

Friday, October 20, 2017

8 – 9 AM

109 Teach with Passion, Manage with Compassion! (Grades K – 12, College)

Dr. Pamela Bouie, Accelerating Excellence

Increases in student discipline concerns and teacher turnover are having a profound negative impact on the effectiveness of schools. Academics and discipline go hand-in-hand. Administrators can recruit and hire some of the best mathematics instructors, but if the teachers are unable to control the classroom the best lessons remain undelivered. This interactive session will present practical and powerful research-based strategies proven to decrease discipline challenges, empower educators and increase student success in mathematics!

110 MathCon National Math Competition (Grades 5 - 12)

Timothy Coefield, Floyd Middle School

MathCon is a national Math Competition where students from all over the country compete in high level math standards with an online assessment. This past year 50,000 students from 43 states competed and the top 1% get invited to participate in the face to face competition at the University of Illinois Chicago. We would like to share our what our student who was a national finalist experienced and what it took to get her there.

111 Making Interventions Meaningful Today (Grades 5 – 9)

Jennifer Jochen, Smith Curriculum and Consulting

Have you ever asked yourself, "How do I meet each of their needs while helping them move forward at the same time?" Come join me to learn some tried and true strategies to integrate into your RTI program to keep your students engaged and wanting to learn more! You will leave with take-aways that you can turn around and implement into your small groups right away!

112 Can You Hear Me Now? Effectively communicating in a math classroom (Grades 6 – 8)

Lisa Hinton, Clayton County School System

There is often times a disconnect between what teachers say and what students hear. Participants will explore different techniques of communicating math language in their classrooms. We will look at how we can begin to bridge the gap so that we can begin to foster positive interactions and promote learning in the classroom.

113 Using Robots to Teach Mathematics (Grades K – 3)

Kevin Hughes, Dunwoody Elementary School

Through the use of robots such as Dash, BB-8 and Makey Makey units, participants will engage in learning specific elementary mathematical standards.

114 Emoji Algebra (Grades 3 – 7)

Scarlett Moore, Middle Georgia State University

Transitioning from arithmetic to algebra creates problems for many students. In this session we will share our idea (and material) of preparing students for this transition using emojis to introduce variables.

115 Speaking the Language of Mathematics (Grades 2 – 5)

Sue O'Connell, Quality Teacher Development (Keynote Speaker)

As students talk and write about their math ideas they test their thinking, process new information, and expand their understanding of skills and concepts, but talking about math is not easy. Mathematics has a complicated language with challenging vocabulary that tests even the most capable students. Join Sue O'Connell to gather classroom-tested activities designed to enhance your students' math vocabulary to help them speak more precisely about math.

116 The Art of Differentiating Math (Grades K – 12)

Sharla Reynolds, Center for Teacher Effectiveness

With the diverse characteristics of students, the basic need to learn remains unchanged. Therefore, educators must diversify how learning occurs. Through this seminar, educators learn to differentiate math instruction in ways that reach the largest number of students. Educators also learn how to assess academic achievement with differentiated instruction and influence student engagement and motivation.

117 I See You Care: Reengaging Reluctant Learners (Grades 6 – 9)

Pamela Seda, Southwest Dekalb High School

For too many students, the cost of learning mathematics is too high for them. Unlike failed learners, who at least try, intentional non-learners believe that if they don't try, they can't fail. In this interactive session, participants will learn to use strategies from an equity framework to re-engage reluctant learners.

118 Posing Mathematical Tasks using Picture Books (Grades K – 5)

Nicole Venuto, Georgia State University

Solving mathematical problems and communicating reasoning is challenging for children. Posing problems using picture books creates meaningful, engaging mental pictures for children. When children understand the context of the problem, they are more easily able to access the task and communicate their thinking. In this session, participants will discuss strategies for using picture books to pose tasks, share resources, and engage in using picture books to develop tasks to use in their classrooms.

119 Using Technology to Enhance Station Activities in the Secondary Math Classroom (Grades 6 – 12)

Andrea Simmons, Rockdale Magnet School for Science & Technology

This session demonstrates how technology can be used to enhance stations in math through online tools.

8 – 9:15 AM**120 More Fun Calculus Activities (Grades 10 – 12, College)**

Sandy Burlingame, Fannin County High School (Retired) – GA²PMT Session

Let's put some fun into Calculus! I will be sharing some different activities than I shared last year. We will be playing Card Sharks to estimate area, a Riemann Sum activity, an AP style worksheet as well as other activities as time permits.

121 Barbie Bungee Jump, Pool Noodle Javelins, and Other Activities to Get Your Statistics Students Outdoors (Grades 10 – 12, College)

Billy Esra, Bishop Hall Charter School – GA²PMT Session

AP Statistics teachers are always looking for new activities and labs to do with their students. In this session, I'll share several activities that will get your students outdoors, including how students can use pool noodle javelins to collect data for matched pairs inference and how bungee jumping Barbie Dolls can help students explore linear regression. You should come away from this session with a few ideas for activities that you can use to provide meaningful statistical experiences with your students outdoors!

8 – 9:30 AM**122 Shaker Math Games and Activities (Grades K – 5)**

Carrie Brockway, Box Cars and One-Eyed Jacks

Come prepared to play with our most popular math manipulative - regular dice in a container! Participants will learn how to shake out the following math concepts: subitizing, all operations, commutative+ associative properties of + and x., place value, make 10's, doubles, rounding, pattern work, fractions and more. Journal writing, math talk and

ideas for immediate implementation will be shared. Everyone can find regular dice, just wait to you experience all the math that can be covered.

123 What's on the Menu? Using Choice Boards to Engage All Learners (Grades 2 – 5)

LaTonya Brown, DeKalb County School System

Are you looking for a way to engage all learners? This is the session for you! Choice boards provide a way to differentiate instruction, support multiple intelligences, and promote student achievement and engagement. This session will provide participants with directions on creating choice boards and sample activities. Participants will participate in a choice board simulation that will leave them wanting more!

124 A MUST in Your Toolbox: Exploring Geometry Classroom-Based Situations (Grades 6 – 12)

Pier A. Junor Clarke, Georgia State University

The Mathematical Understanding for Secondary Teaching (MUST) framework is a way for teachers to create lessons that incorporate various forms of technology to address student misconceptions. A group of teachers from across the state collaborated to create rich lessons designed around the Algebra 1 standards. In this session, these teachers will describe the lessons they created and how you can incorporate the MUST framework into your lesson planning. Attendees will receive copies of the lessons.

125 The Language of Mathematics Is Spoken Here! (Grades K – 5)

Ruth Harbin Miles, Creative Mathematics

Come and experience the power of mathematical vocabulary can be through "hands on" geometry activities! Be prepared to sing and dance with the academic language of mathematics. You will receive an extensive handout along with tools that empower students to speak mathematically!

126 Reading and Writing: The importance of Literacy Strategies in the Math Classroom. (Grades 6 – 8)

Angel Pugh, Carver Road Middle School

Research shows the importance of literacy across the content areas. We would like to share how literacy strategies can be used effectively in the math classroom to increase a student's ability to communicate mathematically. We will model and share literacy strategies we have used with success in math from reading (annotating texts, anticipation guides, close reading), to writing (constructed response, citing evidence, writing rubrics). Participants will be given tools they can immediately apply in their classrooms.

127 Using Definitions and Representations to Reason about Fraction Multiplication and Division (Grades 3 – 8)

Eric Siy, University of Georgia

In this session, we will talk about the role of establishing class definitions and using mathematical representations in solving word problems for multiplication and division of fractions. By using consistent definitions for both multiplication and fractions and representations, we will also answer several math problems and establish connections with the standard algorithms. Additionally, we will talk about teacher moves that can foster the use of definitions and representations in class.

128 Helping Struggling Students Master Mathematics (Grades 3 – 6)

Location: Hastings

Valencia Thornton, CRAM Academy, LLC

An Awesome Workshop! Join Valencia as she models for teachers practical strategies to help under-achievers become successful in mathematics. Various techniques will be presented to assist teachers how to teach the new Georgia Standards of Excellence. The standards addressed will include: basic math facts, fractions, and problem solving skills. Teachers will experience the feel of "RIGOR!" Creative ways of assessments will be demonstrated to incorporate a win-win environment for both student and teacher.

129 Maintaining Health & Wellness for Math Educators! (Grades K – 12, College)

Location: Wildlife 1

Dr. Dottie Whitlow, MoveMore, LLC

As Educators, often the last person on our list to take care of & assist is ourselves. This can lead to health issues, pain and stress that effects health, outlook & energy. As a 30+ year educator, Dr. Whitlow experienced these issues & is a certified Movement Re-education Specialist & Ageless Grace Educator to eliminate pain, restore health & energy. All of it is brain & neuroplasticity based & helpful for people of all ages!

8 – 10 AM

130 Fearless with Fractions (Grades 3 – 6)

Jacqueline Hennings, Rockdale County

Participants in this session will explore fractions conceptually using fraction towers. We will develop the concepts of equivalency, comparison, and the four operations of fractions.

131 Becoming Cultural Competence in Today's Math Classroom (Grades K – 12, College)

Corey Williams, Rockdale Magnet School

Participants will understand how be aware and identify culturally competent behaviors and communicate in a culturally neutral manner in the mathematics classroom. The research focused during this session includes Dr. Milton Bennett's Model of Cultural Competency and Culturally Responsive Teaching and The Brain by Zaretta L Hammond. Participants will dive into what is the definition of culture and how it effects teaching and learning at a school-site. Educators and leaders must embrace their student's cultural background so lessons can be purposely designed to meet their student's needs.

8:30 – 10 AM

132 How High Does It Grow...Or Does It? (Grades 9 – 10)

Timothy Scripko, College Preparatory Mathematics

Participants will experience many problems and investigations around exponential explorations. The problems are interesting and will lead to a better understanding of exponential growth/decay. We will also look at the development of exponential understanding through connections to Geometric Sequences and multiple representations. Participants will leave the session with lessons they can use in their classroom.

9:15 – 10:15 AM

133 Connecting Assessments to Learning (Grades 6 – 8)

Lisa Hinton, Clayton County School System

Participants will examine the difference between formative assessments and summative assessments. Participants will determine the purpose of formative assessments in the math classroom. Participants will explore resources that are helpful in creating formative assessments that provide immediate feedback for teachers and students.

134 Using Nearpod in Elementary Math (Grades K – 2)

Christie Holtman, East Fannin Elementary

Even kindergarten students can present their ideas using Nearpod. This session will show teachers how to create simple student focused lessons and how to use these lessons to encourage math discussions.

135 Using Problem Posing to Support and Enhance Mathematics Instruction (Grades 2 – 12, College)

Clayton Kitchings, University of North Georgia

You've heard about problem solving, but what about problem posing? What is problem posing and how might I use it to help 1) differentiate instruction, 2) promote engagement, and 3) assess student understanding? How can problem posing support the Standards for Mathematical Practice? We will share examples and discuss strategies across all grade levels!

136 Promoting Family Engagement through Hands-On Activities (Grades K – 6)

Angie Meredith, ETA hand2mind

Build a culture of achievement that stretches from school to home with Home Team Advantage products from ETA hand2mind. These take-home, hands-on resources are academically focused and aligned to standards while meeting the goal of engaging students' families in the process. Come see how these products will help increase student achievement and accelerate progress. Free samples will be given away!

137 Class not Chaos (Grades K – 12)

Sharla Reynolds, Center for Teacher Effectiveness (Repeat Session on Friday)

Teaching is a passion! No one wants to spend hours on lesson plans, activities, learning centers, and worksheets to not be able to use them due to class disruptions. Learn how to effectively eradicate low level behaviors before they escalate into classroom chaos. With proven strategies and techniques, you command your class time and its direction. The methods demonstrated, when used correctly, will allow you time to teach like never before.

138 Using Geogebra in high school mathematics (Grades 7 – 12, College)

Wendy Sanchez, Kennesaw State University

Geogebra is an open-access, free platform for dynamically exploring concepts in Geometry and Algebra. It can be used online without downloading software and is also available as an app for phones and tablets. Come learn how to use this powerful tool that is available to your students on their phones and in their homes! Teachers will share activities they've developed or used in their own classrooms. Bring your own device (laptop, tablet, or phone).

139 Engage & Explore with Conic Sections (Grades 9 -12)

Srinivasan Thiyagarajan, Richmond County Schools Augusta GA

Learning mathematics is not a mere acquisition of knowledge and doing a set of exercises. Investigative and activity-based approaches of teaching may kindle mathematical thought, insight and pave the way for effective learning. This session will help participants leave with activity based approaches to teach conic sections and ready to use engaging strategies to their math class rooms!!!!

9:30 – 11:00 AM**140 AP Calculus...by the Standards (Grades 10 – 12, College)**

Storie Atkins, Columbus High School – GA²PMT Session

This session will provide an overview of strategies for implementing a standards-based focus in the instruction of AP Calculus. Techniques for differentiation, grouping, remediation, and targeted review strategies will be highlighted. Participants will also gain practical strategies for including portfolios focused on students driving their own AP exam preparation efforts.

141 Seeing Random Variables in AP Statistics (Grades 10 – 12, College)

Vicki Greenberg, Atlanta Jewish Academy & Kennesaw State University – GA²PMT Session

Using dice, we will see the AP Statistics random variable formulas come alive. Students will no longer just memorize the formulas for combining random variables; they will see how they work. Teachers will walk away with classroom ready activities.

9:30 – 11:30 AM**142 Putting the S.W.I.R.L. in Mathematics: Strategies for Building Academic Language (Grades 6 – 12)**

Kristie Fountain, DeKalb County School District

Planning to S.W.I.R.L. is an instructional initiative to guide lesson planning for literacy development. In this interactive session, participants will be introduced to practical strategies for assuring that math instruction for diverse learners is differentiated based on students language proficiency. As a result, participants will be able to develop exciting lessons that allow each student to speak, write, read, and listen, and illustrate to build academic language in mathematics.

143 Problem Solving and Multiple Representations: Building Diagram Literacy Support Reasoning (Grades 3 – 5)

Seyoung Holte, Clarke County School District

In this mini-GCTM Summer Math Academy, we will unfold the Effective Mathematics Teaching Practices in a classroom setting. We will explore ways to use and connect multiple representations (MTP3) and promoting productive struggle and problem solving (or problem understanding, rather) skills through building the diagram literacy.

144 Ti-Nspire Calculators: The Future in Creating Instructional Assessments & Utilizing Simulated Tasks (Grades 7 - 12, College)

Keenan Lee, Lithia Springs High School/Douglas County School System

Technology and Education are Ever-Changing; and it is imperative that educators make the appropriate transitional steps to stay-ahead of emerging instructional practices. Ti-Nspire calculators have the capability to stimulate student-learning by granting teachers the means to easily create a variety of question-type student assessments, utilize Ti-developed standards-based modules to support student conceptual discoveries, and so much more. The future for student preparation, exploration and evaluation is here!

145 Guided Math for Real Teachers (Grades K – 5)

Location: Dining Hall D

Kathy Spruiell, Gwinnett County - Norton ES

How can you get the most out of your math instruction as a guided math teacher in the real world? Join us to explore grade-specific tasks, resources, and strategies to incorporate guided math into your world. Learn how to meet the needs of your students and get results you want. Receive resources and a tool kit, including manipulatives, to help you get started.

10 – 11:30 AM

146 Build Strong Number Sense and Stay Engaged with the Counting Rope! (Grades K – 3)

Kim Sutton, Creative Mathematics

Come and construct a powerful tool called a counting rope! Your students will be amazed with by the math that is learned from using this tool! This tool is used for subitizing, addition, subtraction, groups of, skip counting by multiples, fractions and multiplication understanding! You will love the math, music and meaning from this motivating session!

147 Learning Through Collaboration and Play (Grades 6 – 12)

Lorenzo Robinson, Fulton County Schools

Teachers will be introduced to various collaborative processes that can be used to: increase student engagement and understanding of a concept, and expand students' problem solving capabilities. The games and problems presented will undoubtedly enhance any math educator's toolkit. These strategies are designed to add spice to your math classroom and wake up the learning in your students.

10:30 – 11:30 AM

148 Keep Calm and Talk Math! (Grades 6 – 8)

Vickie Anderson, Rising Starr Middle School

Teachers understand how important communication is in the math classroom. Communication allows students to formulate logical arguments, strengthen reasoning skills, and share and develop their own understanding. Teachers

benefit from student communication, too, as they use students' discussions as formative assessment tools. Join us as we share effective strategies and activities to improve mathematical discourse in your classroom.

149 Escape the Room (Grades 3 – 7)

Location: Hastings

Yolanda Coley, Sumter County Intermediate School

This session will teach teachers how to use authentically engaging tasks that will support student discourse and encourage critical thinking skills through the escape room workshop. The tasks in this workshop will be targeted for students in grades 3-6, however, they can be adjusted to fit the needs of any grade level. So, join the mission if you dare. One hour worth of time, complete challenges to solve the rhyme.

150 Developing Statistical Reasoning (Grades 6 – 12, College)

Basil Conway, Columbus State University

How can teachers help develop statistical reasoning in their students? This session offers a look in the Statistical Reasoning Learning Environment and presents some activities that may be used at varying levels of the Guidelines for Assessment in Statistics Education.

151 Tooling Around with Equations (Grades 6 – 8)

Kelly Edenfield, University of Georgia

Come explore how to use common elementary school mathematical tools (i.e, cuisenaire rods, bar models, double number lines) to develop conceptual understanding of solving equations. We will investigate the tools and solve problems that will improve your students' understanding of solving one- and two-step equations. Then we will discuss how this work leads to procedural fluency.

152 Pose Planned, Intentional Questions to Get Students Talking Mathematically (Grades K – 5)

Ellen Edmonds, W.H. Sadlier, Inc.

In this interactive session, participants will examine the power of rich discourse in deepening students' understanding of mathematics. Attendees will explore ways to use purposeful questions to jump-start rich student discourse and increase collaboration. They will learn how conversation starters, meaningful questions, and the four operations can be used to gain insight into teaching and learning. Participants will receive a "Why Use Discourse in the Math Classroom?" handout to support implementation of productive math discourse.

153 When your students want to Escape the Room, let them! (Grades 4 – 8)

Tiana Fowler, Kennedy Road Middle School

Participants will be able to complete an Escape the Room Challenge designed by 6th grade math students. Presenters will share experiences with developing Escape Rooms for math and cross-curriculum content as well as discuss the logistics of allowing students to design and develop Escape Room Challenges to demonstrate mastery of Mathematical Standards while focusing on higher order thinking skills.

154 All Hands on Deck: Toolbox of Hands on Activities to promote interactive classrooms (Grades 6 – 8)

Lisa Hinton, Clayton County School System

Manipulatives play a key role in a student's development and conceptual understanding in mathematics. By offering students multiple experiences with manipulatives, students are provided that conceptual foundation to make sense of problems and to reason abstractly and quantitatively. In this session, teachers will experience how to use manipulatives to aid in their instruction

155 Differentiation That Makes A Difference (Grades K -12)

Scotty King, Wilcox County

Differentiation through the use of various learning styles - Practical ideas that can be implemented immediately! Grab the attention of those hard to reach students by identifying and emphasizing their learning styles. Visual, auditory, mathematical/spatial, physical, solitary, and social learning styles are addressed. Greta for planning and TKES!

156 Math in School Gardens (Grades 4 – 8)

Kimberly Kirstein, Episcopal Day School

Many schools are growing their school gardens and looking for ways to connect the gardens to the curriculum. Learn about the ways that math teachers at Episcopal Day School in Augusta, Georgia are using the gardens as an extension to classroom activities to support conceptual understanding of math concepts and promote mathematical reasoning, problem solving, and communication.

157 Football Math (Grades 6 – 12)

Rose Layton, Cross Creek High School

Students will enjoy playing fantasy football for a week all the while working on math skills at a higher level of thinking. Students will work with positive and negative numbers, fractions, multiplication, division, addition, and subtraction. Come join the fun as you become the manager of your own fantasy football team!

158 Teaching Math with a Twist (Grades 3 – 9)

Meg McCann, You CAN Do the Rubik's® Cube

See how the Rubik's® Cube can be used to address NCTM standards for math concepts and math practices in lesson snippets for gr K-9. Get some hands-on experience in a spatial reasoning activity. Learn how to solve the first level of the Cube. Walk away with resources for teaching, running a Rubik's® Cube club and team competitions, and creating mind blowing mosaics!

159 Using Literature to Teach Mathematics (Grades K – 8)

Dr. Jacquelyn L. Mesco, Dalton State College

This session will discuss using Literature to increase Mathematics instruction and understanding. The presenters will provide a variety of reading and writing activities that provide cross curricular connections with Mathematics. Handouts and demonstrations will be provided as well as a list of resources.

160 Let's Give Them Something To Talk About! Strategies For Promoting Mathematical Discourse (Grades K – 5)

Allison Randall, Rockdale County Public Schools

During this session, participants will learn ways to creatively engage students in essential math skills such as fact fluency, number sense, mental math, and dissecting word problems. Presenters will model ways to create a mathematical classroom culture with fun and interactive experiences. Participants will leave with strategies necessary to activate student discourse on real world mathematical tasks. The audience will be engaged with interactive math activities, peer interaction, music, and dancing!

161 Class not Chaos (Grades K – 12)

Sharla Reynolds, Center for Teacher Effectiveness

Teaching is a passion! No one wants to spend hours on lesson plans, activities, learning centers, and worksheets to not be able to use them due to class disruptions. Learn how to effectively eradicate low level behaviors before they escalate into classroom chaos. With proven strategies and techniques, you command your class time and its direction. The methods demonstrated, when used correctly, will allow you time to teach like never before.

162 Open-Source Technology for Teaching Mathematics (Grades 7 – 12, College)

Wendy Sanchez, Kennesaw State University

Technology has come a long way! Not only can you develop great activities using technology that allow your students to investigate and discover mathematics, you can also use materials others have developed! Many technologies are available as apps on phones and tablets or on a laptop or desktop without needing to install software. Geogebra, Desmos, Wolfram Alpha, NCTM Illuminations, and others will be used in this interactive session. Bring your own device!

163 Video Conferencing and the Mathematics Classroom (Grades 9 – 12, College)

John Phillip Taylor

For years now, students in four Northern Florida high schools have attended college classes and North Florida Community college via video conferencing, earning college credit while never leaving their high schools. Experiences, both good and bad, the ups, the downs, the pros, the cons, the opportunities and the implications, all will be discussed, and questions will be welcome.

11 – 12 PM

164 Appropriate Assessment in AP Calculus (Grades 10 – 12, College)

Dr. Chuck Garner, Rockdale Magnet School – GA²PMT Session

This session will provide teachers with examples of assessment strategies appropriate to mimic the level of the AP exam. All issues related to your classroom test, such as timing, grading, scoring, length, style, and even the format of the test itself, will be discussed.

165 Short Meaningful with Applets Activities for AP Statistics (Grades 10 – 12, College)

Vickie Greenberg, Atlanta Jewish Academy & Kennesaw State University – GA²PMT Session

This session will provide participants with three short, meaningful activities using applets (introduction to confidence intervals using hypothesis tests, why blocking is better, and what about the 10% condition). The activities can be given as homework to save class time or done in class to help illustrate the concepts and deepen student understanding.

12:30 – 2 PM

166 Reporting from the AP Calculus Reading (Grades 10 – 12, College)

Marshall Ransom, Georgia Southern University – GA²PMT Session

A review of all nine problems on the operational exam, including discussion of solutions and how the questions were graded. Come to learn how the 2017 exam was graded, common student errors and possible ways to improve student learning in AP Calculus based on last year's exam. The speaker has been a reader and table leader since 1991. Other speakers are also graders for the exam.

167 Reporting from the AP Statistics Reading (Grades 10 – 12, College)

Debbie Kohler, Kennesaw State University – GA²PMT Session

This session will be presented by teachers who attended the 2017 AP Statistics reading. Come to learn how the 2017 exam was graded, common student errors and possible ways to improve student learning in AP Statistics based on last year's exam.

1 – 2 PM

168 Getting to the core that is not so common: Effective Classroom Management (Grades K – 12, College)

Location: Hastings

Gail Blalock, Georgia Advocate

Success in the classroom is measured by student learning. The creation of a positive learning environment is the responsibility of the teacher and student. Student engagement is vital. It values their judgment and gives them ownership. It lets them know you care. Come see tested and proven strategies to connect to positive learning environments where students and teachers contribute to its success.

169 Learn to Love Math Facts! (Grades K – 8)

Richard Buchner, Innovative MATH Solutions Inc.

This session will present ways to enhance math fact fluency with a good blend of strategy and practice. Methods discussed demonstrate ways to eliminate/reduce math reluctance while building problem solving skills while encouraging student resilience. This session will present data from piloted programs and demonstrate how easy, effective and important the fact fluency foundation impacts longitudinal success

170 Get Up and Get Moving With Math In Middle Grades (Grades 6 – 8)

Vickie Bumgardner, Risley Middle School

In this presentation, teachers will learn how to code. Instruction on coding commands with robots and simple instructions. Participants will need a lap top or smart phone. Have you ever thought of using masking tape as a manipulative? Using SmartBoard technology to engage students in the lesson with activities, organizational structure of an equation, and illustrations of word problems. Demonstration of how to effectively use instructional videos in the classroom. Blogging for math and more.

171 Understanding Dimensions: A Foundation for STEAM (Grade K -8)

Jill Cochran, Berry College

For students to be successful in many STEAM activities, they must develop an understanding of 3D objects and intuition about dimension. Through a research-based project, we explored how students develop understanding and representations of 3D objects or ideas using physical objects like cubes, 2D artistic representations, and 3D design software. In our presentation, we will share results from our research about appropriate activities to develop 3D understanding and representation skills along with diagnostic tools.

172 Formative Assessment Strategies (Grades 2 – 11)

Sukhpal Dhillon, Meadowcreek High School

Practical Formative Assessment Strategies for linking Assessment, Instruction and learning. Math teacher can see connections between students' thinking, problem-solving skills and provide learning experience that build a bridge between students' thinking and mathematical understanding. Formative Assessment Strategies can easily modified for ESOL and SPED students. This session can be done in three parts for elementary, middle school and high school focus.

173 Using Smartphone to create and grade assessments (Grades 3 – 12)

Bert Dollar, Dublin City Schools

Use a smartphone to insert graphs, tables, charts into word based documents. Use Zipgrade to create scan sheets, grade multiple choice assessments, and perform item analysis.

174 More Than Meets the Line (Grades 8 – 9)

Kelly Edenfield, University of Georgia

Finding the equation for the line of best fit is just the beginning. Why do we always stop working on a best fit problem when we find an equation? Should we care about the slope, y-intercept, and making predictions? What are some misconceptions and pitfalls when teaching and learning lines of best fit? Let's explore developing understanding of lines of best fit!

175 Polya Lives! Math with Research Methods (Grades 8 – 10)

Everett McCoy, Autrey Mill Middle School

PBL is teaching through authentic application. What does this look like for mathematics? We have always added anecdotal information, applications and extensions. To enter the future, we must pull from history. Consider using Polya's four step process developed for mathematical research: Example, Constraints, Generalize, Verify. This can be done, and within the curriculum. This process will be illustrated through different levels of the mathematics curriculum.

176 Patty Paper, Patty Paper, Make a Proof or Two... (Grades 4 -12)

Rebecca Gammill, Kennesaw Mountain High School

Last year, we investigated how patty paper can be used to discover various mathematical properties within the topics of transformations, symmetry, conic sections, and the unit circle. This year, we will review, dive deeper, and introduce new applications of patty paper to help teachers across many grade levels see the great instructional value of such an inexpensive tool. Come and have fun with us!

177 Maximizing Your Instruction with High Tech and Low Tech Tools (Grades 2 – 3)

Morgan Graiser, Atlanta Jewish Academy

Do you feel like it is hard to keep up with all the Common Core State Standards? It is like a juggling act especially in the way that you set up your math block. Come to a session where you will walk away with a toolbox of ideas that you can utilize in the classroom to maximize classroom instruction using a variety of high tech and low tech resources.

178 You Want WHAT by WHEN????!!! (Grades K – 12)

Michelle Harada, Eagle's Landing Middle School

In our profession we, as teachers, tend to ignore our own identities and health. This session will give teachers strategies to help avoid burn-out and find their passion. I use my own personal stories to support the strategies and how engaging in meaningful conversation, not just venting sessions, with our colleagues improves our teaching and thereby improves the learning of our students.

179 Make and Take Addition / Subtraction Fluency (Grades K – 2)

Deb Havens, Cherokee County School District

You will walk out of this session with a mathematical treasure trove of games and activities. Fluency is much more than fast facts. Help your students develop a flexibility with numbers built on conceptual understanding.

180 Incorporating Social Justice in the Mathematics: An Example Using Statistical Concepts (Grades 9 – 12)

Micaela Hays, Kennesaw State, Marietta City Schools

In this presentation, we share an activity created to develop students' knowledge of statistical concepts within Advanced Mathematical Decision Making (AMDM). This lesson challenges students to critique a national study centered around the levels of student harassment and inclusivity at middle and high schools. Using statistical ideas, the students then modify the existing study, conduct their own study, create visual data displays, and plan ways to lower harassment at their school. This activity attends to social justice by using mathematics to understand issues of race, religion, gender, and sexual orientation and to use mathematics to impact the students' lives and local school policies.

181 Conceptual Understanding with Algebra Tiles (Grades 6 – 12)

Jacqueline Hennings, Rockdale County

Participants will learn how to use algebra tiles to conceptually develop integer operations, solving equations, factoring, and completing the square.

182 Facilitating Effective Teaching Practices Using Purposeful Algebra Tasks (Grades 8 -10)

Tashana Howse, Georgia Gwinnett College

Engaging students in rich, meaningful tasks will support their conceptual understanding of concepts in Algebra 1. However, it is important that each task is accessible and equitable to ensure success for all students. In this session, we will engage in tasks from GCTMs 2017 Summer Academies. For each task, we will connect it to NCTMs Effective Teaching Practices and discuss how each of the tasks may be modified for access and equity.

183 Making Guided Math Work for You and Your Students (Grades K – 5)

Jesse Michmerhuizen, ETA hand2mind

Guided math provides a structure for best practices: differentiation, formative assessment, hands-on learning, small group and whole group, spiral review, etc... but it isn't easy. Whether you are just learning about guided math or have been using it for years, this session is designed to make guided math work for you and your students. You will leave with resources and ideas to put into your classroom immediately.

184 The Problems with Problem Solving (Grades K – 5)

Kassidy Moore, Chapel Hill Elementary School

The goal of this session is to provide participants with a toolbox for developing best practices that have been proven to aid students in becoming mathematically proficient problem solvers. Teachers will leave with a clear understanding of how to effectively plan for and engage students in meaningful problem solving activities.

185 Freestyle Friday, October 20, 2017: Building Relationships & the Culturally Responsive Mathematics Classroom (Grade 8)

Conor Naughton, Hillsman Middle School, Clarke County School District

My colleague and I co-teach a collaborative 8th grade math class in a Title I school. Last year, we began doing “Freestyle Friday, October 20, 2017s” in class, allowing students to rap about whatever they wanted. By allowing our students to engage in a behavior/learning style similar to their interests, we were able to establish and cultivate a wonderfully fun, productive learning environment that resulted in long-lasting relationships as well as higher standardized test scores.

186 What's Happening? The Problem with The Problem (Grades K -2)

Location: Senior Pavillion

Kerri Saunders, Green Acres Elementary

How do you develop critical thinkers? This session will focus on how to help students determine what is happening within a word problem, how to decide on the course of action to solve for the unknown, and how to express their thoughts based on the simple part part whole relationship without relying on key words.

187 Discreet Discrete Calculus (Grades 11 -12, College)

Bill Shillito, Atlanta Jewish Academy

Sequences and series are a common enough topic in a precalculus class. But did you know they can be used to preview key concepts from calculus? (And not just the infinite series unit from BC -- the whole year!) Come see how differences and summations can form a discrete analogue to calculus, before students have even heard of derivatives or integrals!

188 Making Connections in AP Calculus (Grades 11 – 12)

Carol Sikes, South Forsyth High School

The presenters will share three activities/strategies that are designed to help AP calculus students understand material more deeply and retain it throughout the course. One is a review strategy to be used throughout the year to keep critical concepts at the forefront, one activity is designed to introduce and develop the use of Riemann sums for approximation, and one activity is designed to help students better understand Polynomial Series including creation of new series and manipulation of existing series.

189 The TI-84CE and TI-Nspire CX - Which one is right for your classroom? (Grades 8 – 12, College)

Beth Smith, Texas Instruments

Let’s look at a side-by-side comparison of the TI-84CE and TI-Nspire CX to help determine which is best for you and your students. We will learn about and compare the basic calculator and graphing features of both platforms. This session serves as a great introduction to both the TI-84CE and TI-Nspire CX. We will also briefly look at free TI activities and test-taking resources. Door prizes!

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191 Communication Critical to How People Learn (Grades K – 12, College)

Dr. Dottie Whitlow, Dot-Math, LLC

Brain-based research from How People Learn (National Research Council) addresses the critical aspects of helping people engage in & retain learning. Communication is key to the success of learning in that learners (of all ages) should be asked to share pre-conceptions & prior learning and be asked to reflect & share their thoughts about the learning (metacognition). Dr. Whitlow has extensive experience in this field, training students, teachers, coaches & administrators in this important process.

Closing Session

2:30 PM

Sparkling Insights and Igniting Passion: The Power of Our Questions

Location: Talmadge Auditorium

Sue O'Connell, Quality Teacher Development

Our math questions have the power to spark insights and challenge our students' thinking, but the questions we ask also have the potential to ignite a passion for mathematics and help our students construct a vision of mathematics as more than procedures and right answers. Discover specific question types that boost math learning, build student confidence, and ignite math passion.