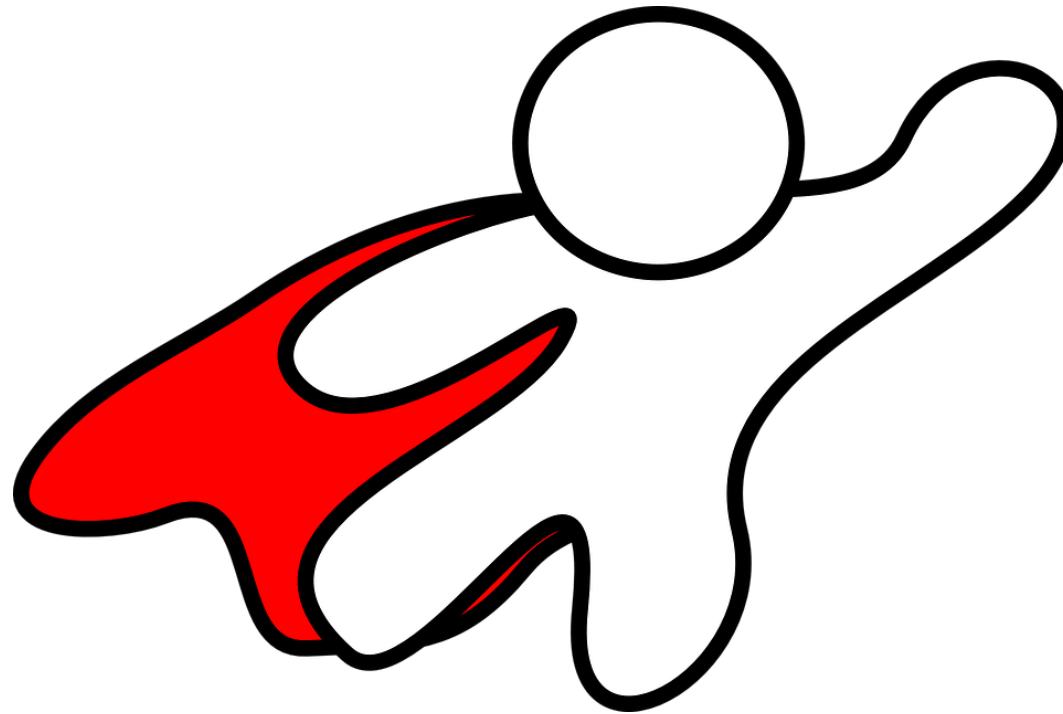


**2016 WEST GEORGIA RESA  
STEM CONFERENCE**



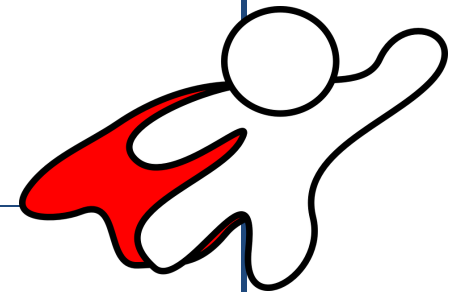
**MARCH 3RD & 4TH, 2016**

**#2016STEMSUPERHERO**

Thursday, March 3rd

# **WELCOME**

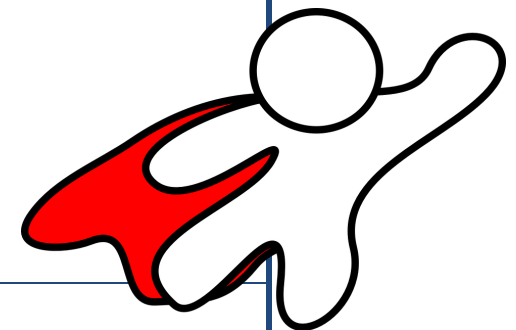
Registration and Breakfast	7:30am—8:30am
Session One	8:30am—9:30am
Session Two	9:45am—10:45am
Session Three	11:00am—12:00pm
Lunch	12:00pm—1:15pm
Session Four	1:15pm—2:15pm
Break	2:15pm—2:45pm
Session Five	2:45pm—3:45pm



Friday, March 4th

# **WELCOME**

Registration and Breakfast	7:30am—8:30am
Session One	8:30am—9:30am
Session Two	9:45am—10:45am
Session Three	11:00am—12:00pm
Lunch	12:00pm—1:15pm
Session Four	1:15pm—2:15pm
Break	2:15pm—2:45pm
Session Five	2:45pm—3:45pm





Access today's presentations at:

<http://tinyurl.com/2016STEMSUPERHERO>

## Our Mission Statement

The WGRESA 21st Century Teaching and Learning Team is an innovative, forward-thinking and knowledgeable partner for its member school systems. We leverage our internal and external networks, utilize our unique perspective at the regional level and employ dynamic, passionate educators with recent and related school experience. We do this work in order to assist our members in operationalizing their system and school improvement plans and to streamline the successful implementation of multiple mandates to further student achievement.

**THANKS TO ALL OF  
OUR SUPERHERO PRESENTERS**



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# ***DR. MARK WILSON***

## ***KEYNOTE THURSDAY, MARCH 3RD***



Dr. Mark Wilson is an educator who travels across the country to encourage people. He has spoken in the halls of Congress and has been invited to the White House to meet the President. He is a speaker, teacher, leadership coach, and author who believes in the joy of learning and the power of curiosity.

During his thirty-year career, Dr. Wilson has been a classroom teacher, coach, assistant principal, transportation supervisor, adult education instructor, drivers education teacher and principal. While he served as the principal of Morgan County High School in Madison, Georgia, his students and teachers were phenomenal, and their success led to him being named the National Principal of the Year.

At MCHS, Dr. Wilson and his teachers created a “Math and Science Academy” that led to a significant number of students pursuing careers in math, science, and engineering. While principal, he taught the MSA students their AP United States History course, focusing on the role of science and technology in America’s growth.

# **DR. AARON L. SMITH**

## **KEYNOTE FRIDAY, MARCH 4TH**



Dr. Smith has been a resident of Newport News, VA for 42 years, graduating from Warwick High School in 1990. From there he earned his bachelor's and master's degrees from Christopher Newport University and his Ph.D. in Educational Leadership from Old Dominion University.

While in education over 18 years, Dr. Smith has served in many capacities on the secondary level, including assistant principal, principal, and teacher. Currently, he is the program director at Aviation Academy where he is an advocate for STEM learning and is committed to helping all students succeed. In addition to serving public school students, Dr. Smith has been an adjunct professor at Christopher Newport University and Old Dominion University.

Dr. Smith was recognized on the national level as he was awarded the Crystal Star Award from the National Dropout Prevention Center in 2010 and listed as an ING Unsung Hero in 2015. His latest work includes co-authoring a book called ***Awakening Your STEM School*** which provides teachers, business partners and school officials the blueprint to transform their current program into an elite STEM site. He is also the Senior Vice President of Geazle, an on-line STEM network for professionals and educators and is writing his second book on workplace readiness.

***SAVE THE DATE***

***2017 WEST GEORGIA RESA  
STEM CONFERENCE***

March 2nd & 3rd, 2017

***SUPERHERO APP.***



Choose Your own  
Superhero  
Schedule

# THURSDAY

	Peachtree D	Canterbury	Spalding A & B	Highland
8:30am—9:30am Session One	The Endless Immensity of Learning  Dr. Mark Wilson, Professional Learning Consultant and Motivational Speaker	Flipped Classroom: Part One  Amanda Fox, The STEM Academy	Developing STEM Critical Thinking & Creativity through Team Building in the Classroom  Kathy Marks, Gwinnett County Public School System	Assessment and STEM  Lisa Fleckenstein, Coweta County Schools
9:45am —10:45 am Session Two	The Endless Immensity of Learning  Dr. Mark Wilson, Professional Learning Consultant and Motivational Speaker	Robotics in the Upper Elementary and Middle School Classrooms  Susan Adams-Curtis, Monroe County Schools	Engaging Tech in the STEM Classroom: Tools You Can Use Tomorrow  Amy Vitala, Cobb County School District	Using NearPod in The Classroom  Nina Eidson, Cherokee County Schools
11:00am—12:00pm Session Three	Flipped Classroom: Part Two  Amanda Fox, STEM Academy	Our AdvancED STEM Certification Story  Dr. Kelly Price, Forsyth County Schools	STEM for Elementary Teachers  Julie Eidson, Welch Elementary School	Farmer Grady's Weather Challenge  Angie Meredith, ETA Hand to Mind
12:00pm—1:15pm Lunch	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>
1:15-2:15pm Session Four	Paving the Way To STEM Certification  Dr. Gilda Lyon, Georgia Department of Education	Makerspace for Robotics  Bobby Lewis, Houston County	Solution Makers or Solution Manuals  Peter Graff, Saint Francis Schools	STEMify Your School Day  Megan Lenahan, Dunwoody Elementary, DeKalb County School System
2:15-2:45pm Break	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>
2:45-3:45pm Session Five	LEGO WeDo Robotics  Paula Corley, White Oak Elementary	Engaging Middle School Girls in STEM  Regina Coley, Leading Ladies of Legacy	#KidsCanCode!  Tanya Cheeves, Code.org	STEM-sational Family Nights  Angie Meredith, ETA hand2mind

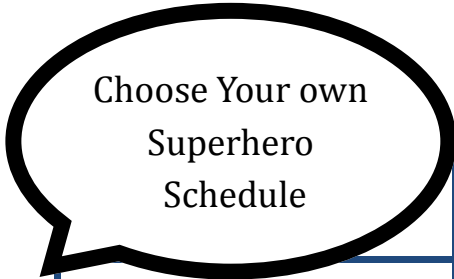


Choose Your own  
Superhero  
Schedule

# THURSDAY

	Cobb	Coweta	Clayton A & B	Fairburn	Kenwood
<b>8:30am—9:30am</b> <b>Session One</b>	Engineering Design for Grades K-2  Terri George, Carolina Curriculum	Geo-Toy Challenge  Dr. Margy McCown, Cherokee County Schools	NASA Technologies for Classroom Use  Dr. Lester Morales, NASA	Motivation and Engagement of All Students!  Dr. Pamela Bouie, Accelerating Excellence	12 for Life: A Working Model to Engage At-risk Students in STEM  Rachel Sayer, 12 For Life,
<b>9:45am —10:45 am</b> <b>Session Two</b>	STEM Beyond The Classroom  Dr. Jacquelyn Walton, Pearson	New Horizon Mission- What are we Learning From Pluto?  Nancy Sills, Creekside School	Video Game Design: Level Up Your STEM Curriculum  Corey Powell, STEM Academy	Growing up STEM!  Rebecca Wachtel, Hubbard Elementary, Dekalb and David Kessler, Horticulturist	EverFi- Free Online STEM Resources for Your Classroom!  Laura Adriansen, EverFi
<b>11:00am—12:00pm</b> <b>Session Three</b>	Full STEM Ahead! Digital Resources to Enhance ELEM STEM Instruction  Laura Evans, Georgia Public Broadcasting	I like the idea of STEM, but where do I even begin?  Leah Couch, Floyd County College & Career Academy	STEM Enrichment through Creativity and Innovation  Judi Colloredo, National Inventors Hall of Fame	Help Students Close Gaps & Keep up with Rigorous, On-Grade Level Lessons Using Digital Instruction  Dr. Pamela Bouie, Accelerating Learning	Integrating STEM in the Kindergarten Classroom  Regina Coley, Leading Ladies of Legacy
<b>12:00pm—1:15pm</b> <b>Lunch</b>	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>
<b>1:15-2:15pm</b> <b>Session Four</b>	Walk That Line!  Denise Peppers, Columbus Regional Mathematics Collaborative	Integrating STEM Through Authentic Collaboration  Dr. Amy Westbrook, Northgate High School, Coweta County Schools	Video Game Design: Level Up Your STEM Curriculum  Corey Powell, STEM Academy	Partnership Bootcamp  Dr. Sally Creel, Cobb County Schools	Sustaining an Effective Elementary STEM Program  Melanie Brooks, Carrollton City Schools
<b>2:15-2:45pm</b> <b>Break</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>
<b>2:45-3:45pm</b> <b>Session Five</b>	Constructed Response for Learning Online  Dr. Warren Combs, Writing2Win	STEM in Biology  Timothy Hawig, Carrollton City Schools	Increasing Engagement in Your STEM Program with Augmented Reality  Cynthia Kaye, Alive Studios	Getting Students  Kevin Hughes, Dunwoody Elementary School, DeKalb County School System	West Point Lake Floating Classroom  Henry Jacobs, Chattahoochee Riverkeeper

# FRIDAY



Choose Your own  
Superhero  
Schedule

	Peachtree D	Canterbury	Spalding A & B	Highland
<b>8:30am—9:30am</b> <b>Session One</b>	Calling on the Fantastic Four to Rescue STEM Schools  Dr. Aaron L Smith, Awakening Your STEM School	Using STEM Across the Curriculum  Susan Adams-Curtis, Monroe County Schools	Cooking with STEM  Karen Garland, Clark Creek Elementary School, Cherokee County Schools	Compacting Standards Through STEM  Helen Scandrick, Cannongate Elementary, Coweta County Schools
<b>9:45am —10:45 am</b> <b>Session Two</b>	Avenging Traditional Lessons by Making them STEM and Student Centered  Dr. Aaron L Smith, Awakening Your STEM School	Makerspaces: Powerful Tools to Enhance Learning and Interest in STEM Topics  Dr. Keith Ingram, Ball Ground STEM Academy	Tiddlywinks! or Marrying the Rigors of STEM and College and Career ELA  Dr. Barbara Bishop, West Georgia RESA	Drones and STEM  Bobby Lewis, Houston County
<b>11:00am—12:00pm</b> <b>Session Three</b>	Makey Makey: Letting Our Kids Build the World  David Lockhart, KSU iTeach Center	Makerspaces: Powerful Tools to Enhance Learning and Interest in STEM Topics  Dr. Keith Ingram, Ball Ground STEM Academy	Integrating Science and ELA  Chenita Jarrett, Fulton County Schools	STEM for Elementary Teachers  Julie Eidson, Welch Elementary School, Coweta County Schools
<b>12:00pm—1:15pm</b> Lunch	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>
<b>1:15-2:15pm</b> <b>Session Four</b>	Holy Cow, I Can See It! Rockin' the Classroom with Sphero  David Lockhart, KSU iTeach Center	MakerSpace; a space for all  Madeline Hall, Clark Creek Elementary School, Cherokee County Schools	Anybody Can Learn to Code  Alexandra Vlachakis, Code.org	Simple Solutions for Incorporating Technology into Your Science Classroom  Andy Musick, Howard Technology Solutions
<b>2:15-2:45pm</b> Break	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>
<b>2:45-3:45pm</b> <b>Session Five</b>	Ed Tech Mystery Skype  David Lockhart, KSU iTeach Center	Dare to Argue!  Debbie Stuckey, Coweta STEM Institute	Tiddlywinks! or Marrying the Rigors of STEM and College and Career ELA  Dr. Barbara Bishop, West Ga RESA	Using Google Forms For Constructed Response  Meagan Luschen, Odyssey Charter School

# FRIDAY

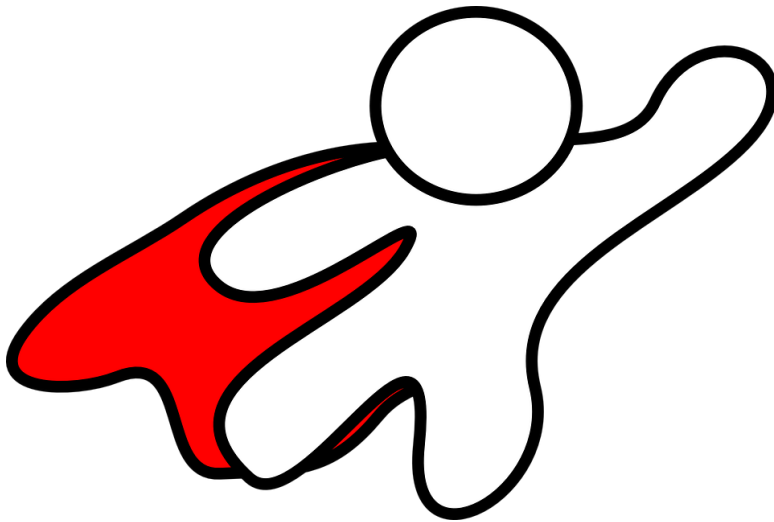
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Superhero  
Schedule

	Cobb	Coweta	Clayton A & B	Fairburn	Kenwood
<b>8:30am—9:30am</b> <b>Session One</b>	K-12 STEM Approach  David Woods, Project Lead The Way	3D Learning Workshop  Stephanie Miles, Villa Rica High School	NASA Technologies for Classroom Use Dr. Lester Morales, NASA	So You Think You Can STEM  Amanda York, Bremen Fourth and Fifth Grade Academy, Bremen City	Evolution of a STEM Elementary School Colleen Cauffiel, Ford Elementary School, Cobb County Schools
<b>9:45am —10:45 am</b> <b>Session Two</b>	Fossil Dig  Kimberly Boucher, Liberty Elementary School	Implementing a STEM Day from A-Z  Emily Westmoreland, Pleasant Grove Elementary, Henry County Schools	Increasing Engagement in Your STEM Program with Augmented Reality Cynthia Kaye, Alive Studios	Teaching Science through a Public Health Lens  Kelly Cordeira, Centers For Disease Control	EverFi- Free Online STEM Resources for Your Classroom! Laura Adriansen, EverFi
<b>11:00am—12:00pm</b> <b>Session Three</b>	Academic Teams as a Means of Enhancing School Climate  Pam Walsh, Fulton Science Academy	3D Learning Workshop  Stephanie Miles, Villa Rica High School, Carroll County Schools	Developing Digital Literacy through Virtual Learning Bejanae Kareem, B K International Education Consultancy	Making Science Study Relevant and Mobile  Gail Lambert, PowerUpEDU	Successful Pathways for School STEM Programs  Lianna Nix, Rex Middle School, Clayton County Schools
<b>12:00pm—1:15pm</b> <b>Lunch</b>	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>
<b>1:15-2:15pm</b> <b>Session Four</b>	Changing Earth  Terri George, Carolina Curriculum	iGEM, Synthetic Biology and You  Janet Standeven, Lambert High School	STEM: The Trojan Way  Stacy Lawler, Carrollton High School, Carrollton City Schools	Flipping Your Classroom with Swivl Gail Lambert, PowerUpEDU	GREENING STEM through Project Based/Problem Based/Place Based Learning Catherine Padgett, Cobb County
<b>2:15-2:45pm</b> <b>Break</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>
<b>2:45-3:45pm</b> <b>Session Five</b>	Constructed Response for Learning Online  Dr. Warren Combs, Writing2Win	In-Service Learning  Kevin Jones, Winston Dowdell Academy	Designing Sustainable Agriculture Through Hydroponics, Aquaponics, and Traditional Gardening  Libby Mitchell, Ford Elementary, Cobb County	Lab Results  Annette Perkins, Carrollton Elementary, Carrollton City Schools	Our Journey to STEM Certification  Adrienne Bickel, Northside Elementary , Houston County Schools

# **SUPERHERO INFORMATION**

Access today's presentations at:

<http://tinyurl.com/2016STEMSUPERHERO>



## **DRAWINGS & PRIZES**

All prize drawings will be  
announced on

Facebook & Twitter



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@WGARESASTEM

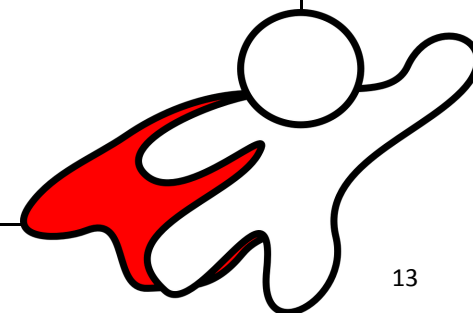
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#2016STEMSUPERHERO

# **THURSDAY**

## **SESSION ONE 8:30AM-9:30AM**

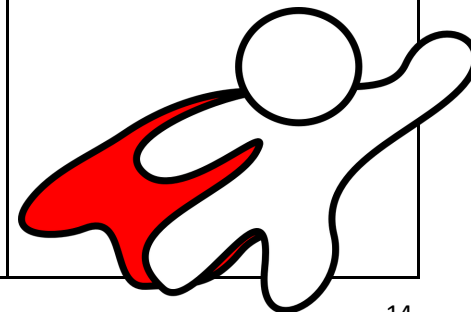
<b>Peachtree D</b>	<b>Canterbury</b>	<b>Spalding A &amp; B</b>	<b>Highland</b>
<b>Keynote</b>	<b>The “T” Integrated Through STEM</b>	<b>Elementary STEM</b>	<b>Elementary STEM</b>
<p><b>The Endless Immensity of Learning</b></p> <p><b>Dr. Mark Wilson, Professional Learning Consultant and Motivational Speaker</b></p>	<p><b>Flipped Classroom: Part One</b></p> <p><b>Amanda Fox, The STEM Academy</b></p>	<p><b>Developing STEM Critical Thinking and Creativity through Team Building in the Classroom</b></p> <p><b>Kathy Marks, Gwinnett County School System</b></p>	<p><b>Assessment and STEM</b></p> <p><b>Lisa Fleckenstein, Coweta County Schools</b></p>
<p>STEM isn't something we do, but an environment in which the excitement of learning can come alive. Dr. Mark Wilson, National High School Principal of the Year (NASSP, 2009) will remind you of the joy of learning and the power of curiosity in an interactive session that will have you ready to build a culture of learning and learners in your classroom and school.</p> <p><i>If you want to build a ship, don't drum up people together to collect wood and don't assign them tasks and work, but rather teach them to long for the endless immensity of the sea.”</i></p> <p>— <i>Antoine de Saint-Exupéry</i></p>	<p>Want to flip your content, but don't know where to start? Let's go over the basics of the flipped classroom, starting with the true flip, in-flip, and reverse/recycle. In this session, I will help you discover your flipped teaching style and offer several structures for implementation that I have found successful in my own practice. You can even co-teach with yourself, while taking care of remediation and enrichment! Hang around for session two to explore flipped tools in a hands-on fashion!</p>	<p>Learn how to turn your class into a team of problem-solving, risk-taking collaborators! Increase your students' STEM success in developing critical thinking and creativity through experiential team building activities that can be used at any time during your school day. As you challenge them out of their comfort zones, your students will practice STEM skills like communication, problem-solving, cooperation, and compromising as they work as a team. Need to see this in action? Come on in, and let's get started!</p>	<p>What does assessment look like in the 21st Century classroom?</p> <p>Research, data gathering, and reporting... observations, probes, constructed response... higher order thinking skills, problem solving, experiments, communication skills, project management...</p> <p>Come join us as we look at some practical ways to assess students in the STEM classroom.</p>



# THURSDAY


## SESSION ONE 8:30AM-9:30AM

Cobb	Coweta	Clayton A & B	Fairburn	Kenwood
Elementary STEM	Elementary STEM	The “T” Integrated Through STEM	Middle School STEM	Supporting At-Risk Students
<p>Engineering Design for Grades K-2</p> <p>Terri George, Carolina Curriculum</p>	<p>Geo-Toy Challenge</p> <p>Dr. Margy McCown, Cherokee County Schools</p>	<p>NASA Technologies for Classroom Use</p> <p>Dr. Lester Morales, NASA</p>	<p>Motivation and Engagement of All Students!</p> <p>Dr. Pamela Bouie, Accelerating Excellence</p>	<p>12 for Life: A Working Model to Engage At-risk Students in STEM</p> <p>Rachel Sayer, 12 For Life, Carroll County Schools</p>
<p>Students in K–2 can ask questions, make observations, and gather information to define a simple problem and solve it with a new or improved object or tool. This will be a hands-on workshop.</p>	<p>So you have a 3D printer... now what? Come see our Geo-Toy Challenge—a dynamic collaboration between high school architecture students and third grade students. Combining math, science, literacy, and social studies standards, this challenge required high school students to train elementary students in the design of 3-dimensional objects to be printed on a 3D printer. These objects were then incorporated into mathematics games the elementary students created and marketed to a “Shark Tank” of high school “investors.”</p>	<p>Explore NASA's various technologies available for classroom usage for Earth System Science, simulations, and applications to enhance student learning. We will also touch on various Teacher Professional Development opportunities, including online tools such as webinars, NASA's EPDC new teacher badging system, and the global registry for future opportunities.</p>	<p>Each student has different ways of learning and interacting with the world. Therefore, a variety of instructional strategies should be used to accommodate the full range of abilities in the classroom. This becomes even more critical when seeking to motivate and engage students in the fields of Science, Technology, Engineering and Mathematics. Attend this exciting, interactive session and leave with research-based strategies that will enable educators to design lessons that are more relevant and responsive to the different needs of their students!</p>	<p>Discover how 12 for Life is building better lives through education, employment and opportunity. This unique partnership between Carroll County Schools and Southwire keeps students engaged in school while providing work opportunities.</p>



# THURSDAY

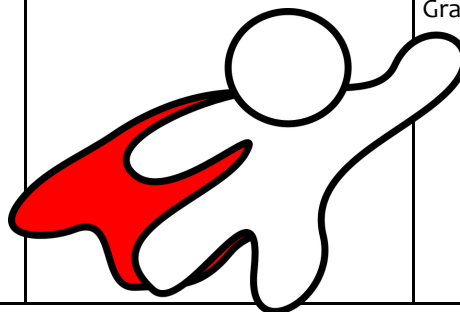
## SESSION TWO 9:45AM-10:45AM

Peachtree D	Canterbury	Spalding A & B	Highland
<b>Keynote</b>	<b>Middle School STEM</b>	<b>The “T” Integrated Through STEM</b>	<b>The “T” Integrated Through STEM</b>
<p style="text-align: center;">The Endless Immensity of Learning</p> <p style="text-align: center;">Dr. Mark Wilson, Professional Learning Consultant and Motivational Speaker</p>	<p style="text-align: center;">Robotics in the Upper Elementary and Middle School Classrooms</p> <p style="text-align: center;">Susan Adams-Curtis, Monroe County Schools</p>	<p style="text-align: center;">Engaging Tech in the STEM Classroom: Tools You Can Use Tomorrow</p> <p style="text-align: center;">Amy Vitala, Cobb County School District</p>	<p style="text-align: center;">Using NearPod in The Classroom</p> <p style="text-align: center;">Nina Eidson, Cherokee County Schools</p>
<p>STEM isn’t something we do, but an environment in which the excitement of learning can come alive. Dr. Mark Wilson, National High School Principal of the Year (NASSP, 2009) will remind you of the joy of learning and the power of curiosity in an interactive session that will have you ready to build a culture of learning and learners in your classroom and school.</p> <p><i>If you want to build a ship, don't drum up people together to collect wood and don't assign them tasks and work, but rather teach them to long for the endless immensity of the sea.”</i></p> <p>— <i>Antoine de Saint-Exupéry</i></p>	<p>Your students are fascinated by robots! Why not harness this fascination and use them within your science and math classrooms? This hands-on session will highlight STEM projects that incorporate robotics. Participants will use EV3 robots to solve math and science problems.</p>	<p>From "Ask" to "Improve," this fast-paced session will cover various tech tools that can be used to promote engaging and meaningful learning throughout the engineering design process!</p>	<p>Are you looking for an effective and meaningful way to integrate technology into your curriculum? NearPod is a simple, but engaging way to utilize iPads, cell phones, and laptops in your classroom. This session will require the use of your own handheld device, such as a tablet or cell phone. If you would like to download the NearPod APP in advance, that would be helpful.</p> <div style="text-align: right;">  </div>

# **THURSDAY**

## **SESSION TWO 9:45AM-10:45AM**

<b>Cobb</b>	<b>Coweta</b>	<b>Clayton A &amp; B</b>	<b>Fairburn</b>	<b>Kenwood</b>
<b>STEM and School Leadership</b>	<b>Middle School STEM</b>	<b>Middle School STEM</b>	<b>Elementary STEM</b>	<b>Middle School STEM</b>
<p><b>STEM Beyond The Classroom</b></p> <p>Dr. Jacquelyn Walton, Pearson</p>	<p><b>New Horizon Mission– What are we Learning From Pluto?</b></p> <p>Nancy Sills, Creekside School, Harris County Schools</p>	<p><b>Video Game Design: Level Up Your STEM Curriculum</b></p> <p>Corey Powell, STEM Academy</p>	<p><b>Growing up STEM!</b></p> <p>Rebecca Wachtel, Hubbard Elementary, DeKalb County Schools and David Kessler, Horticulturist</p>	<p><b>EverFi– Free Online STEM Resources for Your Classroom!</b></p> <p>Laura Adriansen, EverFi</p>
<p>Participants will discover how to leverage educational partnerships to truly integrate their STEM curriculum/program with real world connections. Join us to learn how vital partnerships may impact 21st Century skill building and college and career readiness.</p>	<p>NASA's New Horizon flew past Pluto in a historic mission in July, 2015. What have we learned, and how can we use this to help our students understand our Earth and Solar System? Media presentations along with easy to make lab activities will be presented.</p>	<p>Integrate core content and learn coding while creating fun and exciting video games that students love. A perfect way to build interdisciplinary STEM curriculum.</p>	<p>In this session, participants will learn how hydroponics can work within a school setting to enhance STEM concepts while growing tasty veggies! This is Hydroponics 101. You'll learn about basic systems, cost, DIY projects, and best of all, how to teach standards Pre-K through 5th Grade.</p>	<p>EverFi provides FREE online resources to support students with critical life skills. Attendees will preview our courses Radius: STEM Readiness, Ignition: Digital Literacy and Responsibility, and Hockey Scholar: Incorporating STEM, using the exciting game of hockey to talk through those concepts. Each attendee will receive free login information, standards alignment resources, and technical support throughout the year. We have courses for grades 4 - 12, so come join us and learn about EverFi!</p>





# THURSDAY

## SESSION THREE 11:00-12:00

Peachtree D	Canterbury	Spalding A & B	Highland
The “T” Integrated Though STEM	Elementary STEM	Elementary STEM	Elementary STEM
<p>Flipped Classroom: Part Two</p> <p>Amanda Fox, STEM Academy</p>	<p>Our AdvancED STEM Certification Story</p> <p>Dr. Kelly Price, Forsyth County Schools</p>	<p>STEM for Elementary Teachers</p> <p>Julie Eidson, Welch Elementary School, Coweta County Schools</p>	<p>Farmer Grady's Weather Challenge</p> <p>Angie Meredith, ETA Hand to Mind</p>
<p>Now that we have covered the basics of the flipped classroom it's time for Flipped Classroom Part Two: Let's get interactive! Bring a laptop, iPad, and your next lesson topic to explore tools to help flip your classroom, and create a student centered learning space! In this hands-on session, you will explore digital tools, and begin creating flipped content that you can immediately implement upon your return.</p>	<p>Whitlow Elementary became the first elementary school in Georgia to earn AdvancED STEM Certification in Nov 2015. We will share our journey through the AdvancED certification process.</p>	<p>This session will provide strategies in all five strands of reading: phonemic awareness, phonics, vocabulary, fluency and comprehension to assist students in becoming more proficient readers. Participants will leave with an increase in knowledge and a bank of resources from which to pull and use in their classrooms.</p>	<p>How can a farmer protect crops when a hailstorm threatens? Come and see how upper elementary students can use the engineering design process to compare roof shapes, tensile strength, and cost constraints to design a solution for Farmer Grady that reduces the impact of a weather-related hazard.</p>



# **THURSDAY**

## **SESSION THREE 11:00-12:00**

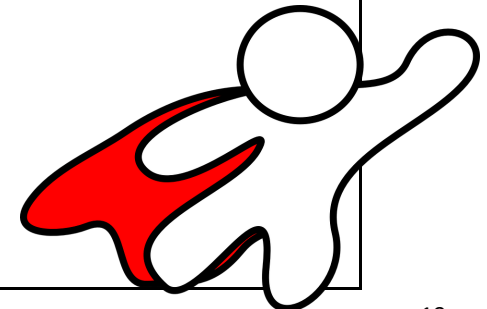
<b>Cobb</b>	<b>Coweta</b>	<b>Clayton A &amp; B</b>	<b>Fairburn</b>	<b>Kenwood</b>
<b>Elementary STEM</b>	<b>High School STEM</b>	<b>Elementary STEM</b>	<b>STEM and School Leadership</b>	<b>Elementary STEM</b>
<p><b>Full STEM Ahead! Digital Resources to Enhance ELEM STEM Instruction</b></p> <p><b>Laura Evans, Georgia Public Broadcasting</b></p>	<p><b>I like the idea of STEM, but where do I even begin?</b></p> <p><b>Leah Couch, Floyd County College and Career Academy</b></p>	<p><b>STEM Enrichment through Creativity and Innovation</b></p> <p><b>Judi Colloredo, National Inventors Hall of Fame, representing Camp Invention, Club Invention and Invention Project</b></p>	<p><b>Help Students Close Gaps and Keep up with Rigorous, On-Grade Level Lessons Using Digital Instruction</b></p> <p><b>Dr. Pamela Bouie, Accelerating Learning</b></p>	<p><b>Integrating STEM in the Kindergarten Classroom</b></p> <p><b>Regina Coley, Leading Ladies of Legacy</b></p>
<p>Georgia Public Broadcasting (GPB) has a long-standing tradition as an educational leader across the state. Resources include locally produced content, broadcast programming, professional development, and digital education resources across ALL subject areas through our partnerships with Discovery Education and PBS LearningMedia. In this session, participants will walk away with digital learning strategies that will engage students and improve learning outcomes in elementary STEM. Educators will not just learn how to use GPB's free resources but also how to create high quality learning experiences for their students.</p>	<p>Come learn how to integrate STEM into non-STEM classrooms. In the presentation, you will be shown examples of projects that have been done in collaboration with STEM and non-STEM classrooms. You will also take on the role of a student and complete some of the projects yourself. Participants will be introduced to some FREE online resources/programs, so you may want to bring a laptop if possible. (not mandatory)</p>	<p>The Camp Invention program provides teachers with direct experience in how to integrate STEM content with student-centered instructional strategies. Participants will engage in hands-on activities that illustrate the power of inquiry-based learning. Participants are encouraged to use these instructional strategies to inspire and motivate their day-to-day teaching in the classroom to enhance student learning.</p>	<p>Behavior management was rated as the most important variable to building and sustaining a high achieving learning environment. Participants will leave this session equipped with practical, powerful and proven strategies that can be implemented immediately to greatly enhance both discipline and academics not only in the classroom, but also throughout the school! Rather than losing an average of 5-9 hours per week dealing with low-level disruptions, educators will be challenged to use these techniques to "Cut the Chaos...Create Time for Student Success!"</p>	<p>This presentation will focus on tools and strategies you can use to incorporate STEM in the Kindergarten classroom.</p>



# **THURSDAY**


## **SESSION FOUR 1:15-2:15**

<b>Peachtree D</b>	<b>Canterbury</b>	<b>Spalding A &amp; B</b>	<b>Highland</b>
<b>STEM &amp; School Leadership</b>	<b>Makerspaces</b>	<b>Makerspaces</b>	<b>Elementary STEM</b>
<p><b>Paving the Way To STEM Certification</b></p> <p><b>Dr. Gilda Lyon, Georgia Department of Education</b></p>	<p><b>Makerspace for Robotics</b></p> <p><b>Bobby Lewis, Houston County</b></p>	<p><b>Solution Makers or Solution Manuals</b></p> <p><b>Peter Graff, Saint Francis Schools</b></p>	<p><b>STEMify Your School Day</b></p> <p><b>Megan Lenahan, Dunwoody Elementary, DeKalb County Schools</b></p>
<p>Is your school interested in moving from STEM activities to STEM Certification? This session will provide the criteria needed to meet certification and give examples of effective STEM schools.</p>	<p>Learn how to create a makerspace for robots. Sphero and Ozobot can be used to create a makerspace. Students can learn how to code and problem solve using robots.</p>	<p>In this presentation, participants will learn how to foster a culture of solution makers, not solution manuals. I will take an additive approach to demonstrate how 3D printing has allowed my students to understand the value of failure and break down the necessary tools and techniques I have employed to grow this #failbetter culture. Finally, I conclude the presentation with how learning to be comfortable with failure in my classroom has allowed for massive leaps in performance.</p>	<p>Come learn about how Dunwoody Elementary STEMifies our school day. You will hear about how we designed our STEM day challenges, wrote integrated STEM units, and how we explicitly teach the Engineering Design Process.</p>




# **THURSDAY**

## **SESSION FOUR 1:15-2:15**

<b>Cobb</b>	<b>Coweta</b>	<b>Clayton A &amp; B</b>	<b>Fairburn</b>	<b>Kenwood</b>
<b>Middle School STEM</b>	<b>High School STEM</b>	<b>Middle School STEM</b>	<b>STEM and School</b>	<b>Elementary STEM</b>
<p><b>Walk That Line!</b></p>  <p>Denise Peppers, Columbus Regional Mathematics Collaborative</p>	<p><b>Integrating STEM Through Authentic Collaboration</b></p>  <p>Dr. Amy Westbrook, Northgate High School, Coweta County Schools</p>	<p><b>Video Game Design: Level Up Your STEM Curriculum</b></p>  <p>Corey Powell, STEM Academy</p>	<p><b>Partnership Bootcamp</b></p>  <p>Dr. Sally Creel, Cobb County Schools</p>	<p><b>Sustaining an Effective Elementary STEM Program</b></p>  <p>Melanie Brooks, Carrollton City Schools</p>
<p>Join us as we explore Time-Distance graphs using TI-84 calculators &amp; Calculator-Based Rangers. Discussions will center around independent &amp; dependent variables and rate of change as it relates to slope.</p>	<p>Teaching Mathematics and approaching RTI through differentiated instruction requires a shift of thinking and focus. New research supports brain plasticity- the ability to learn and grow learning potential throughout life. Jo Boeller and Carol Dweck's research shows that this awareness in teachers and students changes the picture for the future of mathematics learning and engagement. This session on Mathematics will demonstrate how to create mathematical practices that support growth mindset and student engagement.</p>	<p>Integrate core content and learn coding while creating fun and exciting video games that students love. A perfect way to build interdisciplinary STEM curriculum.</p>	<p>STEM Certification encourages partnerships. Where do you start? Partnership Bootcamp-that's where! Learn who to reach out to, how to ask, what to ask, and how to keep it going.</p> <div style="text-align: center;">  </div>	<p>Carrollton Elementary School was one of the first elementary schools in the state of Georgia to receive STEM certification. We are on the cusp of re-certification and feel like our STEM program is stronger than ever. Come learn how we are continuing to grow STEM education within our school and the steps we are taking to prepare for re-certification. You are sure to walk away from this session with ideas and resources, no matter where you are in the STEM implementation process. Listen to teachers who are making STEM happen from the classroom to the lab.</p>

# **THURSDAY**

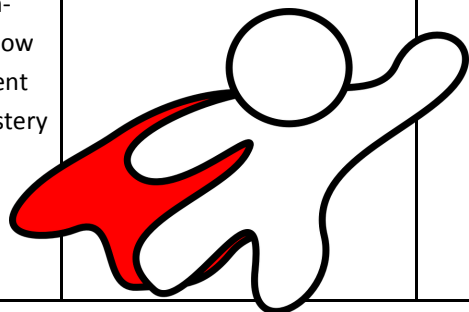
## **SESSION FIVE 2:45-3:45**

<b>Peachtree D</b>	<b>Canterbury</b>	<b>Spalding A &amp; B</b>	<b>Highland</b>
<b>The “T” Integrated Through STEM</b>	<b>Middle School STEM</b>	<b>Elementary STEM</b>	<b>Elementary STEM</b>
<p style="text-align: center;"><b>LEGO WeDo Robotics</b></p> <p style="text-align: center;"><b>Paula Corley, White Oak Elementary</b></p>	<p style="text-align: center;"><b>Engaging Middle School Girls in STEM</b></p> <p style="text-align: center;"><b>Regina Coley, Leading Ladies of Legacy</b></p>	<p style="text-align: center;"><b>#KidsCanCode!</b></p> <p style="text-align: center;"><b>Tanya Cheeves, Code.org</b></p>	<p style="text-align: center;"><b>STEM-sational Family Nights</b></p> <p style="text-align: center;"><b>Angie Meredith, ETA hand2mind</b></p>
<p>Love the idea of robotics, but not sure it is something you can handle? Robotics sure sounds great, but is it really something our young ones can do? What about programming...does the idea scare you? Come use the LEGO WeDo kit and learn how capable you really are with bringing this into your classroom!!</p>	<p>This presentation will focus on instructional strategies to engage more middle school girls in STEM practices in your school and classroom.</p>	<p>Don't miss out on this opportunity to preview "Code Studio" and other age appropriate computer science activities for students K-5. This fun, hands-on workshop blends online learning with unplugged activities! You will leave this workshop with ideas and activities that you can take back and use in your classroom the next day!</p>	<p>Gearing up for a school family night? Looking for ways to introduce STEM to your school community? This session uses the engineering design process to build a prototype of a new spinning toy! Help parents understand why hands-on learning strategies in elementary science and math make a difference in student achievement.</p> <div style="text-align: right;">  </div>

# ***THURSDAY***

## ***SESSION FIVE 2:45-3:45***

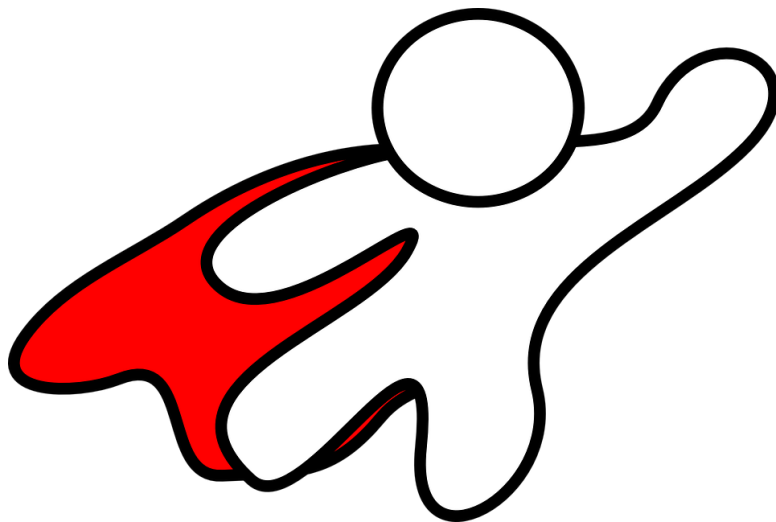
<b>Cobb</b>	<b>Coweta</b>	<b>Clayton A &amp; B</b>	<b>Fairburn</b>	<b>Kenwood</b>
<b>The “T” Integrated Through STEM</b>	<b>High School STEM</b>	<b>Supporting At-Risk Students</b>	<b>Elementary STEM</b>	<b>Middle School STEM</b>
<b>Constructed Response for Learning Online</b>	<b>STEM in Biology</b>	<b>Increasing Engagement in Your STEM Program with Augmented Reality</b>	<b>Getting Students</b>	<b>West Point Lake Floating Classroom</b>
<b>Dr. Warren Combs, Writing2Win</b>	<b>Timothy Hawig, Carrollton City Schools</b>	<b>Cynthia Kaye, Alive Studios</b>	<b>Kevin Hughes, Dunwoody Elementary, DeKalb County Schools</b>	<b>Henry Jacobs, Chattahoochee Riverkeeper</b>
<p>Constructed responses became a trademark of recent national and state tests, raising teacher and student anxiety. At the same time, Writing to Win classroom action research showed that using constructed responses as activators or closings 2-3 times a week boosted student overall performance on tests and closed achievement gaps on the same tests. W2Win Online offers that same tested routine on the Internet. Learn the power of students' constructing responses online. See how interactive software guides student self-assessment and ensures mastery of significant peer-responses.</p>	<p>Explore lessons/labs/activities of inquiry for Georgia's Biology Standards along with some high level differentiation/enrichment, including a variety of lessons such as those done in stations, small projects using recyclables and inexpensive easy to find materials. Learn how to add simple technology and exploratory tasks for all learners.</p>	<p>Learn how to use a 3D technology called Augmented Reality to enhance your STEM program. Our supplemental reading and math programs include animals that spring to life and tie in sciences, technology, and more. Children are hearing, seeing, touching, building, and speaking while creating a positive emotional experience that increases engagement and retention.</p>	<p>Coding drives most everything that we use and/or touch in our daily lives. It is just about everywhere (in our devices, cars, businesses and homes). If English is the international language of business, then coding is the fundamental language that runs the cyber-world. I will share how I use coding programs like Code.org, Kodable.com and Scratch to expose students from kindergarten through 5th grade to the world of coding and build their problem-solving and critical-thinking skills. In a nutshell, games-games-games!</p>	<p>Chattahoochee Riverkeeper (CRK) is pleased to announce the creation of a floating classroom program on West Point Lake to serve the Middle Chattahoochee region, including public and private schools, colleges, nature centers, camps, civic groups and others. The program will be managed by CRK's local office in LaGrange. The West Point Lake Floating Classroom (WPLFC) is a concept with a proven track record. For the past 15 years, CRK has operated the only floating classroom in Georgia on Lake Lanier, successfully bringing 40,000 students and teachers onboard for hands-on educational activities that meet Georgia's Performance Standards.</p>



# **SLUPERHERO INFORMATION**

Access today's presentations at:

<http://tinyurl.com/2016STEMSUPERHERO>



## **DRAWINGS & PRIZES**

All prize drawings will be  
announced on

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# FRIDAY

## SESSION ONE 8:30AM-9:30AM

Peachtree D	Canterbury	Spalding A & B	Highland
Keynote	Elementary STEM	Elementary School	Elementary STEM
<p>Calling on the Fantastic Four to Rescue STEM Schools</p> <p style="text-align: center;">Dr. Aaron L Smith, Awakening Your STEM School</p>	<p>Using STEM Across the Curriculum</p> <p style="text-align: center;">Susan Adams-Curtis, Monroe County Schools</p>	<p>Cooking with STEM</p> <p style="text-align: center;">Karen Garland, Clark Creek Elementary School, Cherokee County Schools</p>	<p>Compacting Standards Through STEM</p> <p style="text-align: center;">Helen Scandrick, Cannongate Elementary, Coweta County Schools</p>
<p>All schools have their own superheroes but sometimes heroes need help from their team. In this case, we'll call on "the fantastic four" to help us bridge support from our communities and businesses. The fantastic four include learning how to approach business partners for support, developing internships for students, championing contributions and sustaining externships for educators.</p>	<p>Are you an English or Social Studies teacher? An administrator? Are you unsure of how to integrate STEM projects throughout your curriculum? In this hands-on, highly interactive session, participants will explore ways to integrate STEM and the Engineering Design Process into every lesson!</p>	<p>How can you combine a student's love for cooking with key lessons in math and science? Just by following the steps of a recipe, children can make important connections to lessons. Yes, cooking is a tasty vehicle for STEM exploration!</p>	<p>Do you find it hard to connect the standards to your STEM lesson? Do you have really good STEM ideas but the lesson does not follow the standards for your grade level? This session will talk about how to compact your standards through STEM. We will look at standards and STEM lessons for grades 3-5 that you can incorporate with your standards while meeting TKES requirements.</p>

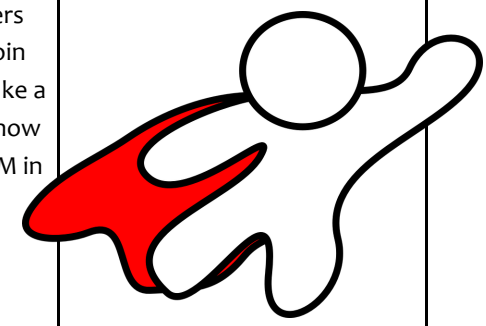




# FRIDAY

## SESSION ONE 8:30AM-9:30AM

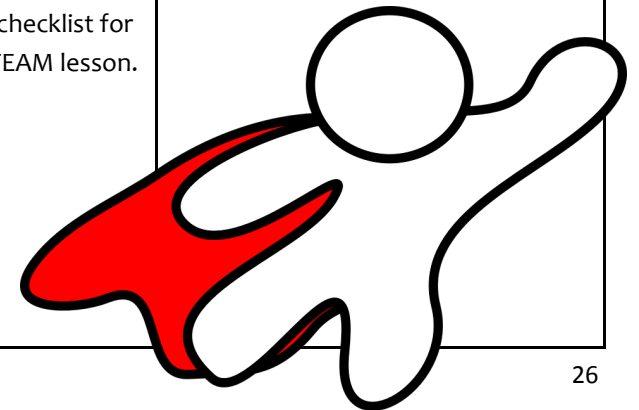
Cobb	Coweta	Clayton A & B	Fairburn	Kenwood
STEM and School Leadership	Middle School STEM	The "T" Integrated Through STEM	Elementary School STEM	STEM and School Leadership
<b>K-12 STEM Approach</b>	<b>3D Learning Workshop</b>	<b>NASA Technologies for Classroom Use</b>	<b>So You Think You Can STEM</b>	<b>Evolution of a STEM Elementary School</b>
<b>David Woods, Project Lead The Way</b>	<b>Stephanie Miles, Villa Rica High School, Carroll County Schools</b>	<b>Dr. Lester Morales, NASA</b>	<b>Amanda York, Bremen Fourth and Fifth Grade Academy,</b>	<b>Colleen Cauffiel, Ford Elementary School, Cobb County Schools</b>
Project Lead The Way is the nation's leading provider of science, technology, engineering, and math (STEM) programs. Starting with hands-on industry-centered curriculum in Kindergarten and progressing all the way to the 12th grade preparing students for not just post secondary success but marketable job skills straight out of high school. PLTW courses cover a wide array of skills in the areas of Engineering, Biomedical Science, and Computer Science. With our national partnership with College Board and Affiliate Universities, students can earn college credit and career skills before even graduating.	This session will introduce teachers to the 3D learning process through hands-on activities.	Exploration of NASA's various technologies available for classroom usage for Earth System Science, simulations, and applications to enhance student learning. We will also touch on various Teacher Professional Development opportunities online tools such as webinars, NASA's EPDC new teacher badging system, and the global registry for future opportunities.	Contrary to what you might hear about STEM AND STEAM, there is not a "one size fits all" for schools. Whether schools are pursuing STEM certification or just want to take those very first steps in offering STEM experiences in the classroom, there are several strategies that can help build "Stem-Confidence" among teachers and students alike. Come join us as we share ideas and take a behind-the-scenes look at how we have been tackling STEM in our school.	How do you create a culture of STEM in your elementary school? This session will discuss how to build a successful STEM school by focusing on the strengths of a school, recognizing growth opportunities, and constructing a sustainable plan for success.



# FRIDAY


## SESSION TWO 9:45AM-10:45AM

Peachtree D	Canterbury	Spalding A & B	Highland
<b>Keynote</b>	<b>Makerspaces</b>	<b>Elementary STEM</b>	<b>Engineering</b>
<p><b>Avenging Traditional Lessons by Making them STEM and Student Centered</b></p> <p><b>Dr. Aaron L Smith, Awakening Your STEM School</b></p>	<p><b>Makerspaces: Powerful Tools to Enhance Learning and Interest in STEM Topics</b></p> <p><b>Dr. Keith Ingram, Ball Ground STEM Academy</b></p>	<p><b>Tiddlywinks! or Marrying the Rigors of STEM and College and Career ELA</b></p> <p><b>Dr. Barbara Bishop, West Georgia RESA</b></p>	<p><b>Drones and STEM</b></p> <p><b>Bobby Lewis, Houston County</b></p>
<p>Fighting Old School Lady and Worksheet Killer has become routine in most schools across our nation. In this session, teachers gain valuable insight on how to make lessons more STEM-oriented and student-centered with curriculum and teacher adjustments so that they can defeat these foes to become a true superhero.</p>	<p>Makerspaces: Powerful Tools to Enhance Learning and Interest in STEM Topics. At our STEM school, we use Problem Based Thinking and Solutions while using our MAKERSPACE. We help our students cultivate creativity, develop problem solving skills, improve communication among team members and help develop collaboration skills. We determine real problems, imagine solutions, and develop a plan to solve the problem, “create” and build (MAKE) for the solution.</p>	<p>Let's play the old fashioned Tiddlywinks game! Participants will explore an ELA-rich STEAM lesson designed to meet rigorous expectations in multiple content areas. One person will win the actual game! But everyone will receive access to all the videos, handouts, and App suggestions needed to implement this STEAM lesson in the classroom (may be differentiated for learners of varying readiness, but it's probably best for grades 2/3/4). More importantly, together we'll build an instructional checklist for any rigorous/college and career STEAM lesson.</p>	<p>How can we use drones with STEM? Discover, share and create some ways to use drones with STEM education.</p>



# **FRIDAY**

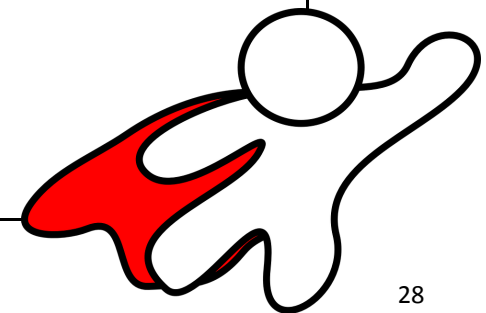
## **SESSION TWO 9:45AM-10:45AM**

<b>Cobb</b>	<b>Coweta</b>	<b>Clayton A &amp; B</b>	<b>Fairburn</b>	<b>Kenwood</b>
<b>Elementary STEM</b>	<b>Elementary STEM</b>	<b>Elementary STEM</b>	<b>High School STEM</b>	<b>Middle School STEM</b>
<p style="text-align: center;"><b>Fossil Dig</b></p> <p style="text-align: center;">Kimberly Boucher, Liberty Elementary School, Liberty County Schools</p>	<p style="text-align: center;"><b>Implementing a STEM Day from A-Z</b></p> <p style="text-align: center;">Emily Westmoreland, Pleasant Grove Elementary, Henry County Schools</p>	<p style="text-align: center;"><b>Increasing Engagement in Your STEM Program with Augmented Reality</b></p> <p style="text-align: center;">Cynthia Kaye, Alive Studios</p>	<p style="text-align: center;"><b>Teaching Science through a Public Health Lens</b></p> <p style="text-align: center;">Kelly Cordeira, Centers For Disease Control</p>	<p style="text-align: center;"><b>EverFi- Free Online STEM Resources for Your Classroom!</b></p> <p style="text-align: center;">Laura Adriansen, EverFi</p>
<p>Experience and analyze an engaging STEM lesson designed to encourage scientific discovery through a hands-on fossil dig. Participants will chart findings and analyze for conclusions in lesson activities that cover the range of Bloom's Taxonomy. Related iPad apps, favorite books, and a 3D Lab Layers of Earth lesson will be shared.</p> 	<p>Let's walk through the implementation of a monthly STEM Day event. This presentation will discuss STEM Careers, STEM Competitions, Student Voice, the Engineering Design Process, and much more. Teachers will leave feeling comfortable enough to host an event for their whole school! Teachers will be given sample formats and ideas on how to get their entire school excited about implementing STEM.</p>	<p>Learn how to use a 3D technology called Augmented Reality to enhance your STEM program. Our supplemental reading and math programs include animals that spring to life and tie in sciences, technology, and more. Children are hearing, seeing, touching, building, and speaking while creating a positive emotional experience that increases engagement and retention.</p>	<p>Teaching epidemiology and public health science in the classroom engages students in learning experiences across STEM disciplines. Seeing STEM content through the lens of public health provides context for student learning and can increase student motivation to learn requisite science and mathematics. It also demonstrates the use of science and mathematics in solving news-making problems, promotes science literacy, and encourages critical thinking.</p>	<p>EverFi provides FREE online resources to support students with critical life skills. Attendees will preview our courses Radius: STEM Readiness, Ignition: Digital Literacy and Responsibility, and Hockey Scholar: Incorporating STEM, using the exciting game of hockey to talk through those concepts. Each attendee will receive free login information, standards alignment resources, and technical support throughout the year. We have courses for grades 4 - 12, so come join us and learn about EverFi!</p>

# FRIDAY


## SESSION THREE 11:00-12:00

Peachtree D	Canterbury	Spalding A & B	Highland
Makerspaces	Makerspaces	Elementary STEM	Elementary STEM
<p><b>Makey Makey: Letting Our Kids Build the World</b></p> <p><b>David Lockhart, KSU iTeach Center</b></p>	<p><b>Makerspaces: Powerful Tools to Enhance Learning and Interest in STEM Topics</b></p> <p><b>Dr. Keith Ingram, Ball Ground STEM Academy</b></p>	<p><b>Integrating Science and ELA</b></p> <p><b>Chenita Jarrett, Fulton County Schools</b></p>	<p><b>STEM for Elementary Teachers</b></p> <p><b>Julie Eidson, Welch Elementary School, Coweta County Schools</b></p>
<p>We are at the dawn of a new generation. Kids can make and view learning in all different ways. The Maker Movement is taking over. Is that scary for you? Don't let it be! Come to this session to learn loads of ideas on how to get the maker movement going in your classroom or school in ways that won't kill your budget.</p>	<p>Makerspaces: Powerful Tools to Enhance Learning and Interest in STEM Topics. At our STEM school, we use Problem Based Thinking and Solutions while using our MAKERSPACE. We help our students cultivate creativity, develop problem solving skills, improve communication among team members and help develop collaboration skills. We determine real problems, imagine solutions, and develop a plan to solve the problem, "create" and build (MAKE) for the solution.</p>	<p>We can find time to teach science! During this session participants will participate in STEM activities and learn how to connect STEM lessons to elementary literacy concepts. Participants will walk away with resources such as suggested book lists and STEM lesson ideas.</p>	<p>This session will provide strategies in all five strands of reading: phonemic awareness, phonics, vocabulary, fluency and comprehension to assist students in becoming more proficient readers. Participants will leave with an increase in knowledge and a bank of resources from which to pull and use in their classrooms.</p>



# **FRIDAY**

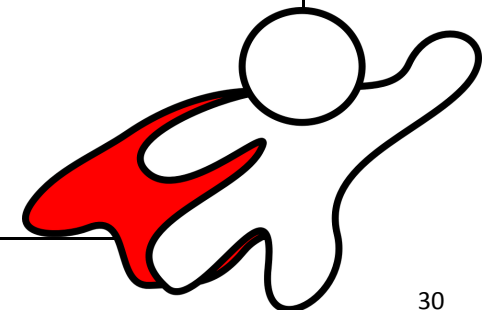
## **SESSION THREE 11:00-12:00**

<b>Cobb</b>	<b>Coweta</b>	<b>Clayton A &amp; B</b>	<b>Fairburn</b>	<b>Kenwood</b>
<b>Middle School STEM</b>	<b>Middle School STEM</b>	<b>The “T” Integrated Through STEM</b>	<b>Middle School STEM</b>	<b>Middle School STEM</b>
<b>Academic Teams as a Means of Enhancing School Climate</b>  <p style="text-align: center;">Pam Walsh, Fulton Science Academy</p>	<b>3D Learning Workshop</b>  <p style="text-align: center;">Stephanie Miles, Villa Rica High School, Carroll County Schools</p>	<b>Developing Digital Literacy through Virtual Learning</b>  <p style="text-align: center;">Bejanae Kareem, B K International Education Consultancy</p>	<b>Making Science Study Relevant and Mobile</b>  <p style="text-align: center;">Gail Lambert, PowerUpEDU</p>	<b>Successful Pathways for School STEM Programs</b>  <p style="text-align: center;">Lianna Nix, Rex Middle School, Clayton County Schools</p>
<p>Traditionally, sports teams are the chief means of promoting school spirit. Who doesn't enjoy a great sporting event and even better, a winning team? Academic teams, such as Science Olympiad, Model UN, First Lego League, and Destination Imagination can have the same effect. At Fulton Science Academy, Academic Teams play a huge role in defining the school's culture and are a major attraction to families seeking a strong STEM education for their children.</p>	<p>This session will introduce teachers to the 3D learning process through hands-on activities.</p> 	<p>Limited funding for field trips? Go Virtual! This session explores web-based technologies to provide virtual field trips to engage K-8 millennial learners. The session provides technology centered resources that foster digital literacy while removing the barriers of travel and its associated expenses. You won't want to miss this session! We encourage participants to bring their own iPad or tablet device.</p>	<p>Students most effectively acquire and retain information when it reflects the reality they experience outside the classroom, allowing them to make cognitive connections that last. Using mobile data loggers, science experiments can be performed anywhere, as a means to solve every day challenges. PowerUpEDU will show how fun and flexible data logging can be for project-based, collaborative learning.</p>	<p>The development of a robust STEM program involves several significant, integrated components. This workshop will speak to that development, addressing such constituent elements as vision, goals, buy-in, curriculum, leadership, team-building, CTE integration, partnerships, extracurricular activities, and professional learning. The speaker will offer strategies successful in guiding Rex Mill Middle School towards becoming the second certified middle school STEM program in Georgia.</p>

# FRIDAY

## SESSION FOUR 1:15-2:15

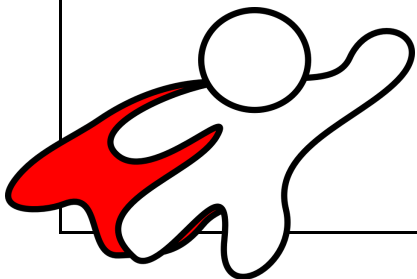
Peachtree D	Canterbury	Spalding A & B	Highland
The “T” Integrated Through STEM	Makerspaces	High School STEM	The “T” Integrated Through STEM
<p style="text-align: center;">Holy Cow, I Can See It! Rockin’ the Classroom with Sphero</p> <p style="text-align: center;">David Lockhart, KSU iTeach Center</p>	<p style="text-align: center;">MakerSpace: a space for all</p> <p style="text-align: center;">Madeline Hall, Clark Creek Elementary School, Cherokee County Schools</p>	<p style="text-align: center;">Anybody Can Learn to Code</p> <p style="text-align: center;">Alexandra Vlachakis, Code.org</p>	<p style="text-align: center;">Simple Solutions for Incorporating Technology into Your Science Classroom</p> <p style="text-align: center;">Andy Musick, Howard Technology Solutions</p>
<p>Sphero at its core is a robotic ball. It looks like a cool toy, but have you ever thought about how you can use it in the classroom? Sphero has loads of apps that can let kids see learning differently. Come find out how you can teach basic coding, engineering, math, problem solving, and many other subjects, all with a real physical object.</p>	<p>Interested in bringing a MakerSpaces into your school, or do you just want to know more about them? Participants will see examples of a MakerSpace in action, student products, resources and activities to start your own MakerSpace. Join us for a “Mini Maker Faire.”</p>	<p>Join me, Alexandra Vlachakis, 2016 Georgia teacher of the year finalist, for an insightful LIVE and virtual learning experience. During this session, hosted live from our Code.org Seattle Headquarters, I will help you discover the wonderful world of computer science. Anyone can learn!</p>	<p>Come join Howard Technology along with Ken-A-Vision to see how incorporating technology into your science classroom can be easy and fun! Practice a fun hands-on lesson with making your own slides, and then take images with digital microscopes and EduCam Plus!</p>



# FRIDAY

## SESSION FOUR 1:15-2:15

Cobb	Coweta	Clayton A & B	Fairburn	Kenwood
Elementary STEM	High School STEM	High School STEM	The “T” Integrated Through STEM	Elementary STEM
<p style="text-align: center;">Changing Earth</p> <p style="text-align: center;">Terri George, Carolina Curriculum</p>	<p style="text-align: center;">iGEM, Synthetic Biology and You</p> <p style="text-align: center;">Janet Standeven, Lambert High School, Forsyth County Schools</p>	<p style="text-align: center;">STEM: The Trojan Way</p> <p style="text-align: center;">Stacy Lawler, Carrollton High School, Carrollton City Schools</p>	<p style="text-align: center;">Flipping Your Classroom with Swivl</p> <p style="text-align: center;">Gail Lambert, PowerUpEDU</p>	<p style="text-align: center;">GREENING STEM through Project Based/Problem Based/Place Based Learning</p> <p style="text-align: center;">Catherine Padgett, Cobb County</p>
<p>Explore the Earth's layers, plate tectonics, and patterns of change.</p>	<p>Are you looking for an engineering research opportunity for your advanced high school students? This session will discuss how you can introduce genetic engineering to your students in a competitive format. iGEM is the International Genetically Engineered Machine Competition which is the premier competition for Synthetic Biology. iGEM has students work with standardized sequences of DNA called Biobricks to design and build new cell machines. This session will include a presentation from Lambert High School’s iGEM team as well as information on starting your own iGEM team.</p>	<p>This program is designed to illustrate how we implement STEM through our engineering program and the importance of strong partnerships to enhance the internship opportunities for our students. We will describe each level of our engineering program, the curriculum that we use, and the importance of differentiating in the classroom, projects, and equipment. We will discuss the emphasis placed on STEM throughout CHS and how we incorporate STEM through all disciplines. We will also discuss the Carrollton High School and Southwire Engineering Academy (SWEA). A strong partnership can change the game in your students’ learning experience.</p>	<p>Capturing video has never been easier with Swivl! The Swivl robot along with the Capture App and Cloud Service are a powerful set of tools ideal for flipping your classroom. Save time and improve outcomes by creating engaging content for students to succeed. Join the Swivl revolution!</p>	<p>Ford Elementary's twenty year journey in Environmental Education is meeting the challenges of remaining relevant and resilient through year-long PBL/STEM experiences. Focusing primarily on grades 2 through 5, we are building capacity for PBL through field experts, partners, teacher training and volunteer Earth Parents. Join us as we share our Monarchs Across Georgia, Vermiculture, PBLU Schoolyard Habitat Project, Project Hero, Aqua/ Hydroponics, and The Victory Garden Project.</p>



# ***FRIDAY***

## ***SESSION FIVE 2:45-3:45***

<b>Peachtree D</b>	<b>Canterbury</b>	<b>Spalding A &amp; B</b>	<b>Highland</b>
<b>The “T” Integrated Through STEM</b>	<b>Elementary STEM</b>	<b>Elementary STEM</b>	<b>Elementary STEM</b>
<p><b>Ed Tech Mystery Skype</b></p> <p><b>David Lockhart, KSU iTeach Center</b></p>	<p><b>Dare to Argue!</b></p> <p><b>Debbie Stuckey, Coweta STEM Institute</b></p>	<p><b>Tiddlywinks! or Marrying the Rigors of STEM and College and Career ELA</b></p> <p><b>Dr. Barbara Bishop, West Georgia RESA</b></p>	<p><b>Using Google Forms For Constructed Response</b></p> <p><b>Meagan Luschen, Odyssey Charter School</b></p>
<p>Have you heard of the mystery Skype game? The idea in the classroom is to Skype with another class, and then you have the students guess where each class is located. This session takes that idea and twists it for the technology crowd. It’s time to play Mystery Skype with a technology company! You can then have all your burning questions answered.</p>	<p>Evidence-based argumentation will get you everywhere. Handouts will offer ready-to-use STEM lessons that implement this valuable skill and start the arguments!</p>	<p>Let's play the old fashioned Tiddlywinks game! Participants will explore an ELA-rich STEAM lesson designed to meet rigorous expectations in multiple content areas. One person will win the actual game! But everyone will receive access to all the videos, handouts, and App suggestions needed to implement this STEAM lesson in the classroom (may be differentiated for learners of varying readiness, but it's probably best for grades 2/3/4). More importantly, together we'll build an instructional checklist for any rigorous/college and career STEAM lesson.</p>	<p>My presentation will include how to use Google forms to create constructed response practice pieces. I will also discuss how to get these items to students through Google Classroom and grade them using a Google extension Flubaroo. Participants should bring their device to log in to Google Drive and create a sample item during the session.</p>





# **FRIDAY**

## **SESSION FIVE 2:45-3:45**

<b>Cobb</b>	<b>Coweta</b>	<b>Clayton A &amp; B</b>	<b>Fairburn</b>	<b>Kenwood</b>
<b>The “T” Integrated Through STEM</b>	<b>High School STEM</b>	<b>Elementary STEM</b>	<b>Elementary STEM</b>	<b>Elementary STEM</b>
<b>Constructed Response for Learning Online</b>  <b>Dr. Warren Combs, Writing2Win</b>	<b>In-Service Learning</b>  <b>Kevin Jones, Winston Dowdell Academy</b>	<b>Designing Sustainable Agriculture Through Hydroponics, Aquaponics, and Traditional Gardening</b>  <b>Libby Mitchell, Ford Elementary, Cobb County Schools</b>	<b>Lab Results</b>  <b>Annette Perkins, Carrollton Elementary, Carrollton City Schools</b>	<b>Our Journey to STEM Certification</b>  <b>Adrienne Bickel, Northside Elementary, Houston County Schools</b>
<p>Constructed responses became a trademark of recent national and state tests, raising teacher and student anxiety. At the same time, Writing to Win classroom action research showed that using constructed responses as activators or closings 2-3 times a week boosted student overall performance on tests and closed achievement gaps on the same tests. W2Win Online offers that same tested routine on the Internet. Learn the power of students' constructing responses online. See how interactive software guides student self-assessment and ensures mastery of significant peer-responses.</p>	<p>The In-Service Learning Project is designed to show educators the value of in-service learning and how they can be used to teach students valuable skills they will use outside of the classroom.</p>	<p>Ford Elementary and our partner in education, Atlantis Hydroponics, have been working together to utilize hydroponics, aquaponics, and traditional gardening in the classroom, utilizing sustainable agricultural practices as the vehicle of a problem-based learning/STEM curriculum. With emphasis placed on critical thinking, creativity, open-ended inquiry, data collection, and engineering concepts, students have taken ownership of their project.</p>	<p>Come and learn how to set up and implement an elementary STEM lab in your school. You will hear from two teachers who have created two STEM labs. You will gain an understanding of how the lab is different from the STEM lessons that are happening in the classroom. Hear their struggles and successes. Also, learn about state-of-the-art technology in the labs that cost the school NO money!</p>	<p>Northside Elementary is a Title I school that achieved STEM certification this past December. At NES, all of our students are involved in STEM from 5th grade all the way down to Pre-K. In this session, we will share our journey of growing pains in becoming a STEM certified school from lesson planning (Criteria 6) to establishing a business partnership (Criteria 8). Perdue Farms is one of our business partners, and together we will share how we work together to integrate our curriculum in order to solve problems at the plant.</p>

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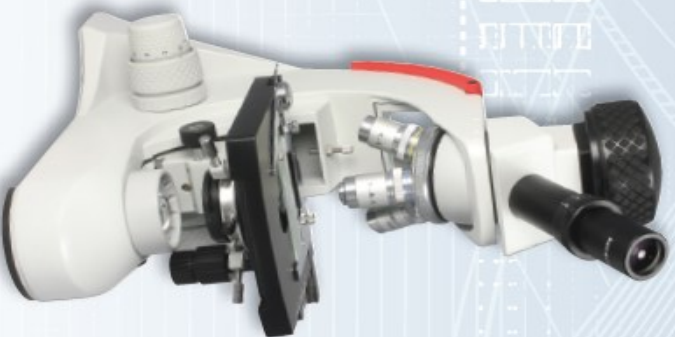


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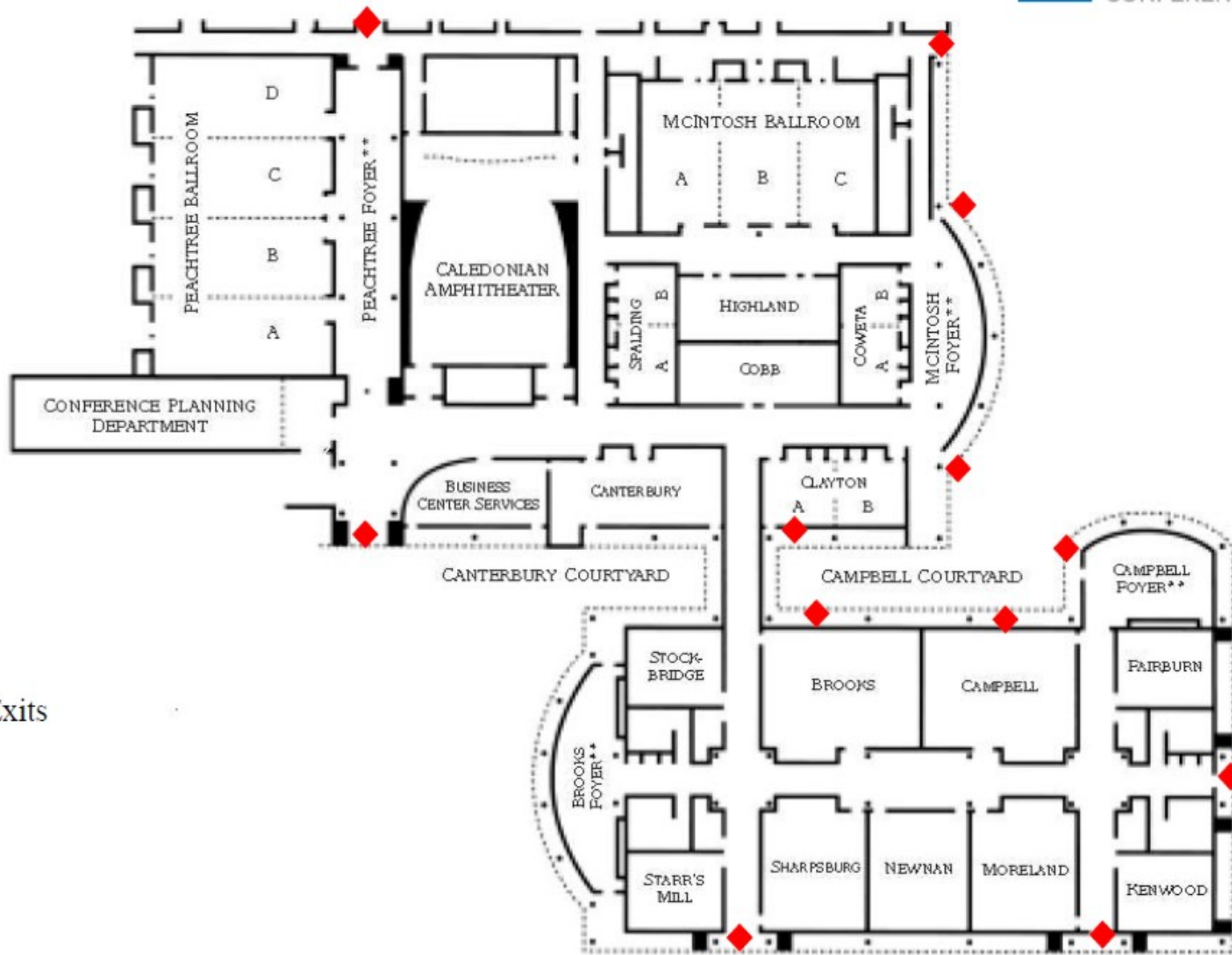
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