Alabama Council of Teachers of Mathematics

presents their annual

FALL FORUM

M^3= Making Math Matter

November 14-15, 2019

McWane Science Center

Birmingham, Alabama

www.actm.education

http://acotom.wildapricot.org

McWane Science Center

200 19TH STREET NORTH · BIRMINGHAM, AL 35203 · (205) 714-8300

ACTM 2019 Fall Forum Program

2019 ACTM Fall Forum Committees

Conference Chair	Ethan Richardson
Program Chair	Loria Allen
Conference Membership Chair	Delphine Thirkill
Finance Chair	Zachary Searles
ACTM Materials	Delphine Thirkill
Signs, Printing, & Website	Jeremy Zelkowski
Registration	Sandy McCarthy
Vendor Exhibits	Jennifer Gilbert
	Beverly Kimes
McWane Science Center	Julia Rae Hanson
Equipment	McWane IT Support
Speaker Support	McWane IT Support
Volunteer Organizers	Joel White

ACTM expresses sincere appreciation to the McWane Science Center Events Staff and Leadership for assisting with the 2019 Fall Forum!

Conference Highlights

Thursday, November 14, 2019

8:00a	**Registration Opens** – Events Center Entrance Area Level 3 – McWane Science Center – Level C Parking Use Elevator from first floor lobby or in parking garage to Level 3
8:15a	**Welcome** and conference updates
8:30a-9:15a	**Regular-** 45- minute sessions
9:30-10:45a	**Regular-** 45- minute & **Extended**-75- minute sessions
10:00p-4:30p	**Exhibits Open –** Events Center Vendor & Exhibit Area, Level 3
11:00a-12:15p	**Regular-** 45- minute & **Extended**-75- minute sessions
12:15p-1:00p	**Lunch on Your Own**
1:00p-2:15p	**Keynote Speaker—Dr. Jennifer Bay-Williams**
2:30p-3:45p	**Regular-** 45- minute & **Extended**-75- minute sessions
4:00p-4:30p	**ACTM Annual Business Meeting, Banquet Hall, Level 3,** **All attendees are welcome to attend**!

Friday, November 15, 2019

8:00a	**Registration Opens –** Events Center Entrance (Level C- Parking)
8:00a-2:00p	**Exhibits open** – *Events Center*
8:30a-9:45a	**Regular-** 45-minute workshops & **Extended**-75- minute sessions
10:00a-11:15a	**Regular** - 45-minute workshops & **Extended**-75- minute sessions
11:15a-12:00p	**Lunch on Your Own**
12:00p-1:15p	**Regular-** 45- minute sessions
1:30p-2:45p	**Regular-** 45- minute & **Extended**-75- minute sessions
2:00p	**Vendors & Exhibits Close**
3:00-3:30p	**Closing Session in Banquet Hall- Level 3** ****Door Prizes*** (must be present to win)*

McWane Science Center Information and Announcements

Registration—Enter through glass doors on parking garage level C. *Registration & Check-in will be through the "Events Center" entrance in the parking garage located on Level C.*

Vendors & Exhibits—Level 3, by registration

Workshops & Sessions on Thursday and Friday:
Classrooms 301, 302, 303, 304
Banquet Hall (Level 3)
Explore Lab (Level 2)
Regions Room (Mezzanine-by stairs)
Science Classroom (Mezzanine-by stairs)
Rushton Theater (Level 1)
GENEius Lab (Level 1)
Lunch Hall A (Lower Level - LL)
Lunch Hall B (Lower Level - LL)

McWane Science Center
All facilities are smoke free.

Registration Dates of Interest
Information is located on the ACTM website. All registrations will be conducted online at http://ACTM.education or on-site at the McWane Science Center.

Parking Locations
Parking will be free in the McWane Science Center lot on Levels C and higher. Tokens will be available to ACTM conference attendees at the registration/check-in desk when you leave.

Registration
Registration and check-in will be at the end of the entrance hallway to the Events Center on Level 3 in the parking garage.

Meal Functions
Lunch is ***not*** provided on either day of the conference this year. There are restaurants within walking distance of the McWane Center. Pizitz is across the street with many choices!
Lunch Breaks: ***Thursday*** 12:15-1:00 and ***Friday*** 11:15-12:00

Vendor Exhibits
Vendor exhibits will be in Events Center Exhibit Area near the registration desks on Level 3.

Special Needs
It is the policy of McWane Science Center to provide reasonable accommodations for environmental and program accessibility for persons with disabilities. Individuals in need of other services should contact McWane Science Center two weeks prior to the conference. Elevators are onsite for navigating floor to floor.

Certificate of Attendance
All conference attendees may pick up a certificate of attendance at the registration/check-in location. It is the responsibility of each attendee to register his or her own professional development hours with their school system.
******ACTM does not provide CEU credits ******

Vendors and Exhibitors

Vendors and exhibitors are in the Events Center Exhibit Area on Level 3. The exhibit area will be open Thursday 9:00 a.m. until 3:00 pm and Friday from 8:00 a.m. until 2:00 p.m.

Thursday Registration is from 8:00AM – 4:00PM
Event Center Entrance
(Level C from Parking Garage)

*****All Forum Attendees Must Register*****

FINDING YOUR WAY AROUND

ACTM attendees should park on Level C and higher in the McWane Center Parking Garage.

On level C in the parking garage, the EVENTS CENTER entrance is located about 20 yards from the elevator bank. Look for signs on level C in the parking garage for guidance!

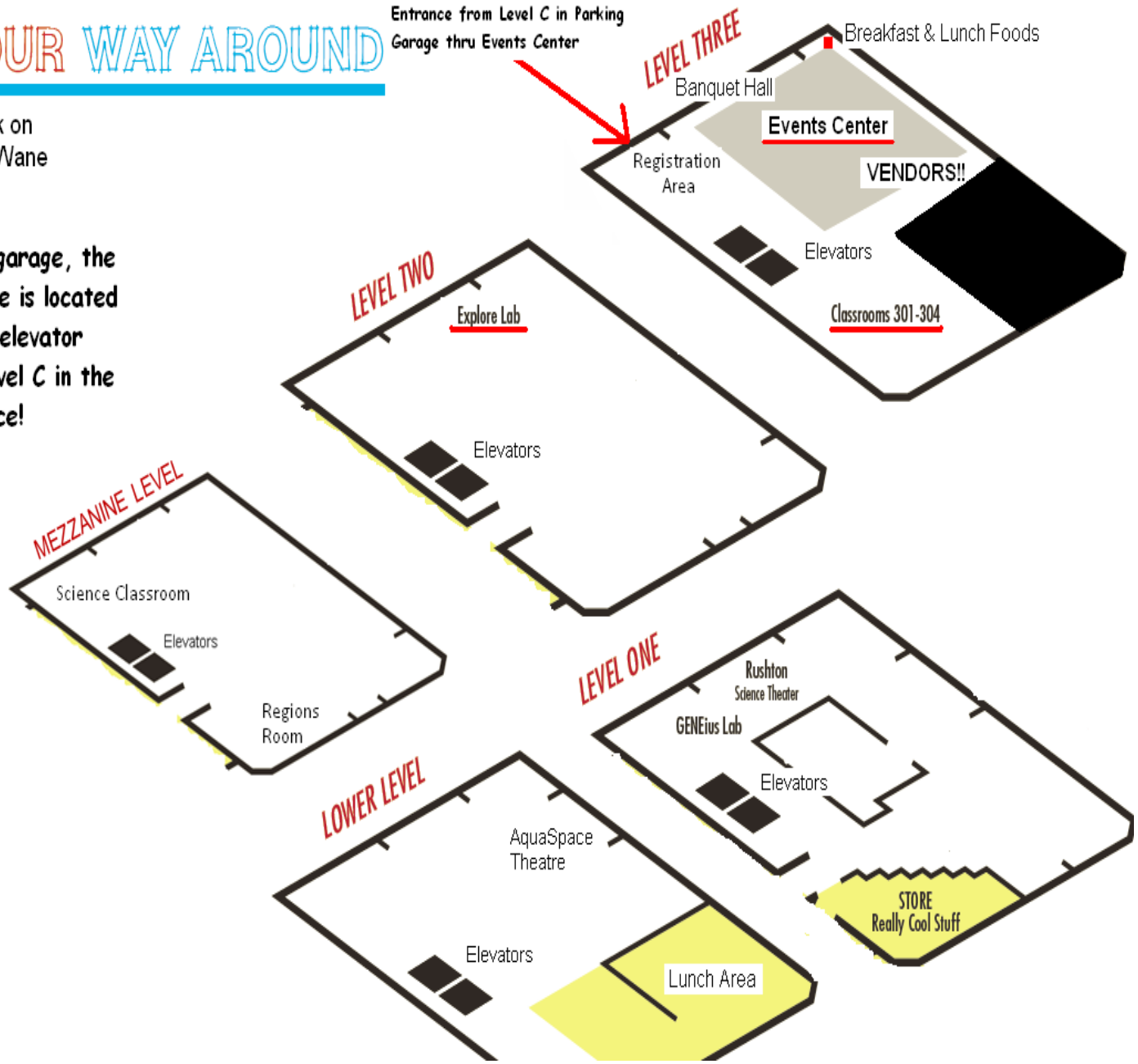
Level 3:
Banquet Hall
Classroom 301
Classroom 302
Classroom 303
Classroom 304

Level 2:
Explore Lab

Mezzanine Level:
Regions Room
Science Workshop

Level 1:
Ruston Science Theatre
GENEius Lab

Lower Level:
AquaSpace Theatre
Lunch Room A



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1:00 pm – 2:15 pm Thursday – Keynote Address

Banquet Hall, Level 3

Featured Keynote Session

Keynote: Who is on First and Why is in Left Field...But Abbott & Costello are Missing an Outfielder!

In our efforts to develop procedural fluency (and conceptual understanding), there are key questions we can (and must) ask students. Join me to see how Abbott & Costello's team of players can help us be better at developing effective questioning in our classrooms – questions that develop conceptual understanding, flexibility and number sense. And, find out the name of the missing outfielder (AKA, something that might also be missing from our questioning)!

Dr. Jennifer Bay-Williams - University of Louisville

Featured Keynote Session

To all our session speakers! We appreciate you presenting during the 2019 ACTM Fall Forum.

8:15 AM Sessions, Thursday, November 14

Lead Speaker	TITLE OF PROPOSED SESSION	Room & Level
Ethan Richardson ACTM President	**Welcome and Conference Updates**	Banquet Hall Level 3

8:30 Sessions, Thursday, November 14

Lead Speaker	TITLE OF PROPOSED SESSION THURSDAY, NOV 14	Grade Band Focus						Room and Level
		K-2	3-5	6-8	9-10	11-12	13+	
Taik Kim	Fun with Fractions		X					301 Level 3
Jennifer Trott	How can I Really Use Formative Assessments?		X					302 Level 3
Julia Criwnover	Get Your Game on: Game-Bases Learning with Legends of Learning!		X	X				303 Level 3
Brad Estes	Can I get Some Feedback?			X	X	X		304 Level 3
Anita Sparyberry	The Ingredients for Growth: An Open conversation about Math Achievement	X	X	X	X	X	X	Banquet Hall Level 3
Rudy Neufeld	Introduction to Coding, an Opportunity for Math Innovation for All	X	X	X				Explore Lab Level 2
Paula Young	Coding and Ozbots for Multiplication Practice, Geometry, and much more!	X	X					Regions Room Mezzanine Level
Leslie Calloway	M.A.T.H.S.: Math anchors together humanities & science			X	X			Science Workshop Mezzanine Level
Jermelle Matthews	Technology's Role in Engaging Students in Deeper Learning	X	X	X	X	X		GENEius Lab Level 1
Dawn Rains	Using mathematics as a Bridge to English with Language Learners	X	X					Lunchroom A Lower Level
Alli Grace Eiland	Bridging the Gap: Partnerships with Teachers and Univ Professors			X	X	X		Lunchroom B Lower Level

8:30—9:15 AM Session Descriptions

Fun with Fractions **Room 301**
Target Audience-Teachers, Coaches, Gen. Interest **Grades 3-5** **Level 3**

According to the National Assessment of Educational Progress (NAEP), students have a very weak understanding of fractions. This session will provide various models to improve students' conceptual understanding of fractions. The goal of this presentation is to provide teachers with methods for developing the concept of fractions to students. This session will also help teachers to improve students' thinking skills and understanding of fractions. The speaker will present a variety of strategies and innovative ways to teach fractions.

Taik Kim New Mexico Highlands University

How Can I really Use Formative Assessments? **Room 302**
Target Audience- Teachers **Grades 3-5** **Level 3**

Formative assessment has become one of the new education buzzwords, but does it really help students? IF you are doing it correctly, it absolutely does! This workshop will explore how teachers can actually make useful formative assessment a regular part of the everyday practice. Teachers will discover that formative assessment is doable, useable, and can make a huge difference in student achievement.

Jennifer Trott

Get You Game on: Game-Based Learning with Legends of Learning **Room 303**
Level 3
Target Audience-Teachers, Coaches, Admin **Grades 3-8**

Come launch cows into outer space using one of our legendary online math and science games! Legends of Learning employs original research to drive student performance using standards-aligned games. Our Netflix-style game-based learning platform delivers a wide range of lessons and drives content proficiency for stronger subject mastery and classroom engagement. Participants will receive first-hand experience of what collaboration and achievement can look like through our hands-on game-based learning platform. Come ready to collaborate, compete, learn some science and have a whole lot of fun!

Julia Criwnover Legends of Learning

Can I Get Some Feedback? **Room 304**
Audience-Teachers **Grades 6-12** **Level 3**

Feedback matters! However, how do teachers make use of it effectively, efficiently, & get students actively participating in the process of formative assessment? In this session, a trio of AMSTI math specialists from across Alabama have collaborated to unpack essential research about feedback and introduce practical application strategies for your classroom. How can you make the most of feedback? Come find out here!

Brad Estes

Ingredients for Growth: An Open Conversation about math Achievement **Banquet Hall**
Level 3
Audience-Coaches, Admin **Grades K-13+**

Growth Comes from Knowing Where You Are: If you want to provide the best possible math education for your students, you have to take a thorough, honest look at where your program is right now. Once you know what you're doing well and where you need to improve, you can do more of what's working and change what's not—but it all starts with that willingness to look. Introducing the CL Math Program Assessment–a three phase approach to a comprehensive review, report, and support for math instruction. Because every student is a math person.

Anita Sparyberry Carnegie Learning

Introduction to Coding, an Opportunity for math Innovation for All **Explore Lab**
Level 2
Audience- Teachers, Coaches, General Interest **Grades K-8**

Open the door to many possibilities. We will introduce an intuitive, simple coding language first designed specifically for young learners by educators many years ago. Attendees will receive free access to this code as well as to a related robot on a computer screen. They will be given sets of lessons developed by the presenters which provide innovative, exciting but simple tools for teaching concepts in K to 6 mathematics.

Rudy Neufeld Understanding Math by Neufeld

Alabama Education Association AEA	ALEX Alabama Learning Exchange	Carnegie Learning

Coding with Ozobots for Multiplication Practice, Geometry, and much more! **Regions Room Mezzanine Level**
Audience- Teachers, Coaches, General Interest Grades K-5

In this session we will use the Ozobot to teach students how they can integrate coding and math in order to learn how to practice Addition, Subtraction, and Multiplication using the Ozobot. We will look a variety of resources such as the OzoBlockly program in order to solve a number of equations. The Ozobot can be used to integrate all the STEAM components and teachers can purchase this inexpensive robot to teach basic coding while also using it to teach a variety of math lessons in their classroom. I will also provide a list of resources that include sites to purchase the Ozobot, but. also including a list of websites and apps in order to make it easy for you to take back to your classrooms.

Paula Young Hatton Elementary School-Colbert County School System

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M.A.T.H.S.: Math Anchors Together Humanities & Science **Science Workshop**
Audience-Teachers Grades 6-10 **Mezzanine Level**

This presentation explores cross-curricular learning and the impact of creating STEAM activities that match students' interests incorporating students teaching and teachers learning. An application towards National Board Certification is illustrated through the cultivation of a strong home-school dynamic. Formative and summative assessments to measure academic improvement and growth in other areas are included.

Leslie Calloway Emma Sansom Middle

Technology's Role in Engaging Students in Deeper Learning **GENEius Lab Level 1**
Audience-Teachers, Administrators Grades K-12

How can we make sure that the content we teach our students sticks with them throughout their futures? As technology continues to become more deeply embedded in classrooms, more opportunities exist for digital instruction to play a large role in how students make sense of the content they learn. During this session, educators will explore the role that rigorous instruction plays in equipping students with a deep understanding of academic standards. Educators will walk away with a bank of resources and strategies, both digital and offline, to engage students in rigorous learning starting tomorrow. Please bring a laptop or electronic device to get the most out of this interactive session.

Jermelle Matthews EVERFI, Inc.

Using mathematics as a Bridge to English with Language Learners **Lunchroom A Lower Level**
Audience- Teachers **Grades K-5**

Because the Hindu-Arabic numeric system is used throughout the world, most English learners are familiar with it. The mathematics teacher can use this familiarity as a link to reach EL students and help them experience success while learning English.

Dawn Rains C.A. Donehoo Elementary

Bridging the Gap: Partnerships with teachers and University Professors **Lunchroom B Lower Level**
Audience- Teachers **Grades 6-13+**

Both in-service teachers and university professors benefit from working together in the secondary classroom. Through coaching and mentoring, participants can experience improved practice, deepen content knowledge, and evidence of student learning. This session will focus on the necessary elements to partner with local schools and universities. Participants will first hear a presentation overview of the experience between a university professor and classroom teacher. Participants will then be engaged in a discussion of what is necessary to build and replicate these relationships and practices in their local areas.

Ali Grace Eiland Pike County High School

9:30 AM Highlighted Session, Thursday, November 14

Lead Speaker	TITLE OF PROPOSED SESSION	Grade Band Focus	Room & Level
Christine Franklin	**Catalyzing Change: Creating the Reality that Statistical Reasoning Skills are Vital for all Students**	K-12	Banquet Hall Level 3

9:30 AM Sessions, Thursday, November 14

Lead Speaker	TITLE OF PROPOSED SESSION THURSDAY, NOV 14	Grade Band Focus						Room & Level
		K-2	3-5	6-8	9-10	11-12	13+	
Basil Conway	Developing Conceptual Understanding of Pearson's Correlation Coefficient			X	X	X	X	301 Level 3
Lori McGuire	(Math) Lies My Teacher Told Me	X	X	X	X	X		302 Level 3
Ahmad Alhammouri	Understanding mathematics Matters (Umm…) Camp at Jacksonville State University			X	X	X	X	303 Level 3
Lisa Etheridge	Linking Co-Teaching and mathematics to Foster Conceptual Understanding		X					304 Level 3
Christine Franklin	Catalyzing Change: Creating the Reality that Statistical Reasoning Skills are Vital for all Students	X	X	X	X	X		Banquet Hall Level 3
Rudy Neufeld	Brunch on a Ratio Mix of Cranberry Juice & Gingerale 'n Learn			X	X	X		Explore Lab Level 2
~~Wes Overton~~	~~Create Your Own Desmos Activities That Make Math Matter~~ Cancelled	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~Regions Room Mezzanine Level~~
Tanya Sanderson	Talk Mathy to Me				X	X		Science Workshop Mezzanine Level
Robert Thatcher	Routines Don't Have to be Routines	X						Rushton Theater Level 1
Brenda Teacher	Managing Small Groups and Centers in Math	X	X					GENEius Lab Level 1
Stacie Holland	Shining a Light on Number Sense	X						Lunchroom A Lower Level
Carrie Cabaniss	Math is FUN! Adding and Subtracting fractions with Conceptual Understanding		X	X				Lunchroom B Lower Level

ACTM would like to extend a special thanks to

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for being breakfast sponsors for the 2019 Fall Forum!
STOP BY THEIR VENDOR TABLE and SAY THANK YOU

9:30AM-10:45 PM Session Descriptions

Developing Conceptual Understanding of Pearson's Correlation Coefficient — **Room 301, Level 3**
Audience-Teachers, Coaches **Grades 6-13+**

What actually is Pearson's Correlation Coefficient? Join this session to learn how students may develop procedural fluency of interpreting the correlation coefficient from a conceptual understanding of the quadrant count ratio.

Basil Conway IV Columbus State

(Math) Lies My Teacher Told Me — **Room 302, Level 3**
Audience-Teachers, Coaches **Grades K-12**

The elementary school years are an important time during which students should be developing the mathematical reasoning skills they will need later in middle school and high school math courses. It is vital that elementary teachers use correct mathematical vocabulary and that they provide opportunities for students to gain the essential understandings of the "how" and "why" of mathematical operations. This session explores some common misconceptions (tricks) that are often used in teaching elementary mathematics and how these tricks can become obstacles for students' future understanding of advanced topics.

Lori McGuire

Understanding mathematics Matters (Umm…) Camp at Jacksonville State University — **Room 303, Level 3**
Audience-Teachers, Coaches, Admin **Grades 6-13+**

In this session, the participants will explore how a mathematics summer camp that ran at Jacksonville State University improved the campers' perception of mathematics. The Umm… Summer Camp is a week-long camp for upcoming 7th or 8th grade students. The campers engaged in hands-on activities that are presented in the form of "here is a situation, think about it." The goals of the camp are to engage the campers in the mathematical modeling process, in which mathematics is connected to real-world applications and technology, and to enhance the participants' motivation toward school, college, and real-world mathematics.

Ahmad Alhammouri Jacksonville State University

Linking Co-Teaching and Mathematics to Foster Conceptual Understanding **Room 304** **Level 3**
Audience-Teachers **Grades 3-5**

This session will focus on using the six co-teaching strategies in an integrative instructional design to foster student engagement and conceptual understanding in the elementary mathematics classroom.

Lisa Etheridge Troy University

Catalyzing Change: Creating the Reality that Statistical Reasoning Skills are Vital for all Students **Banquet Hall** **Level 3**
Audience-Teachers, Coaches, Admin, Gen. Interest **Grades K-12**

The National Council for Teachers of Mathematics policy document, *Catalyzing Change in High School Mathematics: Initiating Critical Conversations,* contains recommendations for the essential mathematical and statistical concepts that should be in the curriculum for all graduating secondary students and potential curricular pathways through four years of high school mathematics. The document advocates for statistics as an essential strand throughout the Pre-K-12 mathematics and statistics curriculum. This session will consider the implications of the recommendations focused on statistics for students entering the workforce after high school and for college intending students. The building of statistical literacy and statistical reasoning skills must begin in the lower grades and evolve throughout a student's school career. The essential statistical concepts in *Catalyzing Change* will be highlighted alongside identifying ways to introduce statistical literacy into a Pre-K-12 school mathematics curriculum, the role of simulation and investigative learning, and recommended statistics resources that can be useful in delivering the statistics curriculum.

Christine Franklin Ambassador for the American Statistical Association, an ASA Fellow, and University of Georgia Emerita Statistics Faculty

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Brunch on a Ratio Mix of Cranberry Juice & Gingerale 'n Learn **Explore Lab** **Level 2**
Audience- Teachers, Coaches **Grades 6-10**

Come have BRUNCH with us by exploring mixtures such as Cranberry Juice and Ginger Ale. The Next Generation Mathematics Standards emphasizes understanding ratio concepts, using ratio reasoning to solve problems, analyzing proportional relationships and using them to solve real-world and mathematical problems, especially on the middle school level. LEARN by "tasting" our 3-part lessons which teach concepts: Tape Diagrams, Ratio Tables and Double Number Lines. Scale Diagrams, Dilations, Slope. Participants will be given access to lessons both online and in print for their grade 5 to Algebra classes.

Rudy Neufeld Neufeld Learning Systems Inc.

Create Your Own Desmos Activities That Make Math Matter **Regions Room**
Audience- Teachers, Coaches, General Interest Grades K-12+ **Mezzanine Level**

CANCELLED BY SPEAKER

Come learn how simple it is to get started creating your own Desmos Activities. This can be as simple as a one slide warm-up or cool down to a whole lesson. Learn the Desmos design principals and options within activities to make math matter to students by connecting representations and sparking meaningful conservation in your classroom. We will cover the basics of creating or editing an activity as well as a small dive into the Desmos Computation Layer. Participants are encouraged to bring a laptop or tablet to this hands-on session.

Wes Overton Spanish Fort Middle School

Talk Mathy to Me **Science Workshop**
Audience-Teachers Grades 9-12 **Mezzanine Level**

Students learn how to process and think mathematically when we facilitate student discourse and use effective questioning through formative assessment lessons and daily teaching practices. This type of classroom environment creates an atmosphere for shared learning and allows teachers to act as facilitators rather than be the center of attention. In this session, participants will have work through a FAL and experience firsthand how highly trained classroom teachers can implement these effective strategies.

Tanya Sanderson Kate Duncan DAR High School

Managing Small Groups and Centers in Math **GENEius Lab**
Audience-Teachers Grades K-5 **Level 1**

This workshop will provide tips and strategies that will help you implement small group instruction and centers in your math classroom. This workshop will guide you in planning, organizing, and managing your math class so that it can run with ease.

Brenda Teacher Greensboro Elementary School

Routines Don't have to be Routine **Rushton Theater**
Audience-Teachers, Coaches Grades K-2 **Level 1**

Explore a variety of daily routines and teaching strategies focusing on the "not-so-simple" skills of counting and building number sense. Together we will work through concepts that are essential to foundational mathematics understanding. This workshop will leverage the research and theories behind counting, cardinality, and building number sense and provide you with important insight into many taken-for-granted processes. Walk away with ready to use routines and ideas to immediately implement in your classroom.

Robert Thatcher Pearson K-12 Learning Services

Shining a Light on Number Sense **Lunchroom A**
Audience- Teachers **Grades K-2** **Lower Level**

Come experience math in a way that is engaging and shines a light on number sense. Come and see how to utilize strategies and activities to push each student up the number progression framework.

Stacie Holland Arab Primary school

Math is FUN! Adding & Subtracting Fractions with Conceptual Understanding **Lunchroom B**
Lower Level
Audience- Teachers **Grades 3-8**

Come join us in this hands-on and engaging session on adding and subtracting fractions with a focus on conceptual understanding. Mathematics does matter and is as important as other curricular areas. We will use a variety of manipulatives and tools to play games that support students' procedural fluency from conceptual understanding when adding and subtracting fractions in Grades 4 & 5.

Carrie Cabaniss Sylacauga City Schools

ACTM would like to say Thank You to HoodaMath for providing lanyards for the 2019 Fall Forum!

HoodaMath

Cengage Learning	CPM Educational Program	Curriculum Associates

Announcement of Scholarship & Teacher Grant Winners

Are you an ACTM member? Are you a K-12 Teacher?
Apply for an ACTM Teacher Grant

Go to the ACTM website, www.actm.education, for information on how to apply for teacher grants for Spring, and for the application.

ACTM would like to say
THANK YOU
to Pearson Publishing
for providing bags for
the 2019 Fall Forum!

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To our vendors for supporting the 2019 ACTM Fall Forum!

11:00 AM Sessions, Thursday, November 14

Lead Speaker	TITLE OF PROPOSED SESSION THURSDAY, NOV 14	Grade Band Focus						Room and Level
		K-2	3-5	6-8	9-10	11-12	13+	
Katey Arrington	Establishing the Alabama Mathematics Leadership Alliance	X	X	X	X	X	X	301 Level 3
Meg Byrd	3-D Design and Printing in 3rd-6th Grade math		X	X				302 Level 3
Angela Williams	Exploring Children's Literature Through a Mathematical Problem-Solving Lens	X	X					303 Level 3
Gary Martin	Quadratic Quandary: Where and How Do Quadratic Functions and Equations Fit?			X	X			304 Level 3
Jeremy Zelkowski	Want a Math Teacher opportunity of a lifetime? Be a Math Teacher Leader thru NSF			X	X	X		Banquet Hall Level 3
Rudy Neufeld	Empower Them: TEACH the math, don't TELL the Rule		X	X				Explore Lab Level 2
Ashley Boyd	Strategies Used to Promote Discourse in math Classrooms			X	X			Regions Room Mezzanine Level
Jacqueline Richardson	~~Interactive Student Notebooks~~ XXXXXXXXXXXXXX---CANCELLED SESSION----------		X	X	X	X		Science Workshop Mezzanine Level
Kimberly Williams	Keeping it Real	X	X	X				GENEius Lab Level 1
Jeanne Simpson	Mathematical Language Routines for All Students		X	X	X	X		Rushton Theater Level 1
Sherri Gibbs	"Come on in!": Using Entrance Tickets in the Classroom	X	X	X				Lunchroom A Lower Level
Lisa McDonough	Fraction Multiplication; Use Visual Models to Connect to Procedures		X					Lunchroom B Lower Level

Explore Learning	EVERFI	Houghton Mifflin Harcourt

11:00—12:15 PM Session Descriptions

Establishing the Alabama Mathematics Leadership Alliance **Room 301**
Audience-Teachers, Coaches, Admin, Gen. Interest Grades K-13+ **Level 3**

Are you a math coach or specialist? Do you want to be a math leader in your school? Please join us to learn more about starting a state affiliate of NCSM (National Council for Supervisors of Mathematics). Learn of the benefits you will receive as a mathematics teacher leader, supervisor or coach. Review the constitution and bylaws and share what benefits and needs you have to grow mathematics leadership in your school/system.

Katey Arrington Regional Director Southern 2 NCSM Leadership in Mathematics Education

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3-D Design and Printing in 3rd-6th Grade Math **Room 302**
Audience-Teachers, Coaches & General Interest Grades 3-8 **Level 3**

Incorporate 3-D design and printing into your math classroom while teaching critical areas for your grade level. Participants will receive design challenges and rubrics for grades 3rd-6th grades and will experience creating their own designs in Tinkercad. Participants do not need to have access to a 3-D printer in order to incorporate this into their classrooms. Please bring a device and create an account at www.tinkercad.com ahead of time if possible.

Meg Byrd

Exploring Children's Literature Through a Mathematical Problem-Solving Lens **Room 303**
Level 3
Audience-Teachers, Coaches Grades K-5

This session will explore different types of children's literature as it relates to mathematics instruction. Participants will engage in activities designed to interest students through context related to the various types of literature discussed during the session.

Angela Williams

Quadratic Quandary: Where and How Do Quadratic Functions and Equations Fit? **Room 304** **Level 3**
Audience-Teachers **Grades 6-10**

Historically, the study of quadratics directly followed the study of linear equations and functions. However, newer recommendations emphasize the study of exponential functions following linear functions. Exactly how do quadratics fit in? Mathematical, contextual, historical, and learning lenses will be used to better untangle this quandary. As a result of participating in the session, participants will have a deeper understanding of quadratics and their place in the curriculum, along with concrete conclusions about how they might better incorporate address them.

Gary W Martin Auburn University

Want a Math Teacher opportunity of a lifetime? Be a Mathematics Teacher Leader thru NSF **Banquet Hall** **Level 3**
Audience-Teachers & Administrators **Grades 6-12**

The University of Alabama was awarded a $2.85M National Science Foundation grant with ACTM as a non-profit partner to provide 24 Master Teaching Fellowships. Math teachers interested should attend to learn about this opportunity that includes paid graduate tuition towards an advanced degree, annual salary supplements, professional conference travel funds, paid substitute costs, national board submission support, and more!

Jeremy Zelkowski The University of Alabama

Empower Them: TEACH the Math, don't TELL the Rule **Explore Lab**
Audience- Teachers, Coaches, Admin **Grades 3-8** **Level 2**

We will empower attendees to build understanding through visual digital approaches and 3 part lessons on paper in the following concepts: Add 2 digit numbers with regrouping; Fraction Introduction; Multiply 2 digit by 1 digit; Multiply Fractions … the How and the Why; Decimal Addition; Area: Rectangle-Triangle-Parallelogram-Trapezoid. Participants will receive access to all online and paper resources discussed.

Rudy Neufeld Understanding Math by Neufeld

Strategies Used to Promote Discourse in Math Classrooms **Regions Room**
Audience- Teachers, Coaches, Admin **Grades 6-10** **Mezzanine Level**

In many classrooms, students' sitting together in teams does not guarantee effective mathematical discourse. Defending one's position is important, but everyone needs to be heard. Activities will be modeled that encourage students to talk, write, and share ideas. Status is important so some of these activities will address this issue. Participants will experience study team and teaching strategies that particularly deal with discourse while working on math problems. These strategies will be tied back to the Standards for Mathematics Practice and sure to assist in cultivating discourse in the math classroom.

Ashley Boyd College Preparatory Mathematics

Interactive Student Notebooks **Science Workshop**
Audience-Teachers, Coaches **Grades 3-12** **Mezzanine Level**

CANCELLED SESSION by SPEAKER

You will create your own interactive notebook with sample pages to guide you in implementing them in your classroom. Interactive student notebooks will increase student engagement and keep students organized. You will come away with ideas, resources, and excitement to get them started in your classroom!

Jacqueline Richardson Spanish Fort Middle School

Keeping it Real **GENEius Lab**
Audience-Teachers, Coaches, Admin **Target Grades 2-6** **Level 1**

Exposing our students to contextual situations is not just a good idea – it's mandated in our standards. In this session, we will briefly look at the research supporting these "real world situations", understand the equity involved in giving students these opportunities, and acquire new ways to avoid having only "naked numbers" in our classrooms. In this session we are definitely KEEPING IT REAL!

Kimberly Williams

*****Vendor Exhibits will close Thursday at 3:00 PM ***Friday at 2:00 PM*****

Don't forget to visit the VENDORS & Exhibits before the closing session begins!

Level-3 Events Center – Near Registration Desks

Mathematical Language Routines for All Students **Rushton Theater**
Audience- Teachers, Coaches **Grades 3-12** **Level 1**

What can you do when language is a barrier for students learning mathematics? UL/SCALE at Stanford University has developed eight Mathematical Language Routines designed to promote language and content development in English Language Learners. However, teachers are finding that these routines increase engagement and understanding in all students. Participants in this session will experience the routines and learn how to incorporate them into their lessons. Resources will be shared.

Jeanne Simpson

Come on in: Using Entrance Tickets in the Classroom **Lunchroom A**
Audience- Teachers, Coaches **Grades K-8** **Lower Level**

Through this session, the participant will become more knowledgeable about entrance tickets; their definition, the various types, and the benefits of usage. Whether or not the teacher is already employing entrance or exit tickets in the classroom, this session will be informative and provide the participant with plenty of classroom-ready ideas.

Sherri Gibbs Ft Payne City Schools

Fraction Multiplication; Use Visual Models to Connect to Procedures **Lunchroom B**
Lower Level
Audience- Teachers, Coaches **Grades 3-5**

Participants will use manipulatives to build an area model to represent the product of two fractions and make connections between the area model and algorithm.

Lisa McDonough

Lunch→12:15-12:50

Keynote Speaker
Dr. Jennifer Bay-Williams 1:00-2:15
Banquet Hall, 3rd Floor

2:30 PM Sessions, Thursday, November 14

Lead Speaker	TITLE OF PROPOSED SESSION THURSDAY, NOV 14	Grade Band Focus						Room & Level
		K-2	3-5	6-8	9-10	11-12	13+	
Sheila Holt	Engagement Matters: Students in Poverty	X	X	X	X	X		301 Level 3
Kitty Morgan	Using the Unit Circle to Understand Trigonometric Graphs and Identities					X		302 Level 3
Johanna Massey	Powerful Impact. Using Diagnostic Interviews to Impact mathematics Learning	X	X					303 Level 3
Marilyn E Strutchens	Increasing Students Mathematical Success and Joy via Equitable Teaching			X				304 Level 3
Jennifer Bay-Williams	Using Games and Assessment Tools to Ensure Students Learn (and Love) Math Facts	X	X					Banquet Hall Level 3
Leigh Twigg	Making Meaning of Math Through Art and design	X	X					Explore Lab Level 2
Robert Thatcher	Leave the Math, Change the Language: ELL strategies that work	X	X	X				Regions Room Mezzanine Level
Lori Cabra	Mathematical Modeling- Let's Get Messy			X	X	X		Science Workshop Mezzanine level
Rebecca Smith	Picture Perfect Teachers		X					GENEius Lab Level 1
Whitney Becker	Worthwhile Tasks- What They Are and Where to Find Them		X	X	X			Rushton Theater Level 1
Denise Porch	Multiplication Connections Through Visual Models		X					Lunchroom A Lower Level
Leshell Smith	Removing Obstacles for EL Learners in the Mathematics Classroom		X	X	X			Lunchroom B Lower Level

2:30—3:45 PM Session Descriptions

Engagement Matters: Students in Poverty **Room 301**
Audience-Teachers, Coaches, Admin, General Interest Grades K-12 **Level 3**

Create a high-energy, engaging, and productive class climate to foster student success. Build cognitive capacity through engagement to improve student motivation, effort, and sustained understanding of mathematics content.

Sheila Holt

Using the Unit Circle to Understand Trigonometric Graphs and Identities **Room 302**
Level 3
Audience-Teachers **Grades 11-12**

Come play the Unit Circle Game and then take the x- and y- values of the special points and extend them to graphing trigonometric graphs. We will also discuss how the idea of the unit circle and the sin x and cos x relationship help us create the Pythagorean identities.

Kitty Morgan A+ College Ready

Powerful Impact. Using Diagnostic Interviews to Impact Mathematics Learning **Room 303**
Level 3
Audience- Teachers, Coaches **Grades K-5**

Diagnostic interviews are powerful tools that allow teachers to individualize instruction to meet the needs of their learners (Keely, 2008; Van de Wall, 2016). This presentation demonstrates how Prospective Teachers (PT) use an authentic practice-based assessment to plan and implement interventions based on Pre-K to 5th graders needs. From the results, PT, in conjunction with the cooperating teacher, designed and implemented a 3 to 5-day intervention which included instructional strategies and daily formative assessments. PT re-administer the diagnostic interview to determine the impact the intervention plan on their students learning. This assignment was created in response to state implementing edTPA for Elementary Education Task 4.

Johanna Massey Alabama A&M University

Increasing Students' Mathematical Success and Joy Via Equitable Teaching **Room 304 Level 3**
Audience-Teachers, Coaches Grades 6-8

This workshop focuses on strategies that have been known to help students enjoy and succeed in mathematics. Vignettes, video clips, and student responses to problems situated in a variety of contexts will be examined. Equitable teaching strategies, such as using multiple entry tasks and students' mathematics autobiographies will be explored.

Marilyn E Strutchens Auburn University

Using Games and Assessment Tools to Ensure Students Learn (and Love) Math Facts **Banquet Hall Level 3**
Audience-Teachers, Coaches, Admin, General Interest Grades K-5

To ensure our students learn their facts, remember them, and build confidence in their math thinking we need to make some fundamental changes in how we approach the learning of basic facts. In this session, I will share what these changes are, and we will explore a collection of games and assessment tools to put the ideas into action. All games and activities will be shared and are also in my book "***Math Fact Fluency***".

Jennifer Bay-Williams University of Louisville

Making Meaning Through Art and Design **Explore Lab**
Audience-Teachers Grades K-5 **Level 2**

Do you love art and long to find a way to integrate it into your math lessons but have trouble finding meaningful art lessons that actually engage students in the math? In this make and take session, you will discover how to choose art lessons that cover your standards and give students hands on opportunities to actively involve them in learning math. You will be given resources to help you locate art lessons and a rubric to help you identify what makes a good math/art lesson and how to assess the learning. You will also participate in a make and take where you will be able to take at least two activities with you.

Leigh Twigg Calhoun County Schools

Leave the Math, Chane the Language: ELL strategies that work **Regions Room**
Audience-Teachers, Coaches, Admin Grades K-8 **Mezzanine Level**

Access is everything. Learn ways to invite every student to the math table with language strategies that lower the barrier to access for all. Experience these strategies based on the Council of Great City schools ELL framework and NCTM. Take back to your classroom tools that provide equity and access for all learners.

Robert Thatcher Pearson K-12 Learning Services

Mathematical Modeling- Let's Get Messy! **Science Workshop Mezzanine Level**
Audience-Teachers, Coaches Grades 6-12

Further your understanding of the research behind and the meaning of Mathematical Modeling. By analyzing the modeling cycle and examining research found in the GAIMME report, you will walk away with more insight of what truly constitutes Mathematical Modeling. And, of course, you will have the opportunity to experience several highly engaging modeling lessons. By the conclusion of this workshop, you will have ideas that can be used immediately in your classroom to meet required modeling standards!

Lori Cabra Pearson K-12 Learning Services

Picture Perfect Techers **GENEius Lab Level 1**
Audience-Teachers Grades 3-5

In this session upper elementary teachers will explore ways to use pictorial representations to help bridge students' thinking between concrete and abstract ideas. Participants will discover ways to incorporate pictures of mathematical concepts into number routines and daily warm-ups. Teachers will leave this session with ideas and digital resources to help enhance students' number sense. Multiple mathematical concepts will be addressed, such as place value, fractions, decimals, and multiplication.

Rebecca Smith University of North Alabama

Worthwhile Math Tasks- What They Are and Where to Find Them **Rushton Theater Level 1**
Audience-Teachers, Coaches Grades 3-10

This session will define the characteristics of those math tasks that are worthwhile to use in your classroom. You will also be given several online resources for where to find those performance tasks.

Whitney Becker Lexington School Lauderdale County

Multiplication Connections Through Visual Models **Lunchroom A Lower Level**
Audience-Teachers, Coaches Grades 3-5

Participants will use manipulatives to build an area model to represent the product of two whole number factors, engage in the learning progression for multiplication, and make connections between the area model and standard algorithm.

Denise Porch

Removing Obstacles for EL Learners in the Mathematics Classroom **Lunchroom B Lower Level**

Audience-Teachers, Coaches **Grades 3-10**

English Language Learners (ELLs) come up against many obstacles in the mathematics classroom. What evidence can be used to determine and remove obstacles for our ELLs? What structures are needed to ensure high quality math instruction for ELLs? Ideas will be explored using work samples from ELLs, research from Access & Equity: Promoting High Quality Mathematics and Beyond Good Teaching: Advancing Mathematics Education for ELLs.

LeShell Smith

4:00 PM Session, Thursday, November 14

Lead Speaker	TITLE OF PROPOSED SESSION	Grade Band Focus						Room & Level
Ethan Richardson	**ACTM Business Meeting**	X	X	X	X	X	X	302 Level 3

Candidates for offices will be presented and voted upon.
Nominations for positions will be accepted from the floor.
*******Executive Committee Members Required*******
Announcement of Scholarship & Teacher Grant Winners

See you tomorrow!

8:30 AM Session, Friday, November 15

Lead Speaker	TITLE OF PROPOSED SESSION	Grade Band Focus						Room & Level
Nicolette Nalu	**AMTE-A Business Meeting**	X	X	X	X	X	X	302 Level 3

This is the annual meeting for the Association of Mathematics Teacher Educators of Alabama. All coaches, teacher educators, and administrators are invited to discuss issues involving teacher education around the state.

8:30 AM Sessions, Friday, November 15

Lead Speaker	TITLE OF PROPOSED SESSION Friday, NOV 15	Grade Band Focus						Room & Level
		K-2	3-5	6-8	9-10	11-12	13+	
Nick Fink	Can I Get Some Feedback?			X	X	X		301 Level 3
Nicolette Nalu	AMTE-Business Meeting	X	X	X	X	X	X	302 Level 3
Ahmad Alhammouri	TI-Inventor Rover: Fun Way to Model 2D Geometry			X	X	X		303 Level 3
Kristy Mann	The Eyes Have It: Integrating Math, Science, Writing, and Arts		X					304 Level 3
Joel White	(Math) Lies My Teacher Told Me	X	X	X	X	X		Banquet Hall Level 3
Carol Tarpley	Making Math Vocabulary Instruction Robust		X					Explore Lab Level 2
Laurel Partrick	Keeping it Real	X	X	X				Regions Room Mezzanine Level
Meg Byrd	3-D Design and Printing in 3rd-6th Grade Math		X	X				Science Workshop Mezzanine Level
Tanya Sanderson	Talk Mathy to Me				X	X		GENEius Lab Level 1
Joe Cuprak	Where the Rubber Hits the Road: Unlocking the SMPs and Connecting Them to Teacher Practices	X	X	X	X	X	X	Lunchroom A Lower Level

8:30—9:45 AM Session Descriptions

Can I Get Some Feedback? **Room 301**
Audience-Teachers **Grades 6-12** **Level 3**

Feedback matters! However, how do teachers make use of it effectively, efficiently, & get students actively participating in the process of formative assessment? In this session, a trio of AMSTI math specialists from across Alabama have collaborated to unpack essential research about feedback and introduce practical application strategies for your classroom. How can you make the most of feedback? Come find out here!

Nick Fink

AMTE- Business Meeting **Room 302**
Audience-Teachers, Coaches, Admin, General Interest **Grades K-13+** **Level 3**

This is the annual meeting for the Association of Mathematics Teacher Educators of Alabama. All coaches, teacher educators, and administrators are invited to discuss issues involving teacher education around the state.

Nicolette Nalu

TI-Innovator Rover: Fun Way to Model 2D Geometry **Room 303**
Audience-Teachers, Coaches, Admin, General Interest **Grades 6-12** **Level 3**

In this session, the participants will be engaged in the problem-solving process using coding. The participants will explore how the TI graphing calculator (called the TI-Innovator Rover) can be used to deepen school students' understanding of the characteristics of objects in two-dimensional (2D) space. No coding experience is necessary.

Ahmad Alhammouri Jacksonville State University

The Eyes Have It: Integrating Math, Science, Writing, and Arts **Room 304**
Audience-Teachers, Coaches **Grades K-13+** **Level 3**

The Eyes have It! Discover how looking just a little bit closer at objects evoke thinking by analogy, creativity, writing, and authentic research in math and science.

Kristy Mann

(Math) Lies My Teacher Told Me **Banquet Hall**
Audience-Teachers, Coaches **Grades K-12** **Level 3**

The elementary school years are an important time during which students should be developing the mathematical reasoning skills they will need later in middle school and high school math courses. It is vital that elementary teachers use correct mathematical vocabulary and that they provide opportunities for students to gain the essential understandings of the "how" and "why" of mathematical operations. This session explores some common misconceptions (tricks) that are often used in teaching elementary mathematics and how these tricks can become obstacles for students' future understanding of advanced topics.

Joel White

Making math Vocabulary Instruction Robust **Explore Lab**
Audience-Teachers **Grades 3-5** **Level 2**

This session will focus on engaging students with mathematical vocabulary in order to increase depth of understanding, facility of use, and enjoyment. Activities following the work of Beck, McKeown, and Kucan will be presented and participants will be actively engaged.

Carol Tarpley Falkner University

Keeping it Real **Regions Room**
Audience-Teachers, Coaches, Admin **Grades 2-6** **Mezzanine Level**

Exposing our students to contextual situations is not just a good idea – it's mandated in our standards. In this session, we will briefly look at the research supporting these "real world situations", understand the equity involved in giving students these opportunities, and acquire new ways to avoid having only "naked numbers" in our classrooms. In this session we are definitely KEEPING IT REAL!

Laurel Partrick

3-D design and Printing in 3rd-6th Grade Math **Science Workshop**
Audience-Teachers, Coaches, Admin, General Interest **Grades 3-8** **Mezzanine Level**

Incorporate 3-D design and printing into your math classroom while teaching critical areas for your grade level. Participants will receive design challenges and rubrics for grades 3rd-6th and will experience creating their own designs in Tinkercad. Participants do not need to have access to a 3-D printer in order to incorporate this into their classrooms.

Meg Byrd

Talk Mathy to Me **GENEius lab**
Audience-Teachers **Grades 9-12** **Level 1**

Students learn how to process and think mathematically when we facilitate student discourse and use effective questioning through formative assessment lessons and daily teaching practices. This type of classroom environment creates an atmosphere for shared learning and allows teachers to act as facilitators rather than be the center of attention. In this session, participants will have work through a FAL and experience firsthand how highly trained classroom teachers can implement these effective strategies.

Tanya Sanderson Kate Duncan DAR High School

Where the Rubber Hits the Road: Unlocking the SMPs and Connecting Them to Teacher Practices **Lunchroom A Lower Level**
Audience-Teachers **Grades K-13+**

What are the High-Leverage Teacher Practices and how do they support the Standards for Mathematical Practice? In this session, we will dive into both "lists of eight" and focus on teaching methodology to support each. Expect to engage in problems and discussions as we model and diagnose teaching strategies.

Joe Cuprak Curriculum Associates

10:00 AM Sessions, Friday, November 15

Lead Speaker	TITLE OF PROPOSED SESSION FRIDAY, NOV 15	Grade Band Focus						Room & Level
		K-2	3-5	6-8	9-10	11-12	13+	
Brea Ratliff	From Students to Learners: Developing Middle School Mathematicians			X				301 Level 3
Sarah A. Roller	Photographs and Learning Progressions as Formative Assessment Tools	X						302 Level 3
Brenda Teacher	Managing Small groups and Centers in Math	X	X					303 Level 3
Denise Porch	Multiplication Connections Through Visual Models		X					304 Level 3
Jeremy Zelkowski	Want a Math Teacher opportunity of a lifetime? Be a Math teacher Leader thru NSF			X	X	X		Banquet Hall Level 3
Rebecca Smith	Perfect Picture		X					Explore Lab Level 2
Jennifer Trott	How Can I Really Use Formative Assessments?	X	X					Regions Room Mezzanine Level
Dawn Rains	Using mathematics as a Bridge to English with Language Learners	X	X					Science Workshop Mezzanine Level
Anita Sparyberry	The Ingredients for Growth: An Open Conversation about Math Achievement	X	X	X	X	X		GENEius Lab Level 1

T³ International Conference, March 13-15

Discount Registration Code: **REG100T3** **(does not expire, $65 off)**

10:00—11:15 AM Session Descriptions

From Students to Learners: Developing Middle School Mathematicians — **Room 301, Level 3**
Audience-Teachers, Coaches, Admin **Grades 6-8**

Is it possible to guide middle school students from doing mathematics to seeing themselves as mathematicians? Students' academic success in mathematics is framed by their understanding of what it means to be a mathematician. In this session, participants will explore tasks that use real numbers, expressions, equations, and mathematical modeling to affirm students' unique perspectives and experiences in learning mathematics.
Brea Ratliff Auburn University

Photographs and Learning Progressions as Formative Assessment Tools — **Room 302, Level 3**
Audience-Teachers Session **Grades K-2**

Would a formative assessment tool that captures children's thinking organically and focuses on what matters mathematically be helpful? Take a picture! This session will explore how to capture children's mathematical thinking in photographs and use a learning progression to make sense of the mathematical thinking to guide tomorrow's instruction.
Sarah A. Roller The University of Alabama Huntsville

Managing Small Groups and Centers in Math — **Room 303, Level 3**
Audience-Teachers **Grades K-5**

This workshop will provide tips and strategies that will help you implement small group instruction and centers in your math classroom. This workshop will guide you in planning, organizing, and managing your math class so that it can run with ease.
Brenda teacher Greensboro Elementary School

For more information about Teacher Grants, Pre-Service Teacher Scholarships, or the ACTM Book Study, please visit their table in the Vendor Area.

Multiplication Connections through Visual Models **Room 304**
Audience- Teachers, Coaches **Grades 3-5** **Level 3**

Participants will use manipulatives to build an area model to represent the product of two whole number factors, engage in the learning progression for multiplication, and make connections between the area model and standard algorithm.

Denise Porch

Want a Math Teacher opportunity of a lifetime? **Banquet Hall**
Be a Mathematics Teacher Leader thru NSF **Level 3**
Audience-Teachers & Administrators **Grades 6-12**

The University of Alabama was awarded a $2.85M National Science Foundation grant with ACTM as a non-profit partner to provide 24 Master Teaching Fellowships. Math teachers interested should attend to learn about this opportunity that includes paid graduate tuition towards an advanced degree, annual salary supplements, professional conference travel funds, paid substitute costs, national board submission support, and more!

Jeremy Zelkowski The University of Alabama

Picture Perfect **Explore Lab**
Audience-Teachers **Grades 3-5** **Level 2**

In this session upper elementary teachers will explore ways to use pictorial representations to help bridge students' thinking between concrete and abstract ideas. Participants will discover ways to incorporate pictures of mathematical concepts into number routines and daily warm-ups. Teachers will leave this session with ideas and digital resources to help enhance students' number sense. Multiple mathematical concepts will be addressed, such as place value, fractions, decimals, and multiplication.

Rebecca Smith University of North Alabama

Vendor Exhibits will close at 2:00 PM Friday

Jacksonville State University	Legends of Learning	NCSM Leadership in Mathematics Education

How Can I really Use Formative Assessments? **Regions Room**
Audience-Teachers **Grades 6-13+** **Level 2**

Formative assessment has become one of the new education buzzwords, but does it really help students? IF you are doing it correctly, it absolutely does! This workshop will explore how teachers can actually make useful formative assessment a regular part of the everyday practice. Teachers will discover that formative assessment is doable, useable, and can make a huge difference in student achievement.

Jennifer Trott

Using Math as a Bridge to English with Language Learners **Science Workshop**
Audience-Teachers **Grades K-5** **Mezzanine Level**

Because the Hindu-Arabic numeric system is used throughout the world, most English learners are familiar with it. The mathematics teacher can use this familiarity as a link to reach EL students and help them experience success while learning English.

Dawn Rains C.A. Donehoo Elementary

The Ingredients for growth: An Open Conversation about Math Achievement **GENEius Lab**
Mezzanine Level
Audience-Coaches, Admin **Grades K—12**

Growth Comes from Knowing Where You Are: If you want to provide the best possible math education for your students, you have to take a thorough, honest look at where your program is right now. Once you know what you're doing well and where you need to improve, you can do more of what's working and change what's not —but it all starts with that willingness to look. Introducing the CL Math Program Assessment–a three phase approach to a comprehensive review, report, and support for math instruction. Because every student is a math person.

Anita Sparyberry Carnegie Learning

11:15-12:00

12:00 PM Sessions, Friday, November 15

Lead Speaker	TITLE OF PROPOSED SESSION FRIDAY, NOV 15	Grade Band Focus						Room & Level
		K-2	3-5	6-8	9-10	11-12	13+	
Amy Hudson	Shining a Light on Number Sense	X						301 Level 3
Paula Young	Coding with Ozobots for Multiplication Practice, Geometry, and much more!	X	X					302 Level 3
Jermelle Matthews	Technology's Role in Engaging Students in Deeper Learning	X	X	X	X	X		303 Level 3
Amanda Pendergrass	Self-Assessment with Counting Collections	X						304 Level 3
Jeremy Zelkowski	What do we all need to know about new mathematics teachers' needs?			X	X	X	X	Banquet Hall Level 3
Ashley Robinson	Worthwhile Math Tasks-What They Are and Where to Find Them		X	X	X			Explore Lab Level 2
Crystal Wiggins	Fraction Division Stress? Come Collaborate to Gain Conceptual Understanding		X	X	X			Regions Room Mezzanine Level
Robert Thatcher	Routines Don't have to Be Routine	X						Science Workshop Mezzanine Level
Melanie Martin	Measurement and Data: The Pathway to Statistics	X	X	X				GENEius Lab Level 1
Jeanne Simpson	Mathematical Language Routines for All Students		X	X	X	X		Lunchroom A Lower Level
Shannon Noel Tillison	Making Meaning of Math Through Art and Design	X	X					Lunchroom B Lower Level

PAEMST Program	Pearson Publishing	Tech Trek

12:00—1:15 PM Session Descriptions

Shining a Light on Number Sense **Room 301**
Audience-Teachers **Grades K-2** **Level 3**

Come experience math in a way that is engaging and shines a light on number sense. Come and see how to utilize strategies and activities to push each student up the number progression framework.

Amy Hudson Arab Primary School

Coding with Ozobots for Multiplication Practice, Geometry, and much more! **Room 302**
Level 3
Audience-Teachers, Coaches **Grades K-5**

In this session we will use the Ozobot to teach students how they can integrate coding and math in order to learn how to practice Addition, Subtraction, and Multiplication using the Ozobot. We will look a variety of resources such as the OzoBlockly program in order to solve a number of equations. The ozobot can be used to integrate all the STEAM components and teachers can purchase this inexpensive robot to teach basic coding while also using it to teach a variety of math lessons in their classroom. I will also provide a list of resources that include sites to purchase the ozobot, but. also including a list of websites and apps in order to make it easy for you to take back to your classrooms and schools immediately in order to provide some fun and engaging coding lessons in math class.

Paula Young Hatton Elementary School-Colbert County School System

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For more information about Teacher Grants, Pre-Service Teacher Scholarships, or the ACTM Book Study, please visit their table in the Vendor Area.

Technology's Role in Engaging Students in Deeper Learning **Room 303**
Audience—Teachers, Admin **Grades K-12** **Level 3**

How can we make sure that the content we teach our students sticks with them throughout their futures? As technology continues to become more deeply embedded in classrooms, more opportunities exist for digital instruction to play a large role in how students make sense of the content they learn. During this session, educators will explore the role that rigorous instruction plays in equipping students with a deep understanding of academic standards. Educators will walk away with a bank of resources and strategies, both digital and offline, to engage students in rigorous learning starting tomorrow. Please bring a laptop or electronic device to get the most out of this interactive session.

Jermelle Matthews EVERFI, Inc.

Self-Assessment with Counting Collections **Room 304**
Audience-Teachers & Coaches **Grades K-2** **Level 3**

Number sense in early math development provides the foundation for more complex mathematical thinking. Counting collections provide rich opportunities to practice developing number sense and counting skills. Young children need problems to solve and latitude to construct their own strategies for self-assessment. This session will explore the practice of cardinality through counting manipulatives using one-to-one correspondence, thereby building a concrete foundation for future experiences in math. We will also discuss the practice of students using self-assessment to assist in their own learning.

Amanda Pendergrass University of West Alabama

What do we all need to know about new mathematics teachers' needs? **Banquet Hall**
Level 3
Audience- Teachers, Coaches, & Administrators **Grades 6-12**

This session will focus on four important points: (1) The millennial mindset differences and the awareness of new generation mathematics teachers, (2) Support structures that can be put into place to reduce new teacher attrition, (3) Recruitment strategies for attracting newly certified math teachers, and (4) Setting in motion actions to address math teacher shortages.

Jeremy Zelkowski The University of Alabama

Does your work involve supervising or coaching teachers?
Go to www.mathleadership.org to learn about the National Council of Supervisors of Mathematics (NCSM)

Worthwhile math Tasks- What They Are and Where to Find Them **Explore Lab**
Audience-Teachers, Coaches, Admin **Grades 3-10** **Level 2**

This session will define the characteristics of those math tasks that are worthwhile to use in your classroom. You will also be given several online resources for where to find those performance tasks.

Ashley Robinson Lexington School Lauderdale County

Fraction Division Stress? Come Collaborate to Gain Conceptual Understanding **Regions Room Mezzanine Level**
Audience-Teachers, Coaches, General Interest Grades 3-10

Come join our hands-on, engaging, and fun session about learning how to divide fractions conceptually. Participants will use a variety of manipulatives to divide fractions. 40% of the ACT is comprised of essential skills (Grades 3-8) including modeling in mathematics. Grades 7-9 in basic Algebra may use fractions in solving expressions and equations such as 4/5 x + 2/3 or 3/4 x / 1/2). Handouts will be provided. Student work will be shared and discussed. Make sure you arrive early to enter your name for the door prize drawing.

Crystal Wiggins Helena Middle School

Routines Don't Have to be Routine **Science Workshop**
Audience-Teachers, Coaches **Grades K-2** **Mezzanine Level**

Explore a variety of daily routines and teaching strategies focusing on the "not-so-simple" skills of counting and building number sense. Together we will work through concepts that are essential to foundational mathematics understanding. This workshop will leverage the research and theories behind counting, cardinality, and building number sense and provide you with important insight into many taken-for-granted processes. Walk away with ready to use routines and ideas to immediately implement in your classroom.

Robert Thatcher Pearson K-12 Learning Services

Measurement and Data: The Pathway to Statistics **GENEius Lab**
Audience-Teachers, Coaches **Grades K-8** **Level 1**

Explore the connection between Measurement and Data in K-5 and Statistics in the 6-8 grade band. Participants will experience activities for K-5 students that prepare them for the critical thinking needed to understand and apply basic statistical ideas from 6th grade and beyond.

Melanie Martin

Mathematical Language Routines for All Students **Lunchroom A**
Audience-Teachers **Grades 3-12** **Lower Level**

What can you do when language is a barrier for students learning mathematics? UL/SCALE at Stanford University has developed eight Mathematical Language Routines designed to promote language and content development in English Language Learners. However, teachers are finding that these routines increase engagement and understanding in all students. Participants in this session will experience the routines and learn how to incorporate them into their lessons. Resources will be shared.

Jeanne Simpson

Making Meaning of Math through Art and Design **Lunchroom B**
Audience-Teachers **Grades K-5** **Lower Level**

Do you love art and long to find a way to integrate it into your math lessons but have trouble finding meaningful art lessons that actually engage students in the math? In this make and take session, you will discover how to choose art lessons that cover your standards and give students hands on opportunities to actively involve them in learning math. You will be given resources to help you locate art lessons and a rubric to help you identify what makes a good math/art lesson and how to assess the learning. You will also participate in a make and take where you will be able to take at least two activities with you.

Shannon Noel Tillison

Activating Agency for Students Access, Engagement, and Advancement in Mathematics

June 25 - 27
Scottsdale, AZ

Equity, Excellence & Social Justice
TODOS
for ALL in Mathematics

More information at:
https://www.todos-math.org/todos-2020-conference

@TODOSmath
#TODOS2020

1:30 PM Sessions, Friday, November 15

Lead Speaker	TITLE OF PROPOSED SESSION FRIDAY, NOV 15	Grade Band Focus						Room & Level
		K-2	3-5	6-8	9-10	11-12	13+	
Kitty Morgan	Using the Unit Circle to understand Trigonometric Graphs and Identities					X		301 Level 3
Krysten Gunn	What the flip? Integrating FLIPGRID into math classrooms		X					302 Level 3
Almir Smajic	Math/Science Integration for Earth's Sake			X				303 Level 3
Gary Martin	Quadratic Quandary: Where and How Do Quadratic Functions and Equations Fit?			X	X			304 Level 3
Sheila Holt	Establishing the Alabama Mathematics Leadership Alliance	X	X	X	X	X	X	Banquet Hall Level 3
Jacqueline Richardson	----------XXXXXXXXXXXXXXX---CANCELLED SESSION---------- Interactive Student Notebooks	X	X	X	X	X		Explore Lab Level 2
Robert Thatcher	Leave the math, Change the Language: ELL strategies that work	X	X	X				Regions Room Mezzanine Level
Lori Cabra	Mathematical Modeling- Let's Get Messy			X	X	X		Science Workshop Mezzanine Level
Lisa McDonough	Fraction Multiplication; Use Visual Models to Connect to Procedures		X					GENEius Lab Level 1
Ashley Boyd	Strategies Used to Promote Discourse in Math Classrooms			X	X			Lunchroom A Lower Level
Kathryn Early	Analyzing Univariate and Bivariate Data using Desmos				X	X		Lunchroom B Lower Level

1:30—2:45 PM Session Descriptions

Using the Unit Circle to understand Trigonometric Graphs and Identities **Room 301** **Level 3**
Audience-Teachers **Grades 11-12**

Come play the Unit Circle Game and then take the x- and y- values of the special points and extend them to graphing trigonometric graphs. We will also discuss how the idea of the unit circle and the sin x and cos x relationship help us create the Pythagorean identities.
Kitty Morgan A+ College Ready

What the flip? Integrating FLIPGRID into math classrooms **Room 302**
Audience-Teachers, Coaches **Grades 3-5** **Level 3**

What is FLIPGRID? This session is jam packed with ideas of how to integrate FLIPGRID, a video discussion platform, into elementary math classrooms. Empower student voice by giving ALL learners an opportunity to share their strategies and ideas. Create an online classroom community that encourages math discourse. Also, discover FLIPGRID'S new updates and how to use them effectively in a math classroom.
Krysten Gunn Calera Intermediate School

Math/Science Integration for Earth's Sake **Room 303**
Audience-Teachers **Grades 6-8** **Level 3**

In this hands-on workshop, participants will participate in innovative activities that illustrate the math behind real-world ecology concepts such as human population growth and natural resource use. Presented strategies include creating representational models with manipulatives, cooperative group problem-solving challenges, graphing and analysis. The presented activities build students' understanding and skills in algebraic patterns and functions, decimals, fractions and ratios, linear measurement, as well as number operations and problem solving. The activities incorporate data on trends in the environment, global demographics and natural resource use. Receive lesson plans in an electronic format, matched to state standards.
Almir Smajic University of Montevallo

Quadratic Quandary: Where and How Do Quadratic Functions and Equations Fit? **Room 304**
Level 3
Audience-Teachers **Grades 6-10**

Historically, the study of quadratics directly followed the study of linear equations & functions. However, newer recommendations emphasize the study of exponential functions following linear functions. Exactly how do quadratics fit in? Mathematical, contextual, historical, & learning lenses will be used to better untangle this quandary. As a result of participating in the session, participants will have a deeper understanding of quadratics & their place in the curriculum, along with concrete conclusions about how they might better incorporate address them.

Gary Martin Auburn University

Establishing the Alabama Mathematics Leadership Alliance **Banquet Hall**
Audience—Teachers, Coaches, Admin, General Interest **Level 3**
Grades K-13+

Are you a math coach, specialist, or teacher leader? Do you want to be a math leader in your school? Please join us to learn more about starting a state affiliate of NCSM (National Council for Supervisors of Mathematics). Learn of the benefits you will receive as a mathematics teacher leader, supervisor or coach. Review the constitution and bylaws and share what benefits and needs you will gain to grow mathematics leadership in your school/system.

Sheila Holt

Interactive Student Notebooks **Explore Lab**
Audience-Teachers, Coaches Grades 3-12 **Level 2**

CANCELLED SESSION by SPEAKER

You will create your own interactive notebook with sample pages to guide you in implementing them in your classroom. Interactive student notebooks will increase student engagement and keep students organized. You will come away with ideas, resources, and excitement to get them started in your classroom!

Jacqueline Richardson Spanish Fort Middle School

Leave the Math, Change the Language: ELL strategies that work. **Regions Room**
Audience-Teachers, Coaches, Admin Grades K-8 **Mezzanine Level**

Access is everything. Learn ways to invite every student to the math table with language strategies that lower the barrier to access for all. Experience these strategies based on the Council of Great City schools ELL framework and NCTM. Take back to your classroom tools that provide equity and access for all learners.

Robert Thatcher Pearson K-12 Learning Services

Mathematical Modeling- Let's Get Messy! **Science Workshop**
Audience-Teachers, Coaches **Grades 6-12** **Mezzanine Level**

Further your understanding of the research behind and the meaning of Mathematical Modeling. By analyzing the modeling cycle and examining research found in the GAIMME report, you will walk away with more insight of what truly constitutes Mathematical Modeling. And, of course, you will have the opportunity to experience several highly engaging modeling lessons. By the conclusion of this workshop, you will have ideas that can be used immediately in your classroom to meet required modeling standards!

Lori Cabra Pearson K-12 Learning Services

Fraction Multiplication; Use Visual Models to Connect to Procedures **GENEius Lab Level 1**
Audience-Teachers, Coaches **Grades 3-5**

Participants will use manipulatives to build an area model to represent the product of two fractions and make connections between the area model and algorithm.

Lisa McDonough

Strategies Used to Promote Discourse in Math classrooms **Lunchroom A**
Audience-- Teachers, Coaches, Admin **Grades 6-10** **Lower Level**

In many classrooms, students' sitting together in teams does not guarantee effective mathematical discourse. Defending one's position is important, but everyone needs to be heard. Activities will be modeled that encourage students to talk, write, and share ideas. Status is important so some of these activities will address this issue. Participants will experience study team and teaching strategies that particularly deal with discourse while working on math problems. These strategies will be tied back to the Standards for Mathematics Practice and sure to assist in cultivating discourse in the math classroom.

Ashley Boyd College Preparatory Mathematics

Exploring Data using Desmos: Algebra 1 thru AP Statistics **Lunchroom B**
Audience-Teachers **Grades 9-12** **Lower Level**

Desmos is a great program to help explore data and make connections. This session will show all the new additions to the Desmos platform and how to use them in the classroom.

Kathryn Early Harris County High School

3:00 PM Session, Friday, November 15

Lead Speaker	TITLE OF PROPOSED SESSION	Grade Band Focus						Room & Level
Ethan Richardson	**ACTM Closing Session**	X	X	X	X	X	X	Banquet Hall Level 3

Door Prizes!!!
You must be present to win!

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2019 Fall Forum
We hope to see you again next year!

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- *Mathematics Teacher* (8-14) **or**
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Level 3:
Banquet Hall
Classroom 301
Classroom 302
Classroom 303
Classroom 304

Level 2:
Explore Lab

Mezzanine Level:
Regions Room
Science Workshop

Level 1:
Ruston Science Theatre
GENEius Lab

Lower Level:
AquaSpace Theatre
Lunch Room A