Standards-based STEM Learning	Captain Planet Foundation teachers	Transform science education by teaching the K-12 CCGPSS core ideas from an environmental perspective, engaging students in science practices and engineering design challenges.	Lower Elementary, Upper Elementary, Middle, High, AP/IB, Supervisor/Leadership, Pre-service/Early Career Teachers	Integrating Science Within the CCGPS	General	Constructing Explanations and Designing Solutions	Cause and Effect: Mechanisms and Explanations

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Woods	Richard	Thursday	9:00-9:50	Ballroom A	Richard Woods Placeholder	Richard Woods	0	Lower Elementary, Upper Elementary, Middle, High, AP/IB, College, Administrators, Supervisor/Leadership, Pre-service/Early Career Teachers	NA	Advocacy & Leadership	NA	NA
Young	Tasha	Saturday	11:00-11:50	Ballroom B	STEMming out in AP Science & Electives	Amy Coleman, Lauren Ferguson, Lauren Horton, Tasha Young	Are you looking for fun and exciting STEM activities to integrate in your class? Come join us and get ideas! FREE handouts to the first 25 attendees!!	High, AP/IB	Integrated STEM Education	General	Planning and Carrying Out Investigations	NA
Zomer	Nick	Thursday	2:00-2:50	Grand Salon A	Safety and Professional Responsibility for Science Teachers	Nick Zomer	0	Lower Elementary, Upper Elementary, Middle, High, AP/IB, Pre-service/Early Career Teachers	NA	General	NA	NA
Zomer	Nick	Thursday	4:00-4:50	Grand Salon A	Surviving Science Fair	Nick Zomer	Simple tips for teachers to make the Science Fair a more rewarding and less stressful experience.	Upper Elementary, Middle	Integrated STEM Education	General	Asking Questions and Defining Problems	Cause and Effect: Mechanisms and Explanations