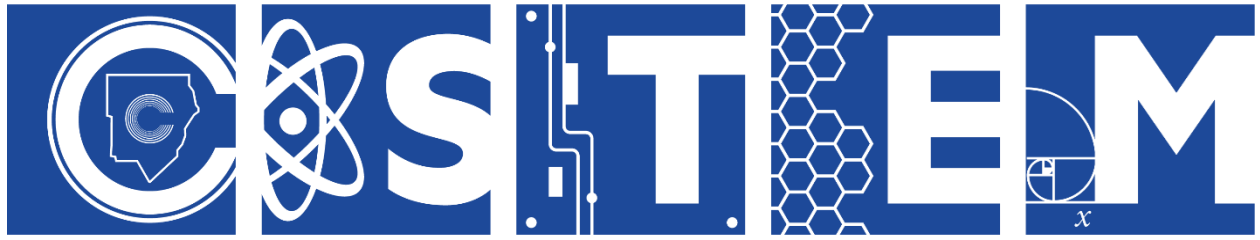
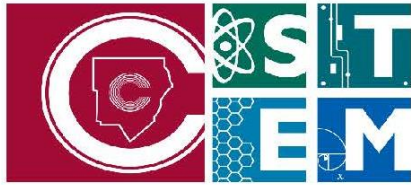


COBB COUNTY SCHOOL DISTRICT



SCIENCE•TECHNOLOGY•ENGINEERING•MATHEMATICS





2018 STEMMapalooza Conference Overview

Kennesaw Mtn High School, Kennesaw GA

Tuesday, June 19, 2018 | STEMMapalooza Conference Day 1

| | | | | |
|-------------------|---|--|-------------------------------------|-----------------|
| 8:15am - 9:00am | Registration Coffee & Conversation | | | |
| 9:00am - 9:50am | Keynote STEM Beyond the USA: What is Happening Internationally in STEM Education? David Lee - Korea International School | | | |
| 10:00am - 10:50am | Concurrent Sessions | | STEM Playground & Maker Space | Exhibit Hall |
| 11:00am - 11:50am | Concurrent Sessions | | | |
| 11:50am - 12:40pm | Lunch <i>Provided for All Attendees</i> | | | |
| 12:50pm - 1:40pm | Concurrent Sessions | | | |
| 1:50pm - 2:40pm | Concurrent Sessions | | | |
| | | | | |

Wednesday, June 20, 2018 | STEMMapalooza Conference Day 2

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|-------------------|--|--|-------------------------------------|-----------------|
| 8:15am - 9:00am | Registration Coffee & Conversation | | | |
| 9:00am - 9:50am | Keynote Equity in STEM: How to Provide Underrepresented Populations Access to STEM Dr. Cindy Moss - Discovery Education | | | |
| 10:00am - 10:50am | Concurrent Sessions | | STEM Playground & Maker Space | Exhibit Hall |
| 11:00am - 11:50am | Concurrent Sessions | | | |
| 11:50am - 12:40pm | Lunch <i>Provided for All Attendees</i> | | | |
| 12:50pm - 1:40pm | Concurrent Sessions | | | |
| 1:50pm - 2:40pm | Concurrent Sessions | | | |
| | | | | |

Thursday, June 21, 2018 | STEMMapalooza Conference Day 3

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|-------------------|--|--|--|--|
| 8:15am - 9:00am | Registration Coffee & Conversation | | | |
| 9:00am - 9:50am | Keynote STEM Pipeline: What Local Resources are Available to Provide Students with Access to Careers in STEM? Dr. Roneisha Worthy - Kennesaw State University | | | |
| 10:00am - 10:50am | Concurrent Sessions | | STEM Playground & Maker Space | |
| 11:00am - 11:50am | Concurrent Sessions | | | |
| 11:50am - 12:40pm | Lunch <i>Provided for All Attendees</i> | | | |
| 12:50pm - 1:40pm | Concurrent Sessions | | | |
| 1:50pm - 2:40pm | Concurrent Sessions | | | |
| | | | | |

Open to Cobb and Non-Cobb teachers alike!

Conference Information online at www.stemcobb.com

Stemapalooza

Day 1 – June 19, 2018

Keynote Session 9:00 – 9:50

COBB COUNTY SCHOOL DISTRICT



Keynote Speaker
Day 1 – June 19th



STEM Beyond the USA: *What is happening internationally in STEM Education?*

David Lee is the STEM Coordinator at [Korea International School \(KIS\)](#) in Seongnam, Korea. His mission is to discover, share, and implement effective technology-enhanced learning practices that promote active, collaborative, and authentic life-long learning. Develop a transdisciplinary, project-based learning environment for students to develop foundational skills and knowledge for the 21st century workplace. And provide teachers with educational technology and STEM education professional development and classroom facilitation.

Learn more about David Lee at

<http://www.davidleedtech.org/>



Code.Org All Day Session

Day: Tues, 6/19 **Time:** 9:00-3:00 **Level:** K-5 **Room:** Comp Lab 533

Title: [Code.org CS Fundamentals Workshop](#)

Description: Our Computer Science Fundamentals courses have about 15 lessons that may be implemented as one unit or over the course of a semester. Students create computer programs that will help them learn to collaborate with others, develop problem-solving skills, and persist through difficult tasks. They will study programming concepts, computational thinking, digital citizenship, and develop interactive games or stories they can share. **Advance registration required.**

Presenter(s): Tanisha Foust

Conference Strand: STEM Tools & Resources

STEM Playground – 10:00-2:00

Day: Tues, 6/19 **Time:** 10:00-2:00 **Level:** K-12 **Room:** Media Center

Title: [STEM Playground](#)

Description: Come play with a variety of STEM tools and resources that you may be considering for your own classroom or school. Try before you buy! Check out the KSU iTeach MakerBus in the courtyard!

Presenter(s): Peggy Clay & KSU iTeach Staff

Conference Strand: STEM Tools & Resources



Session 1 - 10:00-10:50

Day: Tues, 6/19 **Time:** 10:00-10:50 **Level:** 7 **Room:** 505

Title: [Don't Wreck the Reef](#)

Description: This 5-day life science lesson plan from Georgia Tech's AMP-IT-UP curriculum gives students a chance to analyze real-world data and make real-world decisions.

Presenter(s): Betsy Sanford & Karen Kline

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 10:00-10:50 **Level:** 6-8 **Room:** 524

Title: [Cobb Model Water Tower Competition](#)

Description: Students work with Marietta & Cobb Water to learn about water conservation and transport. Students work through the engineering process to create a working water tower out of recycled materials. Students then compete with other local schools on structural and hydraulic efficiency of the water tower. <http://www.gawp.org/?page=MWTC>

Presenter(s): Crystal Mast, Natosha Miller & Kathy Nguyen

Conference Strand: STEM Planning & Lessons

WIFI Network: CCSDEvents
Password: cobb1234

Share your experiences!
 **#STEMCobb**

Day: Tues, 6/19 **Time:** 10:00-10:50 **Level:** K-12 **Room:** 504

Title: [Middle School Science Escape Rooms](#)

Description: Escape Rooms are all the rage! Use this FUN, interactive, cooperative game with your students as the perfect review for any unit. This will be a digital hands-on escape room lesson. Please plan to bring your own device (with a QR reader installed) to participate in this fun lesson. When you

escape the room, you will leave with ideas and resources to plan your own digital escape room review game!

Presenter(s): Dana Evans & Morgan Cochran

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 10:00-10:50 **Level:** K-12 **Room:** 523

Title: [A Different World: Seeing the World Through VR](#)

Description: What's one of the best things about technology in the classroom? Well, one of the best is being able to connect with the outside world, and thankfully we have a cutting edge technology that lets us do it easily in virtual reality! Come to this session to learn what you need to get started, how to jump in easily, and how to move to the next step of building your own. Of course, there is also time to experience it first hand, and an idea share to bring it all together!

Presenter(s): David Lockhart

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 10:00-10:50 **Level:** 6-12 **Room:** 502

Title: [Biology Investigations with Technology and Engineering \(BITE\)](#)

Description: The B.I.T.E. program aims to produce a digital mosquito map and "BITE Index" for Georgia communities by partnering with schools to engage students in authentic citizen-science and engineering design. Over the course of the program students will learn how to identify mosquito breeding areas, understand the mosquito life cycle, identify mosquito larva, and ultimately reduce the risk of mosquito-borne illnesses to their family.

Presenter(s): Eric Knapp

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 10:00-10:50 **Level:** K-5 **Room:** 507

Title: [Bloxels - Building Video Games with Elementary](#)

Description: Bloxels is a hands-on platform for kids to build, collaborate, and tell stories through video game creation. Watch the game world come to life as you build and animate characters, play spaces, and objects as you are the game designer, artist, programmer, storyteller, publisher and a player. Learn how we used this engaging tool with third and fourth graders. Walk away with plans for a one week unit. Download the Bloxels App and together we will learn the steps to begin building video games with your elementary kids.

Presenter(s): Kris Cable

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 10:00-10:50 **Level:** K-5 **Room:** 604

Title: [Elementary Robotics with Edison](#)

Description: Program mobile robots to navigate a maze using two coding languages (Block-style & Python). Advance registration required.

Presenter(s): Liz Miller

Conference Strand: STEM Tools & Resources

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| <p>Day: Tues, 6/19 Time: 10:00-10:50 Level: 9-12 Room: 506</p> <p>Title: Bridging the Gap between Science and ELA: A Study of Developing and Implementing a Science Literature Review</p> <p>Description: Science and English teachers detail their collaborative experience in creating a comprehensive cross-curricular unit that merges ELA with biology and chemistry through a shared literature review.</p> <p>Presenter(s): Maria Avitia-Freeman & Rex Kienel</p> <p>Conference Strand: STEM Planning & Lessons</p> |
| <p>Day: Tues, 6/19 Time: 10:00-10:50 Level: K-12 Leadership Room: 525</p> <p>Title: STEM/STEAM Certification</p> <p>Description: Is your school interested in Georgia DOE STEM or STEAM Certification? Join STEM/STEAM Program Specialists from the Georgia Department of Education for a deep-dive into certification requirements. Session facilitators will share best practices and review all components of the certification continuum.</p> <p>Presenter(s): Meghan McFerrin & Felicia Cullars</p> <p>Conference Strand: STEM Planning & Lessons</p> |
| <p>Day: Tues, 6/19 Time: 10:00-10:50 Level: K-5 Room: 606</p> <p>Title: Primary Breakout Boxes</p> <p>Description: In this session, you will leave with ideas for how to incorporate breakout boxes in a k-2 classroom to introduce, review and assess standards. You will have the opportunity to try out a breakout box, too!</p> <p>Presenter(s): Melissa Usrey</p> <p>Conference Strand: STEM Planning & Lessons</p> |
| <p>Day: Tues, 6/19 Time: 10:00-10:50 Level: K-8 Room: 623</p> <p>Title: Using Argumentation for Discussing Phenomena - Increasing Student Voice About STEM</p> <p>Description: Reduce teacher talk and increase purposeful student talk as we model consensus building through argumentation around intriguing science phenomenon that matter. ELA skills and the 21st century skills of communication and collaboration are a must in the STEM classroom!</p> <p>Presenter(s): Ned Colley & Valerie Sellers</p> <p>Conference Strand: STEM Planning & Lessons</p> |
| <p>Day: Tues, 6/19 Time: 10:00-10:50 Level: K-5 Room: 607</p> <p>Title: Man vs. Machine! Racing ROBOTS!</p> <p>Description: Man vs. Machine! Racing ROBOTS! Come and learn how to do basic coding to create a race against an Ollie Robot! You will design a code, then create an obstacle course to see if you can conquer the robot!</p> <p>Presenter(s): Sean Splawski</p> <p>Conference Strand: STEM Tools & Resources</p> |

Day: Tues, 6/19 **Time:** 10:00-10:50 **Level:** K-8 **Room:** 603

Title: [Innovation Concepts - Keys to Hands-on Learning](#)

Description: How can curiosity, student engagement and attendance be improved in out-of-school and informal learning settings? What are the essential ingredients to provide for innovation and STEAM in after school settings? This session presents Innovation Concepts that are essential to promote creativity and innovation. These Innovation Concepts are gleaned from The National Inventors Hall of Fame inductees and from over 27 years of providing curriculum in the only nationally recognized extended learning programs for Pre-K through middle school. Participants in this session will engage in hands-on activities and be encouraged to use the Innovation Concepts in their teaching to enhance student learning and engagement

Presenter(s): Shawn Wilson

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 10:00-10:50 **Level:** K-2 **Room:** 602

Title: [Creating Classroom Cultures of Discourse \(K-2\)](#)

Description: As students participate in STEM projects or 3-D science investigations, they are required to evaluate both their own and their peers' designs and explanations. It's important for students to learn how to provide respectful, evidence-based feedback to others. This session will model how to create a classroom culture that supports scientific discourse.

Presenter(s): Tracy Matthews

Conference Strand: STEM Tools & Resources

Session 1 – 10:00-11:50 - Double Sessions

Day: Tues, 6/19 **Time:** 10:00-11:50 **Level:** 6-12 **Room:** 526

Title: [When the Wheels are Turning, the Students are Learning!](#)

Description: This session will help those who are new to coding get up to speed! Appropriate for middle or high school students, this session will bring coding and hands-on together as you learn how to program a robotic vehicle (called a Rover) to perform different challenges. Code your rover to navigate an obstacle course, play a song while travel from one place to another, or make it investigate a model of Martian terrain just like Curiosity! No coding experience is necessary.

Presenter(s): Beth Smith & Dora Brown

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 10:00-11:50 **Level:** K-12 **Room:** Band Room 900

Title: [STARLAB Training](#)

Description: The Starlab is a portable planetarium. The training is a K-12th grade hands-on session that teaches you how to use \$40,000 worth of equipment that the county provides FREE of charge to those who have been trained. The training involves learning how to properly set up and pack up the

equipment. Teachers will also get a variety of astronomy lessons to do inside and outside the Starlab. This session is hands-on, so come prepared to have some fun! **Advance registration required.**

Presenter(s): Kelly Bodner

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 10:00-11:50 **Level:** K-8 **Room:** 527

Title: [From Dirt to Dishes: STEAM Gardening for Everyone](#)

Description: STEM in the Garden. We will share STEM garden activities. Even if you don't have a school garden you can grow delicious treats. We will also share "no cooking required" recipes. Come grow and cook with us!

Presenter(s): Krystal Evans & Amy Poole

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 10:00-11:50 **Level:** K-8 **Room:** 503

Title: [STEM with a Plot Twist](#)

Description: This session will focus on how to incorporate STEM with ELA instruction. I will focus on the unit project I created based on the novel, *Out of the Dust*, along with other read-aloud and novel STEM ideas. We will also go through the creative process in groups and see what we can create based off various novels/short stories, questioning, and research. Students love quality STEM instruction, which brings greater enthusiasm to the ELA classroom. As a result, their reading comprehension and writing skills improve, which is the ultimate goal! I will be giving away my project lesson plan for the novel, *Out of the Dust*.

Presenter(s): Laura Farmer

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 10:00-11:50 **Level:** K-8 **Room:** 522

Title: [Super STEM Challenges](#)

Description: STEM Challenges are student-centered explorations arranged around the engineering design process. This process takes students from identifying and understanding a problem, to designing, creating, testing, and improving possible solutions. Come and try out these explorations that kids absolutely love doing. Even better, they use materials that are cheap and easy to find.

Presenter(s): Tom Brown

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 10:00-11:50 **Level:** 6-12 **Room:** 624

Title: [VR Made Easy](#)

Description: Have you ever wanted to transport your students to different locations, but don't have the time or resources? Do you want learn how to easily use 360-degree images, video, and virtual reality in your classroom? In this workshop, you will learn the ways in which you can make your own immersive, virtual experiences, for as little as \$0, and how you can meaningfully implement such experiences into your classroom to support standards-based instruction. You will leave having explored various easy VR options, created your own 360-degree images, and will have time to create or adapt a lesson activity using these resources to support student learning.

Presenter(s): Nadia Williams

Conference Strand: STEAM

Session 2 – 11:00-11:50

Day: Tues, 6/19 **Time:** 11:00-11:50 **Level:** K-12 **Room:** 524

Title: [STEM with iFly](#)

Description: Have you experienced iFly yet? What are you waiting for? Come see how iFly has developed an engaging STEM experience for students of all ages! The classroom connections are legit and experience is more affordable than you might think.

Presenter(s): David Connor

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 11:00-11:50 **Level:** K-12 **Room:** 523

Title: [Become Future Ready! Start Coding Today!](#)

Description: Well folks we have a new language, and it's the language of the future. Coding is in! We have to get our students into this world where there simply aren't enough people yet. Apple, Google, and all the others don't have enough engineers to fill their jobs, and it is just going to get worse unless we do something about it. Come find simple coding solutions for both our beginning tiny ones and more advanced older crowd. You will get plenty of chances to both see how this can fit into your class, and to really get started with coding tools!

Presenter(s): David Lockhart

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 11:00-11:50 **Level:** 6-12 **Room:** 507

Title: [MS & HS InVenture](#)

Description: The K-12 InVenture Challenge at Georgia Tech is developing the next generation of engineers and entrepreneurs by making invention education accessible to all students and teachers in Georgia. This competition takes students through the design process to create an innovative device or process. Detailed lesson plans for middle and high school teachers are provided at <https://inventurechallenge.gatech.edu/>. This session gives you an overview of the design thinking process so that you can confidently challenge your students to become innovators.

Presenter(s): Heather Bell & Sandra Watts

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 11:00-11:50 **Level:** K-12 **Room:** 505

Title: [STEMtastic Field trips at Sparkles!](#)

Description: Our STEM educational field trip program at Sparkles Family Fun Centers immerses students in Science, Technology, Engineering and Math. The STEM concepts are related to many areas of the roller skating rink (from lights/sound to friction and motion), where students will learn that STEM is all around them, it is not just a concept found in science labs. Students participate in hands on activities taught by our dynamic STEM educator. After the interactive lesson, the students participate in two hours of the FUN physical fitness activity of roller skating and our indoor

playground. The eight great lessons we offer for grades K-5 are constantly evolving and have continued to get better throughout the course of the school year. We also offer great middle and high school programs! With competitive pricing and 2 great locations to choose from, Sparkles has the best STEM field trip around!

Presenter(s): Jessica Cranford & Jacob Thompson

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 11:00-11:50 **Level:** K-5 **Room:** 606

Title: [Starting With STEM](#)

Description: This is for people who have never planned/prepared/participated in a STEM lesson or day. Using a step by step process, this session will help guide you from how to get ideas to planning lessons and providing a great STEM experience.

Presenter(s): Jim Williams & Carley Pizza

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 11:00-11:50 **Level:** K-5 **Room:** 502

Title: [Use Science, Coding and Robotics in the Elementary Classroom to Solve Real-World Problems](#)

Description: During this hands-on workshop, participants will build and code robotic models as they explore exciting earth, space and life science lessons. Attendees will learn the importance of teaching coding and computational thinking at the elementary level and will walk away with concrete activities that will empower their students to solve real-world problems.

Presenter(s): John Garrett & Eric Knapp

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 11:00-11:50 **Level:** K-12 Leadership **Room:** 603

Title: [A STEAM Journey](#)

Description: "What do you want me to be?" This is the question asked to Dr. Katie Thompson that made her connect the importance of STEM education with the life of a child. Student empowerment is vital to the success of STEM education. Through experiences, trials, and tribulations, educators can grow in the knowledge and understanding of STEM, and how through integration and application success will come!

Presenter(s): Katie Thompson

Conference Strand: STEAM

Day: Tues, 6/19 **Time:** 11:00-11:50 **Level:** K-5 **Room:** 504

Title: [Literally STEM](#)

Description: How can teachers incorporate best practices in STEM Education while teaching ELA/Reading? We will share our experiences and resources discovered while bringing Reading to life using STEM practices in the Elementary classroom.

Presenter(s): Lisa Colbert & Latoya Wood

Conference Strand: STEM Planning & Lessons

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| <p>Day: Tues, 6/19 Time: 11:00-11:50 Level: 6-8 Room: 604</p> <p>Title: Simulated Earthquakes with Cubit STEAM Kits</p> <p>Description: Use problem-solving skills to create a house that can withstand an earthquake. Advance registration required.</p> <p>Presenter(s): Liz Miller</p> <p>Conference Strand: STEM Tools & Resources</p> |
| <p>Day: Tues, 6/19 Time: 11:00-11:50 Level: 9-12 Room: 506</p> <p>Title: Bridging the Gap between Science and ELA: A Study of Developing and Implementing a Science Literature Review</p> <p>Description: Science and English teachers detail their collaborative experience in creating a comprehensive cross-curricular unit that merges ELA with biology and chemistry through a shared literature review.</p> <p>Presenter(s): Maria Avitia-Freeman & Rex Kienel</p> <p>Conference Strand: STEM Planning & Lessons</p> |
| <p>Day: Tues, 6/19 Time: 11:00-11:50 Level: K-12 Leadership Room: 525</p> <p>Title: Student STEM/STEAM Journals</p> <p>Description: Student documentation is an essential component of STEM or STEAM school culture. This session will provide an overview of how to encourage design and process-based thinking and investigative research through student journaling.</p> <p>Presenter(s): Meghan McFerrin & Felicia Cullars</p> <p>Conference Strand: STEM Planning & Lessons</p> |
| <p>Day: Tues, 6/19 Time: 11:00-11:50 Level: K-8 Room: 623</p> <p>Title: Using Argumentation for Discussing Phenomena - Increasing Student Voice About STEM</p> <p>Description: Reduce teacher talk and increase purposeful student talk as we model consensus building through argumentation around intriguing science phenomenon that matter. ELA skills and the 21st century skills of communication and collaboration are a must in the STEM classroom!</p> <p>Presenter(s): Ned Colley & Valerie Sellers</p> <p>Conference Strand: STEM Planning & Lessons</p> |
| <p>Day: Tues, 6/19 Time: 11:00-11:50 Level: K-5 Room: 607</p> <p>Title: How to Win a Cobb Tank Grant!</p> <p>Description: Mableton will take you on a journey on how we won a CobbTank grant, "Let's Get Educiscized!" This innovative program is a Sports Science program that is being developed by the STEAM and P.E. Department. We were awarded over \$11,000 for this new innovative approach to teaching. You will have a chance to use the equipment and participate in Sports Science! You will also learn some tips and tricks of how we won along the way.</p> <p>Presenter(s): Sean Splawski</p> |

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 11:00-11:50 **Level:** 3-5 **Room:** 602

Title: [Creating Classroom Cultures for Discourse \(3-5\)](#)

Description: As students participate in STEM projects or 3-D science investigations, they are required to evaluate both their own and their peers' designs and explanations. It's important for students to learn how to provide respectful, evidence-based feedback to others. This session will model how to create a classroom culture that supports scientific discourse.

Presenter(s): Tracy Matthews

Conference Strand: STEM Tools & Resources

**Visit our Amazing
Exhibitors in the Cafeteria**



**You Can Win
A Prize!**



Lunch 11:50-12:40

Join us for a complementary
lunch in the cafeteria!



Session 3 - 12:50-1:40

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-5 **Room:** 523

Title: [Advancing STEM in the Cobb Target Classroom](#)

Description: How do we provide the most authentic and engaging STEM investigations for our gifted learners? How do we push these students beyond their zones of proximal development? In this session, we'll discuss the relationships between CCSD gifted standards and STEM. Join us for an informative and interactive session!

Presenter(s): Angela Wilson & Sarah Kessel

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** 7 **Room:** 505

Title: [Don't Wreck the Reef](#)

Description: This 5-day life science lesson plan from Georgia Tech's AMP-IT-UP curriculum gives students a chance to analyze real-world data and make real-world decisions.

Presenter(s): Betsy Sanford & Karen Kline

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** 6-8 **Room:** 524

Title: [Cobb Model Water Tower Competition](#)

Description: Students work with Marietta & Cobb Water to learn about water conservation and transport. Students work through the engineering process to create a working water tower out of recycled materials. Students then compete with other local schools on structural and hydraulic efficiency of the water tower. <http://www.gawp.org/?page=MWTC>

Presenter(s): Crystal Mast, Natosha Miller & Kathy Nguyen

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-12 **Room:** 504

Title: [Middle School Science Escape Rooms](#)

Description: Escape Rooms are all the rage! Use this FUN, interactive, cooperative game with your students as the perfect review for any unit. This will be a digital hands-on escape room lesson. Please plan to bring your own device (with a QR reader installed) to participate in this fun lesson. When you escape the room, you will leave with ideas and resources to plan your own digital escape room review game!

Presenter(s): Dana Evans & Morgan Cochran

Conference Strand: STEM Planning & Lessons

Don't Miss Out...



12:00-2:00
In the
KMHS
Courtyard

Sponsored by:



Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** 6-8 **Room:** 621

Title: [Aquapontastic STEM Challenge](#)

Description: Join the 8th grade STEM Academy teachers of Cooper Middle School to learn about the aquaponics project funded by the Cobb Tank Grant. Our STEM project challenges our students to design and create a self-sustaining aquaponics system that combines hydroponics (cultivating plants in water) and marine life (primarily fish) in a symbiotic environment. The project employs many cross-cutting concepts from mathematics and all three middle school science fields. We will share our aquaponics curriculum including a simple introductory lesson and a demonstration of setting up a system with a bucket and an aquarium.

Presenter(s): Diane Goldsberry & Stephanie Ruffner

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-5 **Room:** 502

Title: [Use Science, Coding and Robotics in the Elementary Classroom to Solve Real-World Problems](#)

Description: During this hands-on workshop, participants will build and code robotic models as they explore exciting earth, space and life science lessons. Attendees will learn the importance of teaching coding and computational thinking at the elementary level and will walk away with concrete activities that will empower their students to solve real-world problems.

Presenter(s): John Garrett & Eric Knapp

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-12 Leadership **Room:** 603

Title: [A STEAM Journey](#)

Description: "What do you want me to be?" This is the question asked to Dr. Katie Thompson that made her connect the importance of STEM education with the life of a child. Student empowerment is vital to the success of STEM education. Through experiences, trials, and tribulations, educators can grow in the knowledge and understanding of STEM, and how through integration and application success will come!

Presenter(s): Katie Thompson

Conference Strand: STEAM

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-5 **Room:** 507

Title: [Bloxels - Building Video Games with Elementary](#)

Description: Bloxels is a hands-on platform for kids to build, collaborate, and tell stories through video game creation. Watch the game world come to life as you build and animate characters, play spaces, and objects as you are the game designer, artist, programmer, storyteller, publisher and a player. Learn how we used this engaging tool with third and fourth graders. Walk away with plans for a one week unit. Download the Bloxels App and together we will learn the steps to begin building video games with your elementary kids.

Presenter(s): Kris Cable

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** 9-12 **Room:** 604

Title: [Robotics & Sensors with Arduino](#)

Description: Explore the use of sensors and data collection to make problem-solving decisions. Advance registration required.

Presenter(s): Liz Miller

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-5 **Room:** Media Center

Title: [Making Time for Maker Space](#)

Description: Experience maker space first hand! Learn how this primary teacher integrates maker space with the Georgia Standards of Excellence. You will leave with ready to go ideas for next school year!

Presenter(s): Lyssa Sahadevan

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-12 **Room:** 525

Title: [OkGo Sandbox with Google Science Journal App](#)

Description: You already know their famous Rube Goldberg YouTube video (This Too Shall Pass by Ok Go). But did you know Ok Go has teamed up with Google's free Science Journal App that enables your smart phone / tablet to show its sensitive side? Barometer, seismometer, accelerometer, sound sensor (decibels and pitch), light sensor. These things are already in your phone! Let's show your students how to use them for experiments, science fair projects, etc. www.OkGoSandbox.org

Presenter(s): Matt Farrell & Kimberly Hutcheson

Conference Strand: STEAM

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-5 **Room:** 606

Title: [Primary Breakout Boxes](#)

Description: In this session, you will leave with ideas for how to incorporate breakout boxes in a k-2 classroom to introduce, review and assess standards. You will have the opportunity to try out a breakout box, too!

Presenter(s): Melissa Usrey

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-12 **Room:** 622

Title: [Putt-Putt Boats \(Full STEAM Ahead!\)](#)

Description: Come learn about the steam engine and how you can incorporate history and physics into this simple STEM lesson using a soda can, two straws, a candle, a milk carton and a whole lot of imagination!

Presenter(s): Michael Lee

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-8 **Room:** 623

Title: [Science Nights with STEMscopes](#)

Description: Distinguishing STEMscopes has partnered with Philippe Cousteau and EarthEcho International to develop Science Nights for schools that turn learning into action. Come see how you can both learn new science content and help save Earth's most valuable resource. Leave with the tools to make your campus science night an unforgettable event for students and families.

Presenter(s): Ned Colley

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-8 **Room:** 623

Title: [Science Nights with STEMscopes](#)

Description: Distinguishing STEMscopes has partnered with Philippe Cousteau and EarthEcho International to develop Science Nights for schools that turn learning into action. Come see how you can both learn new science content and help save Earth's most valuable resource. Leave with the tools to make your campus science night an unforgettable event for students and families.

Presenter(s): Ned Colley

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-5 **Room:** 607

Title: [Man vs. Machine! Racing ROBOTS!](#)

Description: Man vs. Machine! Racing ROBOTS! Come and learn how to do basic coding to create a race against an Ollie Robot! You will design a code, then create an obstacle course to see if you can conquer the robot!

Presenter(s): Sean Splawski

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 12:50-1:40 **Level:** K-12 **Room:** 624

Title: [\(Don't\) Quit Playing Games With My Class](#)

Description: In this session, learn how to use video, card, board, and kinesthetic games to convey educational concepts. We will take things a step further by applying elements of game mechanics into classroom organization and management, so that you can maximize the level of engagement in your class. In addition, you will spend time then adapting games to support instruction in your classroom.

Presenter(s): Nadia Williams

Conference Strand: STEM Planning & Lessons

Session 3 – 12:50-2:40 (Double Session)

Day: Tues, 6/19 **Time:** 12:50-2:40 **Level:** 6-12 **Room:** 526

Title: [When the Wheels are Turning, the Students are Learning!](#)

Description: This session will help those who are new to coding get up to speed! Appropriate for middle or high school students, this session will bring coding and hands-on together as you learn how to program a robotic vehicle (called a Rover) to perform different challenges. Code your rover to navigate an obstacle course, play a song while travel from one place to another, or make it investigate a model of Martian terrain just like Curiosity! No coding experience is necessary.

Presenter(s): Beth Smith & Dora Brown

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-2:40 **Level:** K-12 **Room:** 506

Title: [Design Thinking: Integrating Empathy and Human-Centered Design into STEM](#)

Description: Learn how to integrate the design thinking process and mindsets into your STEM projects. In this session, you will experience the design thinking process first-hand and learn how you can implement this method into your STEM projects.

Participants in this workshop will:

learn and experience each phase of the design thinking process.

see examples of projects that implemented the design thinking process.

learn how to implement design thinking into their current STEM projects.

Presenter(s): David Lee

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-2:40 **Level:** K-12 **Room:** Band Room 900

Title: [STARLAB Training](#)

Description: The Starlab is a portable planetarium. The training is a K-12th grade hands-on session that teaches you how to use \$40,000 worth of equipment that the county provides FREE of charge to those who have been trained. The training involves learning how to properly set up and pack up the equipment. Teachers will also get a variety of astronomy lessons to do inside and outside the Starlab. This session is hands-on, so come prepared to have some fun! Advance registration required.

Presenter(s): Kelly Bodner

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 12:50-2:40 **Level:** K-8 **Room:** 527

Title: [From Dirt to Dishes: STEAM Gardening for Everyone](#)

Description: STEM in the Garden. We will share STEM garden activities. Even if you don't have a school garden you can grow delicious treats. We will also share "no cooking required" recipes. Come grow and cook with us!

Presenter(s): Krystal Evans & Amy Poole

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-2:40 **Level:** K-8 **Room:** 503

Title: [STEM with a Plot Twist](#)

Description: This session will focus on how to incorporate STEM with ELA instruction. I will focus on the unit project I created based on the novel, Out of the Dust, along with other read-aloud and novel STEM ideas. We will also go through the creative process in groups and see what we can create based off various novels/short stories, questioning, and research. Students love quality STEM instruction, which brings greater enthusiasm to the ELA classroom. As a result, their reading comprehension and writing skills improve, which is the ultimate goal! I will be giving away my project lesson plan for the novel, Out of the Dust.

Presenter(s): Laura Farmer

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-2:40 **Level:** K-8 **Room:** 522

Title: [Super STEM Challenges](#)

Description: STEM Challenges are student-centered explorations arranged around the engineering design process. This process takes students from identifying and understanding a problem, to designing, creating, testing, and improving possible solutions. Come and try out these explorations that kids absolutely love doing. Even better, they use materials that are cheap and easy to find.

Presenter(s): Tom Brown

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 12:50-2:40 **Level:** 6-12 **Room:** 602

Title: [Creating Classroom Cultures for Discourse \(6-12\)](#)

Description: As students participate in STEM projects or 3-D science investigations, they are required to evaluate both their own and their peers' designs and explanations. It's important for students to learn how to provide respectful, evidence-based feedback to others. This session will model how to create a classroom culture that supports scientific discourse. Participants will also actively participate in the Science and Engineering Practices of Modeling, Constructing Explanations, and Engaging in Argument from Evidence (using CER) while exploring phenomena.

Presenter(s): Tracy Matthews

Conference Strand: STEM Tools & Resources

Session 4 – 1:50-2:40

Day: Tues, 6/19

Time: 1:50-2:40

Level: K-12

Room: 523

Title: [Advancing STEM for Advanced Learners](#)

Description: This interactive session focuses on methods for engaging and challenging advanced learners with authentic STEM investigations. We'll discuss the development and application of skills that parallel those of experts in the field. We'll look at ways to increase rigor and examine the role of in-depth research. Let's provide the challenging STEM tasks our advanced learners crave!

Presenter(s): Angela Wilson & Sarah Kessel

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19

Time: 1:50-2:40

Level: 6-8

Room: 621

Title: [Aquapontastic STEM Challenge](#)

Description: Join the 8th grade STEM Academy teachers of Cooper Middle School to learn about the aquaponics project funded by the Cobb Tank Grant. Our STEM project challenges our students to design and create a self-sustaining aquaponics system that combines hydroponics (cultivating plants in water) and marine life (primarily fish) in a symbiotic environment. The project employs many cross-cutting concepts from mathematics and all three middle school science fields. We will share our aquaponics curriculum including a simple introductory lesson and a demonstration of setting up a system with a bucket and an aquarium.

Presenter(s): Diane Goldsberry & Stephanie Ruffner

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19

Time: 1:50-2:40

Level: K-12 Leadership

Room: 524

Title: [STEAM: The Challenge Island Way](#)

Description: Present the Challenge Island approach to STEAM and how we can support schools looking to become STEM certified or just enhance their use of STEAM in the classroom, during summer camps, or for after school.

Presenter(s): Dwight Parker & Kindrica Fannin

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19

Time: 1:50-2:40

Level: K-12 Leadership

Room: 502

Title: [Developing and Sustaining Partnerships in STEM](#)

Description: Participants will learn how to develop new STEM partnerships and sustain existing STEM partnerships using the 6 Levels of Engagement as well as the Collaboration Triangle. Additionally, participants will complete a partnership assessment and corresponding action plan that will allow schools to further engage partners in STEM.

Presenter(s): Eric Knapp

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 1:50-2:40 **Level:** 6-12 **Room:** 507

Title: [MS & HS InVenture](#)

Description: The K-12 InVenture Challenge at Georgia Tech is developing the next generation of engineers and entrepreneurs by making invention education accessible to all students and teachers in Georgia. This competition takes students through the design process to create an innovative device or process. Detailed lesson plans for middle and high school teachers are provided at <https://inventurechallenge.gatech.edu/>. This session gives you an overview of the design thinking process so that you can confidently challenge your students to become innovators.

Presenter(s): Heather Bell & Sandra Watts

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 1:50-2:40 **Level:** K-12 **Room:** 505

Title: [STEMtastic Field trips at Sparkles!](#)

Description: Our STEM educational field trip program at Sparkles Family Fun Centers immerses students in Science, Technology, Engineering and Math. The STEM concepts are related to many areas of the roller skating rink (from lights/sound to friction and motion), where students will learn that STEM is all around them, it is not just a concept found in science labs. Students participate in hands on activities taught by our dynamic STEM educator. After the interactive lesson, the students participate in two hours of the FUN physical fitness activity of roller skating and our indoor playground. The eight great lessons we offer for grades K-5 are constantly evolving and have continued to get better throughout the course of the school year. We also offer great middle and high school programs! With competitive pricing and 2 great locations to choose from, Sparkles has the best STEM field trip around!

Presenter(s): Jessica Cranford & Jacob Thompson

Conference Strand: STEM Tools & Resources

Day: Tues, 6/19 **Time:** 1:50-2:40 **Level:** K-5 **Room:** 606

Title: [Starting With STEM](#)

Description: This is for people who have never planned/prepared/participated in a STEM lesson or day. Using a step by step process, this session will help guide you from how to get ideas to planning lessons and providing a great STEM experience.

Presenter(s): Jim Williams & Carley Pizza

Conference Strand: STEM Planning & Lessons

Day: Tues, 6/19 **Time:** 1:50-2:40 **Level:** K-5 **Room:** 504

Title: [Literally STEM](#)

Description: How can teachers incorporate best practices in STEM Education while teaching ELA/Reading? We will share our experiences and resources discovered while bringing Reading to life using STEM practices in the Elementary classroom.

Presenter(s): Lisa Colbert & Latoya Wood

Conference Strand: STEM Planning & Lessons

| | | | |
|---|------------------------|--------------------|------------------|
| Day: Tues, 6/19 | Time: 1:50-2:40 | Level: K-5 | Room: 0 |
| Title: Making Time for Maker Space | | | |
| Description: Experience maker space first hand! Learn how this primary teacher integrates maker space with the Georgia Standards of Excellence. You will leave with ready to go ideas for next school year! | | | |
| Presenter(s): Lyssa Sahadevan | | | |
| Conference Strand: STEM Planning & Lessons | | | |
| Day: Tues, 6/19 | Time: 1:50-2:40 | Level: K-12 | Room: 525 |
| Title: OkGo Sandbox with Google Science Journal App | | | |
| Description: You already know their famous Rube Goldberg YouTube video (This Too Shall Pass by Ok Go). But did you know Ok Go has teamed up with Google's free Science Journal App that enables your smart phone / tablet to show its sensitive side? Barometer, seismometer, accelerometer, sound sensor (decibels and pitch), light sensor. These things are already in your phone! Let's show your students how to use them for experiments, science fair projects, etc. www.OkGoSandbox.org | | | |
| Presenter(s): Matt Farrell & Kimberly Hutcheson | | | |
| Conference Strand: STEAM | | | |
| Day: Tues, 6/19 | Time: 1:50-2:40 | Level: K-12 | Room: 622 |
| Title: Putt-Putt Boats (Full STEAM Ahead!) | | | |
| Description: Come learn about the steam engine and how you can incorporate history and physics into this simple STEM lesson using a soda can, two straws, a candle, a milk carton and a whole lot of imagination! | | | |
| Presenter(s): Michael Lee | | | |
| Conference Strand: STEM Planning & Lessons | | | |
| Day: Tues, 6/19 | Time: 1:50-2:40 | Level: K-5 | Room: 607 |
| Title: How to Win a Cobb Tank Grant! | | | |
| Description: Mableton will take you on a journey on how we won a CobbTank grant, "Let's Get Educized!" This innovative program is a Sports Science program that is being developed by the STEAM and P.E. Department. We were awarded over \$11,000 for this new innovative approach to teaching. You will have a chance to use the equipment and participate in Sports Science! You will also learn some tips and tricks of how we won along the way. | | | |
| Presenter(s): Sean Splawski | | | |
| Conference Strand: STEM Tools & Resources | | | |
| Day: Tues, 6/19 | Time: 1:50-2:40 | Level: K-8 | Room: 603 |
| Title: Innovation Concepts - Keys to Hands-on Learning | | | |
| Description: How can curiosity, student engagement and attendance be improved in out-of-school and informal learning settings? What are the essential ingredients to provide for innovation and STEAM in after school settings? This session presents Innovation Concepts that are essential to promote creativity and innovation. These Innovation Concepts are gleaned from The National | | | |

Inventors Hall of Fame inductees and from over 27 years of providing curriculum in the only nationally recognized extended learning programs for Pre-K through middle school. Participants in this session will engage in hands-on activities and be encouraged to use the Innovation Concepts in their teaching to enhance student learning and engagement

Presenter(s): Shawn Wilson

Conference Strand: STEM Tools & Resources

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StemPalooza

Day 2 – June 20, 2018

Keynote Presentation 9:00-9:50

COBB COUNTY SCHOOL DISTRICT



Keynote Speaker
Day 2 – June 20th



Equity and STEM: *How to provide underrepresented populations access to STEM.*

Dr. Cindy Moss is currently the Senior Director of Global STEM Initiatives for Discovery Education, and travels the world helping companies, nonprofits, Ministries of Education and school districts understand the importance of STEM education and how to implement it successfully. Previously Dr. Moss served 10 years as the PreK-12 Director of STEM for the 145,000 students and 10,000 teachers in the Charlotte Mecklenburg School system. While there her work to decrease the achievement gap helped earn the district the Broad Award, often considered the superbowl of urban education.

Sponsored by: 

Follow Dr. Cindy Moss on Twitter @STEMBoss



Code.Org All Day Session

Day: Wed, 6/20 **Time:** 9:00-3:00 **Level:** K-5 **Room:** Comp Lab 533

Title: [Code.org CS Fundamentals Workshop](#)

Description: Our Computer Science Fundamentals courses have about 15 lessons that may be implemented as one unit or over the course of a semester. Students create computer programs that will help them learn to collaborate with others, develop problem-solving skills, and persist through difficult tasks. They will study programming concepts, computational thinking, digital citizenship, and develop interactive games or stories they can share. **Advance registration required.**

Presenter(s): Tanisha Foust

Conference Strand: STEM Tools & Resources

STEM Playground – 10:00-2:00

Day: Wed, 6/20 **Time:** 10:00-2:00 **Level:** K-12 **Room:** Media Center

Title: [STEM Playground](#)

Description: Come play with a variety of STEM tools and resources that you may be considering for your own classroom or school. Try before you buy! Check out the KSU iTeach MakerBus in the courtyard!

Presenter(s): Peggy Clay & KSU iTeach Staff

Conference Strand: STEM Tools & Resources



Session 1 - 10:00-10:50

Day: Wed, 6/20 **Time:** 10:00-10:50 **Level:** K-2 **Room:** 603

Title: [Robots and Screen-Free Coding for Your Youngest Learners](#)

Description: Come play with the KIBO robot! Get hands-on with this screen-free coding and robotics kit for ages 4-7, while you hear about ideas for integrating these activities within existing curriculum. We'll share how easy it is to integrate robotics within the classroom to engage young students to learn STEAM concepts. We will also feature real world examples from the classroom, including scientific instruction on Light and Sounds!

Presenter(s): Melissa Usrey & Jeff Miller

Conference Strand: STEAM

Day: Wed, 6/20 **Time:** 10:00-10:50 **Level:** K-12 Leadership **Room:** 623

Title: [STEM Certification Programs](#)

Description: The National Institute for STEM Education (NISE) certifies teachers, campuses, and districts in STEM teaching. Using a competency-based, academic coach-led online learning platform, educators produce a portfolio of work that demonstrates proficiency across 15 STEM teacher actions. Popular in Georgia for promoting academic excellence in STEM areas leading to future evaluations and certifications for your building and district. Cobb teachers who attend this session will be entered into a drawing to receive a subscription to this course for FREE! More info about this program can be found on this flyer: https://cobbk12org-my.sharepoint.com/:b:/g/personal/tania_pachuta_cobbk12_org/Ed7NGIQXPodEodkYn8O7_yQByxJL_IJK4N8b9EHSNmR8tg?e=O1LuE1

Presenter(s): Ned Colley

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 10:00-10:50 **Level:** K-2 **Room:** 504

Title: [Primary Share-athon](#)

Description: Have great STEM ideas to share? Need great STEM ideas for your K-2 classroom? Let's collaborate and share our great ideas together!

Presenter(s): Susanne Smith

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 10:00-10:50 **Level:** 6-8 **Room:** 606

Title: [Do You Have The Right Stuff For Mars Exploration?](#)

Description: A variety of STEM/PBL force & motion challenges in a unit aligned with 8th grade Science standards: Begin with mission planning, land a moving payload on a target, protect the payload from landing forces, and engineer a wind powered rover. All challenges are designed around budgets and/or materials criteria & constraints.

Presenter(s): Tami McIntire

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 10:00-10:50 **Level:** K-5 **Room:** Comp Lab 330

Title: [Start Them Early: Coding for K-2 Students Using ScratchJr](#)

Description: In this hands-on session for beginners, learn how to introduce coding to young learners using the introductory programming language, ScratchJr. With this program, students can create their own interactive stories and games by snapping together graphical programming blocks to create scripts that will make characters move, jump, dance, and sing! Leave the session with ideas on how to implement ScratchJr into the curriculum and create your own ScratchJr project!

Requirement: Download the ScratchJr app on your iPad and bring your fully charged iPad to the session.

Presenter(s): Tamieka Grizzle

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 10:00-10:50 **Level:** K-2 **Room:** 602

Title: [Creating Classroom Cultures of Discourse \(K-2\)](#)

Description: As students participate in STEM projects or 3-D science investigations, they are required to evaluate both their own and their peers' designs and explanations. It's important for students to learn how to provide respectful, evidence-based feedback to others. This session will model how to create a classroom culture that supports scientific discourse.

Presenter(s): Tracy Matthews

Conference Strand: STEM Tools & Resources

Session 1 - 10:00-11:50 (Double Sessions)

Day: Wed, 6/20 **Time:** 10:00-11:50 **Level:** K-5 **Room:** 524

Title: [Cobb County Public Library System STEM Stacker Kits](#)

Description: What does the Georgia Science Teachers Association, 4-H and Cobb County Public Library System have in common . . . a passion for STEM. Discover how you can use your CCPLS Educator card to check out more than just books!

Presenter(s): Chinita Allen, Kathleen McElroy & Deborah Feanny

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 10:00-11:50 **Level:** 6 **Room:** 622

Title: [Asteroid Shelter PBL](#)

Description: Students are given the scenario of having to build an underground shelter large enough to house the population of a large city for 1 year after an asteroid has struck a city on Earth. The Asteroid Shelter Project is offered to sixth STEM class. The purpose of the project is to combine engineering, technology, and mathematics along with the sixth grade science standards to enhance enduring understanding of the concepts of geology, hydrology, meteorology, and astronomy.

Presenter(s): Corrinne Golding & Monica Moore

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 10:00-11:50 **Level:** K-12 **Room:** 506

Title: [Design Thinking: Integrating Empathy and Human-Centered Design into STEM](#)

Description: Learn how to integrate the design thinking process and mindsets into your STEM projects. In this session, you will experience the design thinking process first-hand and learn how you can implement this method into your STEM projects.

Participants in this workshop will:

learn and experience each phase of the design thinking process.

see examples of projects that implemented the design thinking process.

learn how to implement design thinking into their current STEM projects.

Presenter(s): David Lee

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 10:00-11:50 **Level:** 6-12 **Room:** 624

Title: [Go-speed Racer...Go!](#)

Description: The new Georgia Standards of Excellence in the physical sciences require students to "Plan and carry out" investigations related to kinematics, energy, and light. In this fun hands-on casual experience, be a student, design and write your own kinematics experiment, use controlled experiment protocols and the engineering cycle to analyze, refine and modify, and improve your investigation.

Presenter(s): Jason Ritchie

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 10:00-11:50 **Level:** 6-12 **Room:** 503

Title: [Phenomenal Learning with the Science GSE](#)

Description: Ugh, why do we even have to learn this? OR Wow! Why did that happen? How does that work? Which would you rather hear from your students? Using real-world phenomena to anchor lessons can engage your students, make learning relevant to them, and help them understand the role science plays in understanding our world. Find phenomena for your classroom and learn how to build engaging lessons based on those phenomena.

Presenter(s): Jeremy Peacock

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 10:00-11:50 **Level:** 6-8 **Room:** 525

Title: [Using Green Screen Technology in the Classroom](#)

Description: This class is geared toward middle school students who can use green screens to create travel videos, weather reports, time travel, illustrate scientific processes, and anything imaginable. The only equipment needed is an iPad/iPhone App and a green plastic table cloth or bulletin board paper.

Presenter(s): Linda Guillory

Conference Strand: STEM Tools & Resources



Day: Wed, 6/20 **Time:** 10:00-11:50 **Level:** K-8 **Room:** 604

Title: [True STEM](#)

Description: We will present components of TRUE STEM design challenges. Participants will have an overview of the Engineering Design Process, evaluate scenarios, and will complete a STEM challenge. At the conclusion of the challenge, teams will identify the TRUE STEM elements present in the challenge and will engage in a group discussion about integration of STEM challenges in their curriculum.

Presenter(s): Stacy Pitts & Christy Garvin

Conference Strand: STEM Planning & Lessons

Session 2 - 11:00-11:50

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** K-5 Leadership **Room:** 527

Title: [Utilizing Foundations To Support STEM Initiatives](#)

Description: Sharing the Foundation's involvement in implementing STEM initiatives and learning opportunities for our students.

Presenter(s): Amanda Johnson & Paula Todd

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** K-5 **Room:** Comp Lab 328

Title: [Full Steam Ahead with The 3 Billy Goats Gruff](#)

Description: We will present how we read this fairy tale (along with many versions of it) and at the end the students retell the original version using a potato that has been balanced to decide if it is the biggest billy goat, smallest or medium sized goat. Then, the students have to engineer a bridge to support the biggest goat and troll's weight. Along the way, students will also design a story map.

Presenter(s): Amanda Smith & Amanda Gillespie

Conference Strand: STEAM

WIFI Network: [CCSDEvents](#)
Password: [cobb1234](#)

Share your experiences!
 **[#STEMCobb](#)**

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** K-12 **Room:** 523

Title: [Advancing STEM for Advanced Learners](#)

Description: This interactive session focuses on methods for engaging and challenging advanced learners with authentic STEM investigations. We'll discuss the development and application of skills that parallel those of experts in the field. We'll look at ways to increase rigor and examine the role of in-depth research. Let's provide the challenging STEM tasks our advanced learners crave!

Presenter(s): Angela Wilson

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** 6-12 **Room:** 526

Title: [Are You Moody?](#)

Description: We will bring math, science and coding together as participants learn to do some basic coding (no experience necessary) while developing a mood ring! The science of color mixing is explored while determining the right body temperature thresholds. Is fuchsia flirty? Should green be groovy? It's up to you!

Presenter(s): Beth Smith & Wendy Peel

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** K-8 **Room:** Band Room 900

Title: [Star Lab](#)

Description: Find out how you can bring the Star Lab to your school! This will be a demonstration of a Star Lab class. You will view many of the different cylinders, hear stories and lessons. At the end you will get a hand out with the training dates and information on how to sign up for the Star Labs so you can bring this resource to your school!

Presenter(s): Dana Evans

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** 6-8 **Room:** 607

Title: [Getting Students Involved in Math Teams](#)

Description: Cobb County offers different tournaments and competitions for our students. This session will focus on the Cobb specific tournaments and competitions, along with other local and state competitions certain schools choose to participate in. Come see the components to each and help your students become more involved in math tournaments and competitions.

Presenter(s): Geraldine Lee

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** 6-12 **Room:** 522

Title: [Easy Ways to Add Science and Engineering to Math](#)

Description: Do you get the question, "Why are we learning this?" Come learn some real world applications of middle and high school math. From making a logarithmic timeline of the history of earth to the geometry of crystals, make math come to life.

Presenter(s): Julie Kokan

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** K-12 Leadership **Room:** 507

Title: [STEM-R](#)

Description: Science, Technology, Engineering, Math and.... Reading? Yes! In this session, you will learn how Perspective STEM Education is utilizing graphic novels (comic books) to increase excitement and engagement in STEM Education. You will also have the opportunity to learn how you can do the same in your classroom and or school.

Presenter(s): Magalie Awosika

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** K-2 **Room:** 603

Title: [Robots and Screen-Free Coding for Your Youngest Learners](#)

Description: Come play with the KIBO robot! Get hands-on with this screen-free coding and robotics kit for ages 4-7, while you hear about ideas for integrating these activities within existing curriculum. We'll share how easy it is to integrate robotics within the classroom to engage young students to learn STEAM concepts. We will also feature real world examples from the classroom, including scientific instruction on Light and Sounds!

Presenter(s): Melissa Usrey & Jeff Miller

Conference Strand: STEAM

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** K-12 Leadership **Room:** 623

Title: [STEM Certification Programs](#)

Description: The National Institute for STEM Education (NISE) certifies teachers, campuses, and districts in STEM teaching. Using a competency-based, academic coach-led online learning platform, educators produce a portfolio of work that demonstrates proficiency across 15 STEM teacher actions. Popular in Georgia for promoting academic excellence in STEM areas leading to future evaluations and certifications for your building and district. Cobb teachers who attend this session will be entered into a drawing to receive a subscription to this course for FREE! More info about this program can be found on this flyer: https://cobbk12org-my.sharepoint.com/:b:g/personal/tania_pachuta_cobbk12_org/Ed7NGIQXPodEodkYn8O7_yQByxJL_IJK4N8b9EHSNmR8tg?e=O1LuE1

Presenter(s): Ned Colley

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** 6-12 Leadership **Room:** 621

Title: [STEMing a Grand Impact with Grand Challenges](#)

Description: Introduction to the National Engineering Grand Challenges and how they can be used to develop STEM connections in all content areas.

Presenter(s): Stephanie Ruffner

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** K-2 **Room:** 504

Title: [Magnocar Challenge](#)

Description: For this K-2 STEM activity, your students will be challenged to design and build a car that is powered by magnetic force. Can your car successfully make it around all 3 tracks at the speedway?

Presenter(s): Susanne Smith

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** K-5 **Room:** Comp Lab 330

Title: [Start Them Early: Coding for K-2 Students Using ScratchJr](#)

Description: In this hands-on session for beginners, learn how to introduce coding to young learners using the introductory programming language, ScratchJr. With this program, students can create their own interactive stories and games by snapping together graphical programming blocks to create scripts that will make characters move, jump, dance, and sing! Leave the session with ideas on how to implement ScratchJr into the curriculum and create your own ScratchJr project!
Requirement: Download the ScratchJr app on your iPad and bring your fully charged iPad to the session.

Presenter(s): Tamiaka Grizzle

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** K-5 **Room:** 606

Title: [Mouse Trap Centers](#)

Description: Learn how to create independent student centers for grades K-5 where students will program a robotic mouse to perform specific missions and thus demonstrate knowledge of desired curriculum standards. This is a low cost way to incorporate robotics into all content areas and grades.

Presenter(s): Teresa Bailey & Casey Simanski

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** 3-5 **Room:** 602

Title: [Creating Classroom Cultures for Discourse \(3-5\)](#)

Description: As students participate in STEM projects or 3-D science investigations, they are required to evaluate both their own and their peers' designs and explanations. It's important for students to learn how to provide respectful, evidence-based feedback to others. This session will model how to create a classroom culture that supports scientific discourse.

Presenter(s): Tracy Matthews

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 11:00-11:50 **Level:** K-8 **Room:** 505

Title: [Capitalizing the M in STEM: Strengthening the Math in Your STEM](#)

Description: Would you like to strengthen the math in your STEM? Come play with force, motion, gravity and math. In this workshop you will participate in a science based STEM activity with a rigorous and relevant math connection, and then a math based STEM activity with a rigorous and relevant science connection. We will discuss math as an igniter of wonder, as the gateway to STEM careers, and as a genuine foundation for STEM activities. And no, you do not need to be good at math to attend, but don't get mad if you leave loving math more than you did when you arrived.

Presenter(s): Vonae Tanner

Conference Strand: STEM Planning & Lessons

Lunch 11:50-12:40

Join us for a complementary
lunch in the cafeteria!

ROLY POLY

the original

Rolled Sandwiches • Soups • Salads

Visit our Amazing Exhibitors in the Cafeteria



You Can Win
A Prize!



Session 3 – 12:50-1:40

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** K-12 **Room:** 623

Title: [Destination Imagination](#)

Description: Destination Imagination is a unique cross-curricular Challenge/project based educational experience that engages both traditional and non-traditional STE(A)M participants. Attendees will receive short Challenge activities (called Instant Challenges), a Mars or Bust Team Challenge and materials for an introduction activity to take back to your classroom.

Presenter(s): Annette Rogers

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** 6-12 **Room:** 526

Title: [STEAM-a-lama-ding-dong](#)

Description: Music is a great way to get kids excited about STEAM. Learn how to use your calculators, a TI-Innovator hub, and some imagination to get kids excited about coding and engineering. This session will help any coding novice become comfortable with the basics by challenging them to create a popular song using a little imagination, cooperation, and coding on their calculator!

Presenter(s): Beth Smith & Wendy Peel

Conference Strand: STEAM

Don't Miss Out...



12:00-2:00
In the
KMHS
Courtyard

Sponsored by:



Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** K-12 **Room:** 523

Title: [A Different World: Seeing the World Through VR](#)

Description: What's one of the best things about technology in the classroom? Well, one of the best is being able to connect with the outside world, and thankfully we have a cutting edge technology that lets us do it easily in virtual reality! Come to this session to learn what you need to get started, how to jump in easily, and how to move to the next step of building your own. Of course, there is also time to experience it first hand, and an idea share to bring it all together!

Presenter(s): David Lockhart

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** 4-5 **Room:** 504

Title: [Differentiating STEM Challenges for High Achieving Students](#)

Description: Having trouble challenging your high achieving learners during STEM activities? Learn classroom tested strategies for pushing these students to become the engineers, designers, and scientists you know they can be! Presented by 4th and 5th grade Advanced Content teachers, this session is best suited for upper elementary classrooms.

Presenter(s): Hannah Bentley & Ryan Dunn

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** K-5 Leadership **Room:** 527

Title: [Taking Your School to STEM](#)

Description: Converting a school from the traditional teaching and learning school to a STEM/STEAM concept of teaching and learning is a daunting task. There are usually more questions than there are answers. In this session, we will share our experiences of converting the thinking of our faculty, students and stakeholders to embark on the journey of changing our school from a traditional school to a Georgia Certified STEM school and from a STEM school to a STEAM school. We will share our experiences of whole school implementation with the different implementation methods and the obstacles that were presented along the way. This session will activate the thinking of participants by challenging them to confront the most common obstacles and engage the participants by providing them with handouts that they can use to produce a plan of action that they can implement at their schools as they work towards becoming STEM/STEAM certified.

Presenter(s): Janet Sellers

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** K-12 **Room:** 503

Title: [Be Your Best with GSTA](#)

Description: What is GSTA? What do we offer? How can we support you and your students in and out of the classroom? Learn the answers to these and other questions from a past president and the current communications director for the Georgia Science Teachers Association.

Presenter(s): Jeremy Peacock

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** K-12 **Room:** 505

Title: [STEMtastic Field trips at Sparkles!](#)

Description: Our STEM educational field trip program at Sparkles Family Fun Centers immerses students in Science, Technology, Engineering and Math. The STEM concepts are related to many areas of the roller skating rink (from lights/sound to friction and motion), where students will learn that STEM is all around them, it is not just a concept found in science labs. Students participate in hands on activities taught by our dynamic STEM educator. After the interactive lesson, the students participate in two hours of the FUN physical fitness activity of roller skating and our indoor playground. The eight great lessons we offer for grades K-5 are constantly evolving and have continued to get better throughout the course of the school year. We also offer great middle and high school programs! With competitive pricing and 2 great locations to choose from, Sparkles has the best STEM field trip around!

Presenter(s): Jessica Cranford & Jacob Thompson

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** K-12 **Room:** Comp Lab 328

Title: [Bringing Blended Learning to Your STEM Classroom](#)

Description: Join us to learn all about how to incorporate blended learning strategies in your classroom, all at 100% no cost. In this session, you'll explore engaging, online, standards-based activities and lesson plans designed to strengthen your students' STEM knowledge. By the end of the session, you'll be ready to implement these resources and bring blended learning to your STEM classroom right away.

Presenter(s): Julianna Morelock

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** 6-12 **Room:** 522

Title: [Easy Ways to Add Science and Engineering to Math](#)

Description: Do you get the question, "Why are we learning this?" Come learn some real world applications of middle and high school math. From making a logarithmic timeline of the history of earth to the geometry of crystals, make math come to life.

Presenter(s): Julie Kokan

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** K-8 **Room:** Band Room 900

Title: [What to Do With Those Ozobots](#)

Description: Are you wondering what to do to get the most from those ozobots? Get over the concerns and gain the confidence you need to use these tiny but mighty coding robots that are full of personality and charm for your students. The personality and charm get the students engaged - the coding and potential for integration are the key to building your students skills in STEM/STEAM. If you are a novice or just a little more, you'll want to participate in this session.

Presenter(s): Karol Stephens & Tamioka Grizzle

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** 4-5 **Room:** 621

Title: [Engaging STEAM through Literature](#)

Description: Teachers will be given ideas, resources, and exciting lessons for tying in reading and art into their STEM curriculum. (4th & 5th grade)

Presenter(s): Kristin Bosley & Vicki Broughton

Conference Strand: STEAM

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** K-12 **Room:** 506

Title: [Pedal-Powered Paper Making: Full STEAM Ahead](#)

Description: A hands on workshop in which you will create sheets of paper from cotton rag using a Hollinder Beater that runs via a bicycle. What? A Cobb Tank grant, written by Art teacher Patsy Rausch, has supplied all the tools necessary for a school that has gone through training to engage their students in this hands-on history, science, technology, engineering and arts based project. Come see how it was utilized at a couple schools, ride the bike and pull sheets of paper.

Presenter(s): Lynn Duhn & Carolynn Stoddard

Conference Strand: STEAM

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** K-5 **Room:** Comp Lab 330

Title: [Putting the T in STEM- Green Screening](#)

Description: In this presentation teachers will learn how to incorporate green screen in STEM.

Presenter(s): Marquita Jackson

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 12:50-1:40 **Level:** 6-8 **Room:** 606

Title: [Do You Have The Right Stuff For Mars Exploration?](#)

Description: A variety of STEM/PBL force & motion challenges in a unit aligned with 8th grade Science standards: Begin with mission planning, land a moving payload on a target, protect the payload from landing forces, and engineer a wind powered rover. All challenges are designed around budgets and/or materials criteria & constraints.

Presenter(s): Tami McIntire

Conference Strand: STEM Planning & Lessons

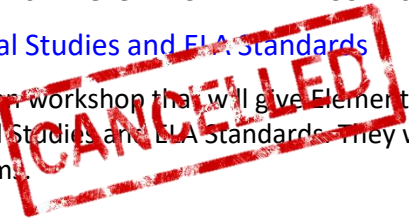
Session 3 – 12:50-2:40 (Double Sessions)

Day: Wed, 6/20 **Time:** 12:50-2:40 **Level:** K-5 **Room:** 607

Title: [Using STEM to Teach Social Studies and ELA Standards](#)

Description: This will be a hands-on workshop that will give Elementary teachers several ways to use STEM to teach and enhance Social Studies and ELA standards. They will leave with several lesson plans that can be used in their classroom.

Presenter(s): Doreen Campbell



Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 12:50-2:40 **Level:** 6 **Room:** 622

Title: [Asteroid Shelter PBL](#)

Description: Students are given the scenario of having to build an underground shelter large enough to house the population of a large city for 1 year after an asteroid has struck a city on Earth. The Asteroid Shelter Project is offered to sixth STEM class. The purpose of the project is to combine engineering, technology, and mathematics along with the sixth grade science standards to enhance enduring understanding of the concepts of geology, hydrology, meteorology, and astronomy.

Presenter(s): Corrinne Golding & Monica Moore

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 12:50-2:40 **Level:** 6-12 **Room:** 624

Title: [Go-speed Racer...Go!](#)

Description: The new Georgia Standards of Excellence in the physical sciences require students to "Plan and carry out" investigations related to kinematics, energy, and light. In this fun hands-on casual experience, be a student, design and write your own kinematics experiment, use controlled experiment protocols and the engineering cycle to analyze, refine and modify, and improve your investigation.

Presenter(s): Jason Ritchie

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 12:50-2:40 **Level:** K-8 **Room:** 524

Title: [FIRST Robotics and STEAM in the Classroom](#)

Description: There are so many ways to incorporate STEAM in your classroom. We will teach you how to build in more time for STEAM using flipped lessons and how to have STEAM enrichment always available. We will show you how coding lessons are possible without access to computers. Finally we will introduce you to FIRST robotics and bring STEAM to life by allowing you to code and complete challenges with your own robot.

Presenter(s): Kim Clark & Brinda Kapani

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 12:50-2:40 **Level:** 6-8 **Room:** 525

Title: [Using Green Screen Technology in the Classroom](#)

Description: This class is geared toward middle school students who can use green screens to create travel videos, weather reports, time travel, illustrate scientific processes, and anything imaginable. The only equipment needed is an iPad/iPhone App and a green plastic table cloth or bulletin board paper.

Presenter(s): Linda Guillory

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 12:50-2:40 **Level:** K-8 **Room:** 604

Title: [True STEM](#)

Description: We will present components of TRUE STEM design challenges. Participants will have an overview of the Engineering Design Process, evaluate scenarios, and will complete a STEM challenge. At the conclusion of the challenge, teams will identify the TRUE STEM elements present in the challenge and will engage in a group discussion about integration of STEM challenges in their curriculum.

Presenter(s): Stacy Pitts & Christy Garvin

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 12:50-2:40 **Level:** 6-12 **Room:** 602

Title: [Creating Classroom Cultures for Discourse \(6-12\)](#)

Description: As students participate in STEM projects or 3-D science investigations, they are required to evaluate both their own and their peers' designs and explanations. It's important for students to learn how to provide respectful, evidence-based feedback to others. This session will model how to create a classroom culture that supports scientific discourse. Participants will also actively participate in the Science and Engineering Practices of Modeling, Constructing Explanations, and Engaging in Argument from Evidence (using CER) while exploring phenomena.

Presenter(s): Tracy Matthews

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 12:50-2:40 **Level:** K-5 **Room:** 507

Title: [Experiential Learning and Literacy in the Outdoor Classroom](#)

Description: DAY 1:

Participants will dive into best practices for integrating literacy through experiential STEM lessons using the outdoor classroom. Participants will take part in model lessons, explore ways to plan for and implement lessons that address key literacy components (Tier 3 vocabulary, non-fiction text, writing), and gain 30 day access to the REAL School Gardens Coaching Center. **Advance registration required.**

Presenter(s): Vanessa Ford & Suzannah Koilpillai

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 12:50-2:40 **Level:** K-12 **Room:** 502

Title: [Aquaponics in the Classroom](#)

Description: High energy presentation using Socratic questioning to enhance STEM integration utilizing the basics of aquaponics to bring your classroom experience to life! Real-world connections to global hunger issues coupled with real time solutions to be implemented in the classroom. Participants will leave with a functional aquaponics system to begin a mission-based learning program! **Advance registration required.**

Presenter(s): Ryan Cox

Conference Strand: STEM Tools & Resources

Session 4 – 1:50-2:40

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** K-5 Leadership **Room:** 527

Title: [Utilizing Foundations To Support STEM Initiatives](#)

Description: Sharing the Foundation's involvement in implementing STEM initiatives and learning opportunities for our students.

Presenter(s): Amanda Johnson & Paula Todd

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** K-5 **Room:** Comp Lab 328

Title: [A Collection of STEAM Challenges for K-1](#)

Description: We will present "Kindness Card" Challenge; as well as "Plant Parts".

Presenter(s): Amanda Smith & Amanda Gillespie

Conference Strand: STEAM

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** K-5 **Room:** 522

Title: [Eco-Literacy](#)

Description: Eco-Literacy is the ability to understand the natural systems that make life on earth possible. Sounds like something we all kind of know? Sounds boring? Eco-Literacy was the overarching theme and guide for us to then take students on a journey where they created learning stations to then share with students around our campus.

Presenter(s): Anna Dickinson

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** K-12 **Room:** 623

Title: [Destination Imagination](#)

Description: Destination Imagination is a unique cross-curricular Challenge/project based educational experience that engages both traditional and non-traditional STE(A)M participants. Attendees will receive short Challenge activities (called Instant Challenges), a Mars or Bust Team Challenge and materials for an introduction activity to take back to your classroom.

Presenter(s): Annette Rogers

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** 6-12 **Room:** 526

Title: [Are You Moody?](#)

Description: We will bring math, science and coding together as participants learn to do some basic coding (no experience necessary) while developing a mood ring! The science of color mixing is explored while determining the right body temperature thresholds. Is fuchsia flirty? Should green be groovy? It's up to you!

Presenter(s): Beth Smith & Wendy Peel

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** 6-12 **Room:** 523

Title: [Make Something Delicious with Raspberry Pi](#)

Description: Coding does not have to just be in a specialized computer class. With the power of digital making it can be part of any standard! The Raspberry Pi is a \$35 computer that can make it all happen. Come to this session to get started with both the components to make the computer great and the coding to make it all happen. Make your class all about digital making!

Presenter(s): David Lockhart

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** K-12 Leadership **Room:** 627

Title: [STEAM: The Challenge Island Way](#)

Description: Present the Challenge Island approach to STEAM and how we can support schools looking to become STEM certified or just enhance their use of STEAM in the classroom, during summer camps, or for after school.

Presenter(s): Dwight Parker & Kindrica Fannin

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** 4-5 **Room:** 504

Title: [Differentiating STEM Challenges for High Achieving Students](#)

Description: Having trouble challenging your high achieving learners during STEM activities? Learn classroom tested strategies for pushing these students to become the engineers, designers, and scientists you know they can be! Presented by 4th and 5th grade Advanced Content teachers, this session is best suited for upper elementary classrooms.

Presenter(s): Hannah Bentley & Ryan Dunn

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** K-12 **Room:** 503

Title: [Be Your Best with GSTA](#)

Description: What is GSTA? What do we offer? How can we support you and your students in and out of the classroom? Learn the answers to these and other questions from a past president and the current communications director for the Georgia Science Teachers Association.

Presenter(s): Jeremy Peacock

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** K-8 **Room:** Band Room 900

Title: [What to Do With Those Ozobots](#)

Description: Are you wondering what to do to get the most from those ozobots? Get over the concerns and gain the confidence you need to use these tiny but mighty coding robots that are full of personality and charm for your students. The personality and charm get the students engaged - the coding and potential for integration are the key to building your students skills in STEM/STEAM. If you are a novice or just a little more, you'll want to participate in this session.

Presenter(s): Karol Stephens & Tamioka Grizzle

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** K-12 **Room:** 506

Title: [Pedal-Powered Paper Making: Full STEAM Ahead](#)

Description: A hands on workshop in which you will create sheets of paper from cotton rag using a Hollinder Beater that runs via a bicycle. What? A Cobb Tank grant, written by Art teacher Patsy Rausch, has supplied all the tools necessary for a school that has gone through training to engage their students in this hands-on history, science, technology, engineering and arts based project. Come see how it was utilized at a couple schools, ride the bike and pull sheets of paper.

Presenter(s): Lynn Duhn & Carolynn Stoddard

Conference Strand: STEAM

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** K-12 **Room:** Comp Lab 330

Title: [Putting the T in STEM- OneNote Wonder](#)

Description: During this workshop, teachers will learn to use OneNote to create digital STEM Notebooks!

Presenter(s): Marquita Jackson

Conference Strand: STEM Tools & Resources

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** 6-12 Leadership **Room:** 621

Title: [STEMing a Grand Impact with Grand Challenges](#)

Description: Introduction to the National Engineering Grand Challenges and how they can be used to develop STEM connections in all content areas.

Presenter(s): Stephanie Ruffner

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 **Time:** 1:50-2:40 **Level:** K-5 **Room:** 606

Title: [Mouse Trap Centers](#)

Description: Learn how to create independent student centers for grades K-5 where students will program a robotic mouse to perform specific missions and thus demonstrate knowledge of desired curriculum standards. This is a low cost way to incorporate robotics into all content areas and grades.

Presenter(s): Teresa Bailey & Casey Simanski

Conference Strand: STEM Planning & Lessons

Day: Wed, 6/20 Time: 1:50-2:40 Level: K-8 Room: 505

Title: Capitalizing the M in STEM: Strengthening the Math in Your STEM

Description: Would you like to strengthen the math in your STEM? Come play with force, motion, gravity and math. In this workshop you will participate in a science based STEM activity with a rigorous and relevant math connection, and then a math based STEM activity with a rigorous and relevant science connection. We will discuss math as an igniter of wonder, as the gateway to STEM careers, and as a genuine foundation for STEM activities. And no, you do not need to be good at math to attend, but don't get mad if you leave loving math more than you did when you arrived.

Presenter(s): Vonae Tanner

Conference Strand: STEM Planning & Lessons

2nd Annual

Thursday
June 21, 2018
@ 9:00 AM

NERDY T-SHIRT
CONTEST



THANK YOU to our *StemPalza* SPONSORS



We'd Also like to thank:

Carrabba's Italian Grill
Children's Museum
The High Museum of Art
Kona Ice

Nearpod
Zoo Atlanta
Stone Mountain Park
Six Flags Over Georgia

Stemapalooza

Day 3 – June 21, 2018

COBB COUNTY SCHOOL DISTRICT



Keynote Speaker
Day 3 – June 21st



STEM Pipeline: *What local resources are available to provide students with access to careers in STEM?*

Dr. Ronesha Worthy currently serves at the P-12 STEM Faculty Fellow at Kennesaw State University's Center for Diversity Leadership and Engagement and Community Engagement. Her role is to connect P-12 educators and students with STEM professors, students and departments at Kennesaw State. Dr. Worthy has a passion for providing students of all backgrounds with access to and awareness of STEM careers. She is also an assistant professor of Environmental Engineering at KSU's Department of Civil and Construction Engineering.

Learn more about Dr. Ronesha Worthy at

<http://facultyweb.kennesaw.edu/rworthy/>



STEM Playground 10:00-2:00

Day: Thurs, 6/21

Time: 10:00-2:00

Level: K-12

Room: Media Center

Title: [STEM Playground](#)

Description: Come play with a variety of STEM tools and resources that you may be considering for your own classroom or school. Try before you buy! Check out the KSU iTeach MakerBus in the courtyard!

Presenter(s): Peggy Clay & KSU iTeach Staff

Conference Strand: STEM Tools & Resources



Session 1 – 10:00-10:50

Day: Thurs, 6/21

Time: 10:00-10:50

Level: 6-8

Room: 527

Title: [More M in STEM!](#)

Description: An introduction to STEM for 6-8 Math teachers. We will complete a STEM challenge and then have a brainstorming session of ways STEM can be incorporated within the Frameworks during the upcoming school year.

Presenter(s): Alison Fridborg

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21 **Time:** 10:00-10:50 **Level:** K-12 **Room:** Comp Lab 533

Title: [The Wonders of WebQuests](#)

Description: Using WebQuests to teach STEM is a great way to incorporate all of the elements needed in a Problem-Based Learning experience.

During this session I will demonstrate various ways to create and locate WebQuests for use in any classroom.

Presenter(s): Amy Alfonso

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21 **Time:** 10:00-10:50 **Level:** K-12 Leadership **Room:** 505

Title: [Gatekeepers: Disrupting STEM Selection Models](#)

Description: Usually program model STEM schools have a traditional application process that considers a number of criteria (grades, test scores, teacher recommendation, etc.). Other programs allow any applicant who expresses an interest. But what if there was a selection model that observed behavioral traits in students applicable to a STEM mindset and chose students who demonstrated fit and potential beyond test scores and teacher opinion? Come find out how South Atlanta High School is disrupting selection models in a way that authentically includes non-traditional participants in STEM education.

Presenter(s): Andrea Miller & Andrea Pendergrass

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21 **Time:** 10:00-10:50 **Level:** K-8 **Room:** 604

Title: [Full STEM Ahead](#)

Description: STEM is not just teaching about Science, Technology, Engineering, and Mathematics but the culture that needs to be cultivated to help create a problem solving, creative, critical thinking workforce for tomorrow. During this session, we will expand your thinking to embrace STEM beyond those subjects, and beyond your classrooms walls and demonstrate how STEM enhances your core curricular courses.

Presenter(s): Brad Fountain

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21 **Time:** 10:00-10:50 **Level:** K-5 **Room:** 523

Title: [STEAM it Up-How the Music room can support your STEM curriculum](#)

Description: Brown and Wood present ways that the music classroom can not only be a STEAM classroom, but can do so while accomplishing music standards as well as many science, math,

language arts and social studies standards as well. Interactive demonstrations of grab and go lesson plans to implement in your own classroom or use to collaborate with your own music specialists.

Presenter(s): Courtayne Wood & Erika Brown

Conference Strand: STEAM

Day: Thurs, 6/21

Time: 10:00-10:50

Level: K-12

Room: 525

Title: [Get Rolling with Sphero](#)

Description: This training will be an introduction to Sphero and the SpheroEdu classroom management tool. Participants will learn how to code Sphero and perform basic operations using draw, block coding and JavaScript. Teachers will learn how to use SpheroEdu to enhance teaching and learning by locating powerful content area classroom lessons. Teachers are welcome to use their own digital device.

Presenter(s): Daniel Hoeh

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 10:00-10:50

Level: K-12 Leadership

Room: 522

Title: [Using STEM as a School Improvement Strategy](#)

Description: Thinking about STEM but not sure it's worth the effort when you have to consider your school's CCRPI and Milestones scores? This session will highlight how STEM/STEAM can be used to improve your school's academic achievement as well as bringing about better engagement for your students and your staff. This session is researched based and will provide data you can use to help justify your STEM/STEAM initiatives.

Presenter(s): Donald White

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 10:00-10:50

Level: K-5

Room: 526

Title: [Sphero Applications with Water!](#)

Description:

Sphero robotics offer so much more to your science instruction than just rolling around. This hands-on session will allow you to try your hand at Sphero challenges with water! Come see applications of this handy robotic tool that incorporate concepts like pushes/pulls, force and motion, properties of matter (sinking or floating), physical and chemical changes, and more!

Presenter(s): Erin Harris

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 10:00-10:50

Level: 7

Room: 506

Title: [STEM in Life Science](#)

Description: Join us as we explore using STEM principles in Life Science Content! We will be investigating and calculating how energy is lost in ecosystems by designing owl habitats, building and

testing bristle bots and testing them to demonstrate natural selection, and using simple STEM labs to calculate how organisms are shaped by their environments (in biomes).

Presenter(s): Geoff Gillie

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 10:00-10:50

Level: K-8

Room: 504

Title: [Get Them Hooked!](#)

Description: Get Them Hooked will teach Educators in elementary schools how to effectively conduct theme- based STEM days in ways that will engage children of all ages. I will also present my research that demonstrated these types of STEM days, held in public schools, were not only affordable, but also had a lasting impact on student's perceptions of themselves in future STEM professions.

Presenter(s): Karyn Pumphrey

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 10:00-10:50

Level: K-5

Room: 603

Title: [Putting the T in STEM- Green Screening](#)

Description: In this presentation teachers will learn how to incorporate green screen in STEM.

Presenter(s): Marquita Jackson

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 10:00-10:50

Level: 6-8

Room: 524

Title: [STEM in Action: The Physical Science Classroom](#)

Description: STEM in Action highlights lesson activities that include Cross Cutting Concepts as well as Science and Engineering Practices in the Physical Science Classroom that will get your students engaged, excited, and invested in their learning!

Presenter(s): Shannon Sigler

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 10:00-10:50

Level: K-8

Room: 503

Title: [How to Reinvent Your STEM Night!](#)

Description: Are you tired of the same old STEM Night? Come hear tips and tricks for bringing your teachers, family, and community together to make an powerful STEM Night!

Presenter(s): Snow Jordan, Kara Williams & Gabby Dowell

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 10:00-10:50

Level: 3-8

Room: 602

Title: [Nuts & Bolts of starting an FLL Competition Robotics Team](#)

Description: Have you ever wanted to start a Lego Competition Robotics team but didn't know where to start? Come see us for answers to your questions.

Presenter(s): Tracey Homer & Robin Poulos

Conference Strand: STEAM

Session 1 – 10:00-11:50 (Double Session)

Day: Thurs, 6/21

Time: 10:00-11:50

Level: K-5

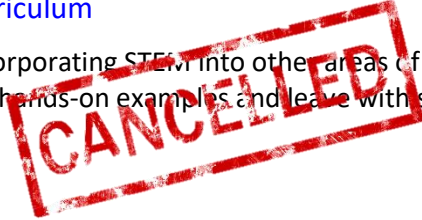
Room: 607

Title: [STEM-ing Across the Curriculum](#)

Description: Various ways of incorporating STEM into other areas of the curriculum will be presented. The attendees will participate in hands-on examples and leave with several lesson plans that use STEM in a multitude of ways.

Presenter(s): Doreen Campbell

Conference Strand: STEM Planning & Lessons



Day: Thurs, 6/21

Time: 10:00-11:50

Level: K-12 Leadership

Room: Band Room
900

Title: [STEM Pipeline & Pathways Project](#)

Description: Educators from Cobb County Schools share their experiences setting up K-14 STEM Vertical pathways and pipelines curriculum ideas from elementary to college.

Presenter(s): Michael Lee, Matthew Farrell, Sandra Watts & Daniel Harbert

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 10:00-11:50

Level: K-5

Room: 507

Title: [Experiential Learning and Literacy in the Outdoor Classroom](#)

Description: DAY 2:

This session is for participants who took part in the first day. Participants will apply practices from the first day to create an outline that is specific to their grade-level/school specific literacy goals. Participants will have the opportunity to create a scope and sequence of aligned literacy lessons to STEM content and/or dive deeper into lesson creation. This day is workshop based with support from the REAL School Gardens team. Tools will be provided for this work. **Advance registration required.**

Presenter(s): Vanessa Ford & Suzannah Koilpillai

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 10:00-11:50

Level: K-12

Room: 502

Title: [Aquaponics in the Classroom](#)

Description: High energy presentation using Socratic questioning to enhance STEM integration utilizing the basics of aquaponics to bring your classroom experience to life! Real-world connections to global hunger issues coupled with real time solutions to be implemented in the classroom. Participants will leave with a functional aquaponics system to begin a mission-based learning program! **Advance registration required.**

Presenter(s): Ryan Cox

Conference Strand: STEM Tools & Resources

Session 2 – 11:00-11:50

Day: Thurs, 6/21

Time: 11:00-11:50

Level: K-8

Room: 604

Title: [STEM For All](#)

Description: Want to learn more about building a culture of creativity, collaboration, communication, and critical thinking, no matter your content area? Join us to learn more about the many ways Discovery Education supports STEM culture through FREE STEM camps, lesson plans, career connections, hands-on and minds-on experiences and more.

Presenter(s): Brad Fountain

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 11:00-11:50

Level: 6-12

Room: 602

Title: [Who Dunit? A Hands-on Murder Mystery with Blood Sampling, DNA and Genetics](#)

Description: Create a murder mystery in your classroom. You will be the detective and will figure out "who dunit?" Using "blood samples," DNA and Genetics, 7th graders will solve the mystery (and learn, too – but don't tell them that!!!)

Presenter(s): Dana Evans & Morgan Cochran

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 11:00-11:50

Level: K-12

Room: 525

Title: [Get Rolling with Sphero](#)

Description: This training will be an introduction to Sphero and the SpheroEdu classroom management tool. Participants will learn how to code Sphero and perform basic operations using draw, block coding and JavaScript. Teachers will learn how to use SpheroEdu to enhance teaching and learning by locating powerful content area classroom lessons. Teachers are welcome to use their own digital device.

Presenter(s): Daniel Hoeh

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 11:00-11:50

Level: K-12 Leadership

Room: 522

Title: [Motivating Your STEM Teachers](#)

Description: This session will provide real, viable strategies to motivate your department, school, or district to implement STEM. You'll hear about my district's STEM successes (and failures) and how you can get your school moving in the right direction by leveraging the latest research into motivating students and teachers. This session is quirky and fast-paced so buckle up!

Presenter(s): Donald White

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 11:00-11:50

Level: K-8

Room: 523

Title: [Producing STEM artifacts: Using the 4 C's](#)

Description: With the Adobe Spark Post, Page and Video apps, students can use their voice, pictures and text to showcase their STEM learning process. They can share their learning socially or by attaching a web page. Their learning can even be downloaded so as to spark communication with their parents.

The best part is the apps are free and available on iOS, android and web browsers! Each of the Spark apps must be downloaded individually to use on iPads. Web browser and Chromebook users can access all three together by visiting <https://spark.adobe.com/>

Presenter(s): Dr. Darcel Hogans

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21 **Time:** 11:00-11:50 **Level:** K-5 **Room:** 526

Title: [Sphero Applications with Water!](#)

Description:

Sphero robotics offer so much more to your science instruction than just rolling around. This hands-on session will allow you to try your hand at Sphero challenges with water! Come see applications of this handy robotic tool that incorporate concepts like pushes/pulls, force and motion, properties of matter (sinking or floating), physical and chemical changes, and more!

Presenter(s): Erin Harris

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21 **Time:** 11:00-11:50 **Level:** K-8 **Room:** 503

Title: [Flipping the Script in Middle School](#)

Description: How to use technology in a middle school classroom; there will be a focus on using EdPuzzle to create dynamic lessons for students to use in class or to flip their learning at home. Information will be tailored for a variety of levels and learners. Participants will need a device to access content and make their own to understand all the tools and options to creating a flipped class. Other resources such as using QR codes in the Middle School classroom will also be featured.

Presenter(s): Kristen Crain & Connie Kirshner

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21 **Time:** 11:00-11:50 **Level:** K-12 **Room:** 603

Title: [Putting the T in STEM- OneNote Wonder](#)

Description: During this workshop, teachers will learn to use OneNote to create digital STEM Notebooks!

Presenter(s): Marquita Jackson

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21 **Time:** 11:00-11:50 **Level:** K-12 **Room:** 505

Title: [NearPod 101](#)

Description: Introducing NearPod as an innovative strategy to enrich and engage student learning using technology and interactive communication between students and teachers.

Presenter(s): Melissa Weatherford & Natarsha Miller

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 11:00-11:50

Level: K-5

Room: 524

Title: [STEM in Literacy](#)

Description: We will discuss various ways to implement STEM with read alouds. We will take the attendees through an actual STEM challenge based on the book, Chicka Chicka Boom Boom, and they will leave with several ways to incorporate STEM into their ELA classroom and beyond.

Presenter(s): Rebecca Coleman & Tammie Taylor

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 11:00-11:50

Level: K-5

Room: Comp Lab 533

Title: [Free Apps your Students will Love!](#)

Description: Free Apps your students will love, that will drive project based learning in ELA, Math and Social Studies. Lesson plans will be included in the workshop.

Presenter(s): Shawn Kirby & Khaia Smith

Conference Strand: STEM Tools and Resources

Day: Thurs, 6/21

Time: 11:00-11:50

Level: K-2

Room: 504

Title: [Primary Share-athon](#)

Description: Have great STEM ideas to share? Need great STEM ideas for your K-2 classroom? Let's collaborate and share our great ideas together!

Presenter(s): Susanne Smith

Conference Strand: STEM Planning & Lessons

WIFI Network: CCSDEvents

Password: cobb1234

Share your experiences!



#STEMCobb

Lunch 11:50-12:40

CARRABBA'S

ITALIAN GRILL®

Join us for a
complementary lunch in
the cafeteria sponsored
by Dr. Cronan of
OrthoZone!



Session 3 – 12:50-1:40

Day: Thurs, 6/21 **Time:** 12:50-1:40 **Level:** 6-8 **Room:** 527

Title: [More M in STEM!](#)

Description: An introduction to STEM for 6-8 Math teachers. We will complete a STEM challenge and then have a brainstorming session of ways STEM can be incorporated within the Frameworks during the upcoming school year.

Presenter(s): Alison Fridborg

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21 **Time:** 12:50-1:40 **Level:** K-12 **Room:** Comp Lab 533

Title: [The Wonders of WebQuests](#)

Description: Using WebQuests to teach STEM is a great way to incorporate all of the elements needed in a Problem-Based Learning experience. During this session I will demonstrate various ways to create and locate WebQuests for use in any classroom.

Presenter(s): Amy Alfonso

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21 **Time:** 12:50-1:40 **Level:** K-12 Leadership **Room:** 505

Title: [Gatekeepers: Disrupting STEM Selection Models](#)

Description: Usually program model STEM schools have a traditional application process that considers a number of criteria (grades, test scores, teacher recommendation, etc.). Other programs allow any applicant who expresses an interest. But what if there was a selection model that observed behavioral traits in students applicable to a STEM mindset and chose students who demonstrated fit

and potential beyond test scores and teacher opinion? Come find out how South Atlanta High School is disrupting selection models in a way that authentically includes non-traditional participants in STEM education.

Presenter(s): Andrea Miller & Andrea Pendergrass

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 12:50-1:40

Level: K-8

Room: 604

Title: [Full STEM Ahead](#)

Description: STEM is not just teaching about Science, Technology, Engineering, and Mathematics but the culture that needs to be cultivated to help create a problem solving, creative, critical thinking workforce for tomorrow. During this session, we will expand your thinking to embrace STEM beyond those subjects, and beyond your classrooms walls and demonstrate how STEM enhances your core curricular courses.

Presenter(s): Brad Fountain

Conference Strand: STEM Tools & Resources

Don't Miss Out...



12:00-2:00
In the
KMHS
Courtyard

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Day: Thurs, 6/21

Time: 12:50-1:40

Level: K-5

Room: 523

Title: [STEAM it Up-How the Music room can support your STEM curriculum](#)

Description: Brown and Wood present ways that the music classroom can not only be a STEAM classroom, but can do so while accomplishing music standards as well as many science, math, language arts and social studies standards as well. Interactive demonstrations of grab and go lesson plans to implement in your own classroom or use to collaborate with your own music specialists.

Presenter(s): Courtayne Wood & Erika Brown

Conference Strand: STEAM

Day: Thurs, 6/21

Time: 12:50-1:40

Level: 7

Room: 506

Title: [STEM in Life Science](#)

Description: Join us as we explore using STEM principles in Life Science Content! We will be investigating and calculating how energy is lost in ecosystems by designing owl habitats, building and

testing bristle bots and testing them to demonstrate natural selection, and using simple STEM labs to calculate how organisms are shaped by their environments (in biomes).

Presenter(s): Geoff Gillie

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 12:50-1:40

Level: K-8

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Description: Get Them Hooked will teach Educators in elementary schools how to effectively conduct theme- based STEM days in ways that will engage children of all ages. I will also present my research that demonstrated these types of STEM days, held in public schools, were not only affordable, but also had a lasting impact on student's perceptions of themselves in future STEM professions.

Presenter(s): Karyn Pumphrey

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 12:50-1:40

Level: 6-12

Room: 507

Title: [Using Technology Apps in the 3D Science Classroom](#)

Description: Using technology applications such as Nearpod, Quizziz, Flipgrid in a 3D high school science class (flipped and regular classroom).

Presenter(s): Maya Edgar & Iesha Harrison

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 12:50-1:40

Level: K-5 Leadership

Room: 522

Title: [STEM & Growth Mindset](#)

Description: Learn how STEM and Growth Mindset go hand in hand! Allow students to "train their brain" and become STEM thinkers through the implementation of growth mindset strategies.

Presenter(s): Missy Shackelford & Lisa King

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 12:50-1:40

Level: K-5

Room: 524

Title: [STEM in Literacy](#)

Description: We will discuss various ways to implement STEM with read alouds. We will take the attendees through an actual STEM challenge based on the book, Chicka Chicka Boom Boom, and they will leave with several ways to incorporate STEM into their ELA classroom and beyond.

Presenter(s): Rebecca Coleman & Tammie Taylor

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 12:50-1:40

Level: K-8

Room: 503

Title: [How to Reinvent Your STEM Night!](#)

Description: Are you tired of the same old STEM Night? Come hear tips and tricks for bringing your teachers, family, and community together to make an powerful STEM Night!

Presenter(s): Snow Jordan, Kara Williams & Gabby Dowell

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 12:50-1:40

Level: 3-8

Room: 602

Title: [Nuts & Bolts of starting an FLL Competition Robotics Team](#)

Description: Have you ever wanted to start a Lego Competition Robotics team but didn't know where to start? Come see us for answers to your questions.

Presenter(s): Tracey Homer & Robin Poulos

Conference Strand: STEAM

Day: Thurs, 6/21

Time: 12:50-1:40

Level: K-5

Room: 525

Title: [Monarch Fun! Engage Your Students](#)

Description: Lesson plans to engage learners to learn more about the food chain of the Moarch butterflies while simulating the reasons why the population has decreased. Bring tennis shoes to play the game!

Presenter(s): Joannah Shoushtarian

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 12:50-1:40

Level: K-8

Room: 603

Title: [Student-Based Phenomena-Rich Curriculum](#)

Description: Curriculum is free of charge via a partnership with Leukemia & Lymphoma Society and covers K-8. The content includes 100+ pieces of proprietary content with lesson plans, hands on activities, videos and beyond. The content is also cross-curricular and brings in literacy and math skills.

Presenter(s): Rachel Newcomer & Mary Kate Abel

Conference Strand: STEM Planning & Lessons

Session 3 – 12:50-2:40 (Double Session)

Day: Thurs, 6/21

Time: 12:50-2:40

Level: K-12 Leadership

Room: Band Room 900

Title: [STEM Pipeline & Pathways Project](#)

Description: Educators from Cobb County Schools share their experiences setting up K-14 STEM Vertical pathways and pipelines curriculum ideas from elementary to college.

Presenter(s): Michael Lee, Matthew Farrell, Sandra Watts & Daniel Harbert

Conference Strand: STEM Planning & Lessons

Session 4 – 1:50-2:40

Day: Thurs, 6/21

Time: 1:50-2:40

Level: K-5

Room: 525

Title: [Monarch Fun! Engage Your Students](#)

Description: Lesson plans to engage learners to learn more about the food chain of the Moarch butterflies while simulating the reasons why the population has decreased. Bring tennis shoes to play the game!

Presenter(s): Joannah Shoushtarian

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

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Level: K-8

Room: 603

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Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

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Room: 604

Title: [STEM For All](#)

Description: Want to learn more about building a culture of creativity, collaboration, communication, and critical thinking, no matter your content area? Join us to learn more about the many ways Discovery Education supports STEM culture through FREE STEM camps, lesson plans, career connections, hands-on and minds-on experiences and more.

Presenter(s): Brad Fountain

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 1:50-2:40

Level: 6-12

Room: 602

Title: [Who Dunit? A Hands-on Murder Mystery with Blood Sampling, DNA and Genetics](#)

Description: Create a murder mystery in your classroom. You will be the detective and will figure out "who dunit?" Using "blood samples," DNA and Genetics, 7th graders will solve the mystery (and learn, too – but don't tell them that!!!)

Presenter(s): Dana Evans & Morgan Cochran

Conference Strand: STEM Planning & Lessons

Day: Thurs, 6/21

Time: 1:50-2:40

Level: 6-12

Room: 506

Title: [Make Something Delicious with Raspberry Pi](#)

Description: Coding does not have to just be in a specialized computer class. With the power of digital making it can be part of any standard! The Raspberry Pi is a \$35 computer that can make it all happen. Come to this session to get started with both the components to make the computer great and the coding to make it all happen. Make your class all about digital making!

Presenter(s): David Lockhart

Conference Strand: STEM Tools & Resources

| | | | |
|---|------------------------|--------------------|------------------|
| Day: Thurs, 6/21 | Time: 1:50-2:40 | Level: K-8 | Room: 523 |
| Title: Producing STEM artifacts: Using the 4 C's | | | |
| Description: With the Adobe Spark Post, Page and Video apps, students can use their voice, pictures and text to showcase their STEM learning process. They can share their learning socially or by attaching a web page. Their learning can even be downloaded so as to spark communication with their parents. The best part is the apps are free and available on iOS, android and web browsers! Each of the Spark apps must be downloaded individually to use on iPads. Web browser and Chromebook users can access all three together by visiting https://spark.adobe.com/ | | | |
| Presenter(s): Dr. Darcel Hogans | | | |
| Conference Strand: STEM Tools & Resources | | | |
| Day: Thurs, 6/21 | Time: 1:50-2:40 | Level: K-8 | Room: 503 |
| Title: Flipping the Script in Middle School | | | |
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| Presenter(s): Kristen Crain & Connie Kirshner | | | |
| Conference Strand: STEM Tools & Resources | | | |
| Day: Thurs, 6/21 | Time: 1:50-2:40 | Level: K-2 | Room: 504 |
| Title: Magnocar Challenge | | | |
| Description: For this K-2 STEM activity, your students will be challenged to design and build a car that is powered by magnetic force. Can your car successfully make it around all 3 tracks at the speedway? | | | |
| Presenter(s): Susanne Smith | | | |
| Conference Strand: STEM Planning & Lessons | | | |
| Day: Thurs, 6/21 | Time: 1:50-2:40 | Level: 6-12 | Room: 507 |
| Title: Using Technology Apps in the 3D Science Clasroom | | | |
| Description: Using technology applications such as Nearpod, Quizziz, Flipgrid in a 3D high school science class (flipped and regular classroom). | | | |
| Presenter(s): Maya Edgar & Iesha Harrison | | | |
| Conference Strand: STEM Tools & Resources | | | |
| Day: Thurs, 6/21 | Time: 1:50-2:40 | Level: K-12 | Room: 505 |

Title: [NearPod 102](#)

Description: Introducing NearPod as an innovative strategy to enrich and engage student learning using technology and interactive communication between students and teachers.

Presenter(s): Melissa Weatherford & Natarsha Miller

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 1:50-2:40

Level: K-5 Leadership

Room: 522

Title: [STEM & Growth Mindset](#)

Description: Learn how STEM and Growth Mindset go hand in hand! Allow students to "train their brain" and become STEM thinkers through the implementation of growth mindset strategies.

Presenter(s): Missy Shackelford & Lisa King

Conference Strand: STEM Tools & Resources

Day: Thurs, 6/21

Time: 1:50-2:40

Level: 6-8

Room: 524

Title: [Conscious Data: Data Doesn't Byte!](#)

Description: The Conscious Data: Data Doesn't Byte! presentation caters toward the STEM educator who wants to incorporate more data in the classroom but is not quite sure how. The presentation will provide useful strategies for implementing data and share the importance of intentional use and embedding of data in all STEM classrooms.

Presenter(s): Shannon Sigler

Conference Strand: STEM Planning & Lessons



SAVE THE DATE

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