

## Alabama Council of Teachers of Mathematics <br> presents their annual


... With Liberty And Mathematios For Alle.


October 22-October 23, 2015 McWane Science Center • Birmingham, Alabama
www.actm.education
http://acotom.wildapricot.org

## McWane Science Center

## BLANK PAGE RESERVED for PAID ADVERTISING

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| 2015 ACTM Fall Forum Committees |  |
| :--- | :--- |
| Conference Chair | Jeremy Zelkowski |
| Program Chair | Cathy Jones |
| Conference Membership Chair | Rebecca Brown |
| Finance Chair | Michele Matin |
| ACTM Materials | Catherine Sperando |
| Signs and Printing | Jeremy Zelkowski |
| Registration | Sandy McCarthy |
| Hospitality | Angie Pelton |
| Vendor Exhibits | Beverly Kimes |
| McWane Science Center | Lyndsie Garrett |
| Equipment | McWane IT Support |
| Speaker Support | McWane IT Support |
| Volunteer Organizers | Joel White |
| Reception | Ethan Richardson |
|  | ACTM Board Members |

## Conference Highlights

| Thursday, October 22, 2015 |  |
| :---: | :---: |
| 9:00a | Registration Opens - Events Center Entrance Area |
| 10:00a-11:15a | Conference Pre-sessions |
| 12:00p-5:30p | Exhibits Open - Events Center Vendor \& Exhibit Area |
| 1:00p-2:15p | Keynote Speaker—Linda Gojak - Events Center Banquet Hall 2012-14 NCTM President |
| 2:30p-3:45p | Power Sessions |
|  | Rushton Theater (Level 1) - Discourse and Questioning in the Mathematics Classroom: Connecting Research to Practice by Christopher Parrish and Ruby Ellis |
|  | Events Center Banquet Room (Level 3) - Moving Principles into Actions: Focus on Access and-Grades K-12 by Marilyn Strutchens |
| 4:30p-5:30p | Praise and Graze Reception and Business Meeting Events Center Banquet Room |
|  | Friday, October 24, 2014 |
| 7:30a | Registration Opens - Events Center Entrance (Level C- Parking) |
| 7:45a-2:30p | Exhibits open - Events Center |
| 9:00a | Regular - 50-minute morning sessions begin |
|  | Extended - 75-minute morning workshops begin |
| 12:00p-1:00p | Lunch served in Events Center Banquet Room |
| 1:10p | Extended -75-minute afternoon workshops begin Regular - 50-minute afternoon sessions begin |
| 2:30p | Vendors \& Exhibits Close |
| 2:30-2:45p | Closing Session in Events Center Banquet Hall (Level 3) ***Door Prizes*** (must be present to win) |
| 2:45-3:45p | Special Interest Sessions - End of Fall 2015 Forum |


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## McWane Science Center Information

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 Thursday Reception-Level 3, Banquet Hall 

Highlighted Workshops Thursday:
Events Center \& Rushton Theatre

Regular Workshops \& Sessions on Friday:
Classrooms 301, 302, 303, 304 (Level 3)
Explore Lab (Level 2)
Regions Room (Mezzanine-by stairs)
Science Classroom (Mezzanine-by stairs)
Rushton Theatre (Level 1)
GENEiuos Lab (Level 1)
AquaScape Theatre (Lower Level)
Lunchroom Area Room A (Lower Level)

Friday Lunch

Events Center Banquet Hall (Level 3)

## Parking at McWane will be complimentary in their garage Park on Level C and higher

## Announcements

## McWane Science Center

All facilities are smoke free.

## Registration Dates of Interest

Information is located on the ACTM website. The deadline for early registration is through October 9, 2015. Extended sessions, which require tickets, will be assigned on a first come, first serve basis as registrations are received. All registrations will be conducted online at http://ACTM.education or on-site at McWane.

## Parking Locations

Parking will be free in the McWane Science Center lot on Levels C and higher. Attendees will be provided a "token" to exit the garage for free. The tokens will be given to attendees at registration/check-in upon arrival to the ACTM forum.

## Registration

Registration and check-in for Thursday, October 22 will be at the end of the entrance hallway to the Events Center on Level 3 in the parking garage. Registration and check-in for Friday October 23 will be the same.

## Meal Functions

A complimentary Praise and Graze reception will follow the last session on Thursday in the Events Center Banquet Hall.

The Praise and Graze reception is sponsored by Heinemann Publishing!
Each participant will receive a lunch ticket at check-in/registration.
Lunch will be served Friday in the Events Center Banquet Hall from 12-1pm.

## Vendor Exhibits

Vendor Exhibits will be in Events Center Exhibit Area outside the Banquet Hall.

## Lunch, Friday, October $\mathbf{2 3}^{\text {th }}$.

Lunch will be served Friday in the Events Center.

## Ticketed and Non-Ticketed Sessions

Extended Sessions - Ticketed Workshops: The workshops last 75 minutes and usually consist of some type of hands-on experience. Enrollment is limited. Spaces in workshops are reserved on a first come, first serve basis during registration. You will receive a notice confirming your registration and any workshop spaces that have been reserved for you. Those who register on site will participate in workshops on a space available basis only and will be issued tickets for such sessions in the registration area. Remaining tickets for the extended sessions will be available on-site at the registration desk if tickets remain. Unrequested tickets will be available at the registration desk.

Regular Sessions: The sessions last 50 minutes and are open without tickets or reservations up to room capacity. Space availability is based on room occupancy size and available computers (for computer labs).

## Color-Coded Grade Bands (for online program only)

## Early Childhood Sessions K-2 are highlighted in ORANGE <br> Elementary Sessions 3-6 are highlighted RED <br> Middle Grades Sessions 6-8 are highlighted GREEN <br> High School Sessions 9-12 are highlighted BLUE <br> Cross-over grade band and/or General interest sessions are in Bold Black

## 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 is not providing CEU credits ***

## Vendors and Exhibitors

Vendors and exhibitors will be located in Events Center Exhibit Area.
The exhibit area will be open Thursday after 12:00 noon.
Friday from 7:45 a.m. until 2:15 p.m., Exhibits will be open.

| ACTM Exhibitors 2015 |
| :---: |
| Alabama Education Association |
| Alabama GRIT |
| Graduate Ready, Impact Tomorrow |
| Bby Publications at UWA |
| Collaborative Partnership to teach mathematical |
| Reasoning through Computer Programming (CPR^2) |
| Curriculum Associates |
| Educational Epiphany |
| Heinemann Publishing |
| Houghton Mifflin Harcourt Publishing |
| McGraw-Hill Education |
| McWane Science Center |
| Pearson Publishing |
| Sadlier |
| Stenhouse Publishers |
| Think Through Learning |
| Teachers ' N Tools |
| Texas Instruments |
| The Silver Trunk |
| Triumph Learning |
| The University of Alabama Gadsden Center |
| The University of North Alabama Alabama Mathematics Contest INFO! |

HIGHLIGHTED, not confirmed yet, previous vendors.

## ACTM 2015 Fall Forum

# Thursday Program Pre-sessions, October 22, 2015 

## 10:00 a.m. -11:00 a.m.

Pre-session Association of Mathematics Teacher Educators of
Alabama (AMTEA)
Grades K-16, Teacher Education

Events Center Banquet Hall Level 3

Join us as we work together to improve the teacher education and professional development in Alabama. This is a diverse group of individuals including master teachers, professional development leaders, college and university math faculty, and education faculty. We encourage all those who help educate future K-12 mathematics teachers and improve existing teachers' knowledge and practices to join AMTEA and participate.

This will be just an informal gathering for which folks can collaborate and discuss future meetings across the state.

## Stefanie Livers

President, AMTEA
The University of Alabama

## Topics worthy of discussion

1. Elementary Mathematics Specialist advanced degree programs \& certification
2. AMSTI certification for preservice secondary (6-12) mathematics teachers
3. Mathematics Education Teacher - Partnership, update
4. Mathematics Praxis Tests (Secondary \& Elementary)

| Pre-session | Developing Number Sense through Small Group <br> Instruction in Grades K-2 <br> DeeDee Hendrix | 302 <br> Level 3 |
| :--- | :--- | :--- |
|  |  |  |

This training will deepen the foundational building block for number sense routines that will empower students to be more critical thinkers. Come explore how we can use strategies, games, and activities in meaningful ways to develop number sense. Participants can email presenter for packet of materials.
This will be just an informal gathering for which folks can collaborate and discuss future meetings across the state.

## in the Personalized Classroom

Level 3
Grades 3-10
Peter Cipkowski
A blended classroom presents a host of unique challenges and opportunities. This workshop will present five essential strategies to help educators transition to an effective blended math classroom. Combining teacher-led instruction with computer-delivered instruction, blended instruction provides teachers with data to plan and implement practices that best meet the needs of all students, while providing students with personalized content that adapts to their learning needs. The ultimate goal of blended learning is to provide a richer, more differentiated learning experience for students. One of the happy results is that teaching can also become more effective - and rewarding.

## Pre-session Fractions: Traditional Versus Inquiry Grades 3-5 <br> 303 <br> Kim Hinds

This researcher is a current fourth grade teacher for the Hoover City Schools and a doctoral student at The University of Alabama. A study was conducted to see if traditional or nontraditional mathematics instruction have a positive impact on the performance of fourth grade students. One group of students was presented a unit on fractions using a traditional textbook and a second group was taught without a textbook, in a more inquiry-based setting. The results showed that an inquiry based setting produced the most progress among the students. The presenter will share her findings and offer suggestions on how to incorporate different types of teaching into the intermediate level classroom.

| Pre-session | Making Games Meaningful <br> Grades K-2 <br> Carole Tilley | 304 <br> Level 3 |
| :--- | :--- | :--- |

Meaningful games have a positive impact on mathematics achievement. Learn how to maximize this positive impact by strategically using math games for formative assessment and differentiation. Key themes will include the balance between procedural and conceptual development, manipulative use, and strategies for moving from concrete to abstract.

Title: But My Students Can't Think:
Building Mental Math Capacity through Number Talks in the African American Community
Grades K-5
Johanna Massey
LaTesa Willis-Sanders

Rushton Theater
Level 1
mathematics teaching allows students to collaborate, problem solve, and have rich mathematics discourse. Number Talks allows students the opportunity to express their mathematics thinking. The presenters for this session will discuss how the addition of Number Talks empowered their African American students to engage in rich mathematics discussion. The presenters will also emphasize how the math practice standards and the math content standards can be developed through Number Talks.

## Pre-session Providing Opportunity for Student Advancement Grades 6-12 Basil Conway <br> GENEius Lab <br> Level 1

Opportunities for rigorous mathematics courses are often restricted to what teachers deem as the best and brightest students. These judgements often lead to segregation of race and socio-economic status. Recent work will be presented from a school in Alabama that has worked to break these barriers at the high school setting. Student scoring and affection towards mathematics have shown positive signs.

# Thursday Registration is from 9:00 AM - 5:00 PM Event Center Entrance (Level C from Parking Garage) 

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

# Thursday Featured Sessions 

## 1:00-2:15 PM

## Featured Session

## F1 Keynote Speaker

## Events Center Banquet Room Level 3

## Linda Gojak

National Council of Teachers of Mathematics Past President (2012-2014)

## "Mathematics: Everything You Do Should Make Sense (except trapezoids!)"

The first Standard for Mathematical Practice calls for our students to make sense of the mathematics they learn and do. Does our teaching support or hinder sense making? From the language we use to the tricks we teach, how can we be more purposeful in the actions we take each day in the classroom?

## Thursday, October 22, Featured Sessions

## 2:30-3:45 PM

## Featured Power Sessions

## Session F2 Discourse and Questioning in the Mathematics Classroom: Connecting Research to Practice <br> Christopher Parrish-Auburn University Ruby Ellis—Auburn University Rushton Theatre (Level 1)

Within the National Council of Teachers of Mathematics' (NCTM, 2014) latest publication, Principles to Actions: Ensuring Mathematical Success for All, two of the eight Mathematical Teaching Practices relate to discussion in the mathematics classroom. The two practices, facilitate meaningful discourse and pose purposeful questions, combine to advance student learning (NCTM, 2014). During the Spring of 2015, the presenters completed action research in an effort to make both practices a reality in the mathematics classroom. Within the session, research related to discourse and questioning will be examined alongside practices and suggestions for ensuring one's own students have the opportunities to learn through conversations.

Session F3 Moving Principles into Actions: Focus on Access and Equity General Session
Marilyn Strutchens-Auburn University
Events Center Banquet Room (Level 3)
In Principles to Actions, NCTM sets forth a vision to support the goal of ensuring the mathematical success of all students. This session introduces professional learning resources designed to support teachers and other stakeholders as they strive to achieve the vision outlined in the principles, with a particular emphasis on access and equity.

# Please join us for a wonderful LUNCH on FRIDAY! 12:00 PM - 12:50 PM Events Center Banquet Room Level-3 by the VENDORS! Included in your Friday registration! 

## Events Center Banquet Room <br> Level-3 by the VENDORS!

# NCTM Regional Conference Mathematics Education Meets Excellence Nashville, TN November 18-20, 2015 

[^0]Graze the Vendors at $3: 45$. Then help us Praise ACTM members who serve mathematics teachers across Alabama and join us for the ACTM Business Meeting.


All attendees are invited to the Praise Reception in the Events Center Banquet Room at 4:30. Light hors d'oeuvres will be provided

The ACTM Executive Board will hold its business meeting during the Praise and Graze
Candidates for offices will be presented and voted upon Nominations for positions will be accepted from the floor
****Executive Committee Members Required****
ACTM Annual Business Meeting
All ACTM Members Are Invited!
Election of officers for 2015-2017
Announcement of Scholarship and Teacher Grant Winners

Find out how YOU can be involved in ACTM!

## Program by Time Slots on Friday, October 23rd

| Lead Speaker | TITLE OF PROPOSED SESSION FRIDAY, OCT 22 | Grade Band Focus |  |  |  |  |  | Start Time | Session <br> length <br> (mins) | Room \& Level |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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| Kelly Roper | Putting Fractions in Action: Increase fractional understanding through real life application, modeling, and Manipulatives. |  | X |  |  |  |  | 9am | 50 | $\begin{gathered} 302 \\ \text { Level } 3 \end{gathered}$ |
| Tamra Counts | Math Teacher Hacks: Strategies and Technology for All |  |  | X |  |  |  | 9am | 50 | $301$ <br> Level 3 |
| Kitty Morgan | Do I have to be Rational? Rational Functions in the High School Curriculum |  |  |  |  | X |  | 9am | 75 | Explore Lab Level 2 |
| Tina Rye Sloan | Engaging Math Games for K-2 <br> Classroom: Reinforce Mastery, <br> Develop Mathematical <br> Reasoning, and Foster an <br> Interest in Mathematics | X |  |  |  |  |  | 9am | 50 | Rushton Theater Level 1 |
| Lisa Lishak | Grant Writing: Get Classroom Equipment and Technology | X | X | X | X | X |  | 9am | 50 | AquaSpace Lower Level LL |
| Keri Flowers | Teaching Math through ACCESS Distance Learning: Connecting Classrooms, Educators, and Students in an Online Platform |  |  |  | X | X |  | 9am | 50 | Lunch Area Room A Lower Level LL |
| Leslie <br> Hilderbrand | Outstanding Math Guide OMG 1: Make an OMG Student Reference with | X | X |  |  |  |  | 9am | 75 | GENEius Lab Level 1 |



| Lead Speaker | TITLE OF PROPOSED SESSION FRIDAY, OCT 22 | Grade Band Focus |  |  |  |  |  | Start <br> Time | Session length (mins) | Room \& Level |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\underset{\sim}{\text { N }}$ | セn | ¢ |  | N - - | $\stackrel{+}{\text { + }}$ |  |  |  |
| John Abby Khalilian | Investigating Linear and Quadratic Functions |  |  |  | X | X |  | 1030am | 75 | 304 Level 3 |
| Denise Peppers | From Concrete Models to Mathematical Models |  |  | X | X |  |  | 1030am | 75 | 303 Level 3 |
| Jim Gleason | Teaching with GeoGebra |  |  | X | X | X |  | 1030am | 75 | GENEious Lab Level 1 |
| Andrea Shane | Free Resources to Support Alabama College and Career Ready Standards | X | X | X |  |  |  | 11am | 50 | $\begin{gathered} 301 \\ \text { Level } 3 \end{gathered}$ |
| Amber Trantham | Access, Equity, and Identity in a K-5 Math Classroom | X | X |  |  |  |  | 11am | 50 | $302$ <br> Level 3 |
| Leslie Hilderbrand | Outstanding Math Guide - <br> OMG 2: Make an OMG Student Reference with Graphic Organizers, Steps, Examples, and Vocabulary |  |  | X | X | X |  | 11am | 50 | AquaSpace Lower Level LL |
| Loria Allen | It's All About the Task! | X |  |  |  |  |  | 11am | 50 | Explore Lab Level 2 |
| Joanne Wells | Give me integers, or give me death! |  | X | X |  |  |  | 11am | 50 | Lunch Area, Room A Lower Level LL |
| Amanda Haskins | Number Sense Routines | X |  |  |  |  |  | 11am | 50 | Rushton Theatre Level 1 |
| Lunch 12-1 Level 3 Banquet Room, ACTM business meeting |  |  |  |  |  |  |  |  |  |  |
| Jennifer S. Towles | Counting Collections: Math in Practice | X |  |  |  |  |  | 110pm | 50 | GENEious Lab Level 1 |
| Athina Ryals | Revolutionary battle plan: Coordinate graphing |  | X | X |  |  |  | 110pm | 50 | Lunch Area, Room A Lower Level LL |
| Madison Hutto | One Preservice Teacher's | X | X |  |  |  |  | 110pm | 50 | AquaSpace Lower Level LL |



## Major Grade Band Focus, General Interest Sessions

## 9:00-9:50a Grant Writing: Get Classroom Equipment and Technology

## AquaSpace <br> Lower Level

Would you like technological equipment for your classroom such as a media projector? Or, perhaps you would like to have a classroom set of graphing calculators or other manipulatives for your students to use. Need money to implement an idea? The focus of this workshop will be on how to write a grant as well as common mistakes to avoid.

## Lisa Lishak

Beulah High School

## 9:00-10:15a The MathTwitterBlogosphere (MTBoS) <br> Ticketed

## Science Classroom Mezzanine Level

The MathTwitterBlogosphere (MTBoS) is a community of mathematics teachers who engage across both Twitter and blogs. The MTBoS is invested in helping all teachers move forward in their practices. The MTBoS was recently describe by one member as follows, "from blog posts, to new resources, to shoulders to lean on, the \#MTBoS has done more for my career than any course, PD, or training." The best part? It's free and open 24/7. In this session, educators will be provided with time and support to get started (or delve deeper) in the MTBoS community and leave with resources for finding valuable classroom materials, community members, and opportunities to learn.

Meg Craig<br>Thompson High School

## Christopher Parrish <br> Auburn University

## 9:00-10:15a Using Music in Math Ticketed

## Regions Room Mezzanine Level

## "Music is a more potent instrument than any other for education" - Plato

Walk into a mall, a church, a doctor's office, or a gym and you hear music. Walk into a school and you hear bells, announcements, and kids. Music is everywhere . . . except schools. Explore the benefits of music based on brain research. Learn how music affects the brain and the body. Find out about the powerful connection of memory and music. Participate in some fun music/math activities.
"Music and math together satisfied a sort of abstract 'appetite,' a desire that was partly intellectual, partly aesthetic, partly emotional, partly, even, physical." - Edward Rothstein

## Gary Kubina

Baldwin County Board of Education

# Major Grade Band Focus, General Interest Sessions 

## 10:00-10:50a What Instructional Coaches Need to Know about Teaching Mathematics

Explore Lab

Level 2
Participants will learn where to focus their efforts as they seek to impact student learning through coaching. They will look at ways to make the Standards for Mathematical Practice a part of the school culture, discuss how to have productive conversations with teachers and administrators, and receive resources for modelling lessons, co-teaching, and helping teachers plan.

Jeanne Simpson<br>LeShell Smith<br>AMSTI-UAH<br>UAH-AMSTI

10:00-10:50a

## AquaSpace

What's Everyone Flipping Out About?
Lower Level
Have you heard about Flipped Learning but not sure what the buzz is all about? Have you considered Flipping a lesson but not sure how to start? Participants who attend this session will learn about the foundational pieces that are critical to a successful Flipped Lesson. This session is for any teacher who is familiar with the principles of Flipped Learning and have tried, or are considering trying to Flip a lesson(s) this school year. Participants will walk away with a deeper understanding of how to prepare their students, parents, administrators and themselves in order to get the most from the Flipped Learning Model.

## Adam Coulter Johnson

Mountain Brook Junior High

## 10:30-11:50a Conceptualizing Direct Variation Using Computer Ticketed Programming Exercises

Science Classroom
Mezzanine Level
This workshop will engage middle and high school teachers in Computer programming exercises designed to teach mathematical reasoning skills. Participants will write mini programs to explore the concept of direct variation. They will make conjectures based on the exploration and write convincing arguments for their conjectures. No prior programming experience is necessary.

James A. Jerkins
University of North Alabama

Cynthia Stenger, Janet Jenkins, Jessica Stovall
University of North Alabama

> NCTM Regional Conference Mathematics Education Meets Excellence Nashville, TN
> November 18-20, 2015

Curriculum Associates has built materials for the rigorous Alabama College and Career Readiness standards. This session we will share free resources that support for the Standards of Mathematical Practice and Math fluency. We will introduce our instructional materials for grades K-8 and our new common assessment for grades 2-8. Our editorial team has been trained to build the coherence and spirit of DOK 2 and DOK3 by Dr. Norman Webb to ensure proper rigor.

## Andrea Shane

Curriculum Associates

## 1:10-2:00p RTI, Professional Learning Communities, and How to Respond When Kids Don't Learn

## Rushton Theater Level 1

Schools and districts are confronting the challenge of responding to the legislative initiative known as Response to Intervention. Are we responding to this with a spirit of compliance or do we truly understand this initiative and respond with commitment? This session investigates the 'why' behind RTI and thinking about the right questions and wrong questions to ask ourselves. Participants will explore ways to transform the tiers for mathematics instruction. Behavioral and academic achievement will also be addressed.

## Sheila Holt

AMSTI-UAH

1:10-2:25p Ticketed

Why Don't My Students "Get It?"

## 304

Level 3

Teachers' (4-12) who use this analysis of each new math concept before lesson presentation will insure that students "get it". Teachers can take the lead in their students' learning process by employing this instructional strategy, which they can easily grasp and incorporate into their daily communication of new information. Presenters share a six step Lesson Development Strategy that enables teachers' clear development of lesson plans prior to actual presentation of a new concept to their students. Presenters will distribute detailed sample analyses of concepts. Following the initial presentation, participants will work in groups to apply these six questions to math concepts. Worksheets with steps and guidelines will be provided.

Brenda Buckley<br>Fort Myers, Florida

## Friday, October 23, 2015

## Early Childhood K-2 Focused Sessions

## 9:00-9:50a Nine Engaging Math Games for the K-2 Classroom

## Rushton Theater <br> Level 1

Engaging students in hands-on math games reinforces mastery of basic facts, develops mathematical reasoning, and fosters an interest in the subject of mathematics. Participants will play myriad games based on skills and concepts taught in kindergarten through second grade.

## Tina Rye Sloan

Athens State University

## 11:00-11:50a It's All About the Task!

## Explore Lab Level 2

Participants will glimpse inside K-2 classrooms to see the impact that mathematical tasks, small group instruction, lesson debriefs, and formative assessments have on the development of number sense and mathematical reasoning. Video clips, work samples, and interviews will be used to highlight this journey. K-2 tasks provided.

## Loria Allen

AMSTI-UAH

## 11:00-11:50a Counting Collections: Math in Practice <br> 11:00-11:50a Couting Colections:

## GENEious Lab <br> Level 1

One of the new aspects of the Common Core is the Math Practice Standards. Teachers in the primary grades are often unsure about what the Math Practice Standards should look like in the early childhood classroom. This presentation focuses on a first grade teacher's year long journey to implement the standards through Counting Collections. You will see video footage of a diverse group of students engaging in the Math Practice Standards as well as video of the teacher planning for instruction. You will leave the presentation with helpful planning documents, student support materials, and a better understanding of how the Math Practice Standards can and should be a major part of early childhood mathematics.

Jennifer S. Towles<br>Cindy Baily<br>AMSTI-UM<br>Birmingham City Schools

11:00-11:50a Number Sense Routines
Participants will get a glimpse inside a K-2 classroom and observe routines being used to develop number sense and mathematical reasoning. This will include walking through a typical day in math (number talk, whole group, small group, and debriefing). The BIG question to answer is how can we fit it all in?

## Amanda Haskins

Priceville Elementary

## DeeDee Hendrix

Priceville Elementary

## Rushton Theater Level 1

## Elementary K-5 Focused Sessions

## 9:00-10:15a <br> Ticketed

## Outstanding Math Guide-OMG1

## GENEious Lab Level 1

Come make an OMG student reference containing graphic organizers with steps, examples, and vocabulary for key concepts taught throughout the year. This creative guide will transform your classroom and help students become self-sufficient learners! You must see it to believe it!

## Leslie Hilderbrand

Fairplay Middle School
Douglasville, GA

## Rushton Theater

## 10:00-10:50a Cooperative Learning in the Elementary Classroom

 Level 1Come learn some strategies for incorporating cooperative learning within an elementary school mathematics classroom. This session focuses on defining, planning, and implementing group work. Through hands on experiences and information shared, come explore the benefits of cooperative learning and ways to use this strategy to increase student understanding.

## Kirby Webb

Auburn University

## Megan Burton

Auburn University

## 302

11:00-11:50a Access, Equity, and Identity in a K-5 Math Classroom Level 3

Meeting the needs of our diverse and unique populations is an essential element in effective math instruction. Learn to promote and foster a growth mindset in your students and colleagues. Find interesting ways to engage all learners in problem solving. Examine productive beliefs and practices and learn to narrow the gaps through context, culture, and language.

## Amber Trantham

AMSTI-JSU

## 1:10-2:00p

## AquaSpace Lower Level LL

Come learn about one pre-service teacher's project to explore teacher perceptions of students who are struggling with specific mathematical content during summer school. This session will share specific struggles that were observed, information about ways to support students struggling with mathematical concepts, formative assessment strategies, and lessons learned by a preservice teacher from her peers and her elementary students.

Megan Burton

Auburn University

Explore Lab
Level 2

Beyond the classroom walls, there is a real world full of mathematical opportunities. This session will highlight an e-STEM project that infused a nature trail with mathematics tasks. This project clearly took mathematics principles and put them into action through faculty professional development, task writing, and the creation of a math trail.

# ***Vendor Exhibits will be closing at 2:15 PM*** 

## Don't forget to visit the VENDORS \& Exhibits before the closing session begins at 2:30!

Level-3 Events Center

## ACTM is now on Facebook! <br> Like the Alabama Council of <br> Teachers of Mathematics page

## Elementary 3-6 Focused Sessions

```
9:00-9:50a Putting Fractions in Action
302
Level 3
```

Participate in lessons and activities that increase fractional understanding through real life application, modeling, and the use of Manipulatives. Learn to teach students to use fractions at the conceptual level and increase their depth of knowledge. Provide hands-on learning opportunities for students at all levels that meet the Alabama College and Career Ready content and practice standards.

## Kelly Roper

AMSTI-JSU

| 9:00-10:15 | Understanding Fractions Through Estimating and |
| :---: | :--- |
| Ticketed | 304 <br> Level 3 |

This session will discuss and share strategies and models for estimating fractions. The focus of the strategies and models will be on benchmark fractions, fractions relative to $1 / 2$, and where to place the fractions on the number line. The discussion will be extended to include fractions greater than one.

## Sheila Varner

Millbrook Middle School

## 9:00-10:15a Ticketed

With Liberty and Mathematics for All

## 303

This learning session will focus on introducing strategies for students of various abilities to understand equations. Hands-on equations provide students an opportunity to use manipulatives, pictures, and traditional strategies for solving two-step equations. Recalling the definition of the term "variable" is much easier than finding the value of the variable. Many students rely on fact families to solve simple equations. Solving multi-step equations can be more difficult. Using hands-on equation strategies provide ALL students with several methods for finding the value of a variable.

## Cara Burnette

Opelika Middle School

Amanda Kelley
Opelika Middle School

> Help us stay connected to you! Update your contact information at the ACTM membership table or visit http://acotom.wildapricot.org/.

In this hands-on presentation, participants will see how easy it is to integrate social studies, science, and language arts activities while teaching math. Presenters will use the theme of popcorn to "pop up some fun" while teaching important math and economic concepts and skills that are applicable to all students!

Kyoko Johns
Jacksonville State University

Melinda Staubs
Jacksonville State University

## Jennifer Troncale

Lunch Area, Room A<br>Lower Level

These five scaffolded activities take fifth and sixth graders from an understanding in the difference of positive/negative, to adding and subtracting with ease. Activities are fun and combine a simple story and games, moving to students creating their own tale.

## Joanne Wells

Athina Ryals
Eclectic Middle School
Eclectic Middle School

## Geometry and Fractions Progressions-Yes, you can 301 <br> 1:10-2:00p do this! <br> Level 3

Teacher candidates enter elementary mathematics methods with beliefs and procedural content knowledge. Many lack a conceptual lens. This session will focus on teaching problems conceptually within the 3-5 band. Participants will engage in discussions and practice of teaching geometry and fractions, and will gain information, ideas, and strategies. Participants will use a selection of manipulatives to solve fraction problems conceptually, and will learn about the Numbers and Operations-Fractions and Geometry progressions within the domains. With intentionality and productive struggle, the process and procedure will be emphasized rather than the result.

## Nicolette Nalu

## Amanda Pendergrass

The University of West Alabama

The University of Alabama

Revolutionary Battle Plan: Coordinate Graphing
1:10-2:00p

## Lunch Area, Room A Lower Level

Rate My Music for fifth and sixth grades, create your own picture, and Battleship will have students begging to do more math. From group games to individual creativity, students will learn about all four Quadrants and be prepared for seventh grade.

## Athina Ryals

Joanne Wells
Eclectic Middle School

# Upper Elementary \& Middle School 3-8 Focused Session 

1:10-2:00p
Real World Math

In a world of standardized tests and textbook practice problems, we can change the way our students investigate the world around us. As educators, we need to sharpen the 4 C's of 21st century learning, and help them understand the importance of asking the right questions. Students need to work collaboratively to determine what information is important to solve real world problems. We need to stop preparing our students for the test and start preparing them to be responsible members of our community. Communication, collaboration, creativity and critical thought are crucial aspects of solving real world problems. We can help our student more by giving them less.

## Zach Tubinis

Highlands School

| 1:10-2:25p Math Pair-a-Dice | Regions Room |
| :---: | :--- |
| Ticketed | Mezzanine Level |

Dice can be used in many ways in the math classroom. Dice are most commonly used to explore probability, but have you ever considered using them to teach basic math facts? What about using double dice to teach graphing points or finding slope? In this session, we will do those activities and more such as comparing fractions, finding area, and maybe a little magic. This workshop is to di(c)e for.

Beverly Kubina
Retired Teacher/Math Consultant

Gary Kubina
Retired Teacher/Math Consultant

# Please join us for a wonderful LUNCH! 12:00 PM - 1:00 PM Events Center Banquet Room Level-3 by the VENDORS! Included in your Friday registration! 

# Middle School 6-8 Focused Sessions 

Math Teacher Hacks: Strategies and Technology for
301
9:00-9:50a
All
Level 3
Participants will be given strategies and technology ideas to help all students be successful in math class. From organization to activities to Pinterest, each participant will leave with ideas to implement immediately in his/her classroom.

## Tamra Counts

Muscle Shoals High School

| 1:10-2:25p | Calculating Our Future: Math Lessons on the | 303 |
| :---: | :--- | :--- |
| Ticketed | Environment and Society | Level 3 |

As global citizens, students need to be mathematically literate. Understanding budget deficits, environmental challenges, changing demographics and more requires command of basic middle school math skills. Engage in hands-on activities that integrate math with social studies and science to grasp issues shaping our future. The presented hands-on activities build students' understanding and skills in algebraic patterns and functions, decimals, fractions and ratios, as well as number operations and problem solving. The activities incorporate data on trends in the environment, economy, and global demographics. Manipulatives are used to illustrate concepts for visual learners. Free CD-ROM of activities!

## Melinda Staubs

Jacksonville State University

# Please join us for a wonderful LUNCH! 12:00 PM - 1:00 PM <br> Events Center Banquet Room Level-3 by the VENDORS! Included in your Friday registration! 

## Secondary 6-12 Focused Sessions

## Practical Ways to Implement Online Software in <br> 302 <br> 10:00-10:50a Middle and High School Math Courses Level 3

Come see how this ninth grade geometry and Algebra I teacher implements Google Apps for Education, Geogebra, Kahoot!, and many other online tools to promote discovery and collaboration.

## Brittany Wilson

Mountain Brook Junior High School

## 10:30-11:50a Problem-based Learning (PBL) in the Geometry <br> Ticketed Classroom <br> GENEious Lab <br> Level 1

BYOC. GeoGebra is a multi-platform mathematics software that helps students explore the connections across mathematics. In this workshop we will demonstrate how to install GeoGebra onto your own device and work through some sample mathematical tasks that demonstrate how this free software can be used to show students the interconnections between Geometry, Algebra, Functions, and Data Analysis.

Jim Gleason

University of Alabama


Not all students are procedurally savvy enough to create mathematical models for patterns problems using only a table of values. Join us as we explore linear and non-linear patterns problems using manipulatives and write mathematical models that help students to understand coefficients, variables, and constants in a conceptual way.

## Denise Peppers

Auburn University
Columbus Regional Mathematics Collaborative

## 11:00-11:50a

Come make an OMG student reference containing graphic organizers with steps, examples, and vocabulary for key concepts taught throughout the year. This creative guide will transform your classroom and help students become self-sufficient learners! You must see it to believe it!

## Leslie Hilderbrand

Fairplay Middle School

## 1:10-2:25p <br> Hexagon Tiling

## Regions Room <br> Mezzanine Level

## Ticketed

Manipulatives aren't just for elementary students. Join us as we explore a hexagon tiling problem using a hands-on model that will leave you impressed and wanting to try this in your own classroom. Come with an open mind and eager to learn.

## Denise Peppers

Columbus Regional Mathematics Collaborative

## 1:10-2:25p Ticketed <br> Do "Alice in Wonderland," "High Dive," and "Cookies" Science Classroom sound like math units? Mezzanine Level

Learn to use real-life situations to make mathematics relevant and compelling. Problem-based learning helps students develop the ability to transfer their learning and reasoning skills to new problems. Learning mathematics through real-life situations prepares the students for the challenges encountered in business and industry careers by developing problem-solving and communication skills as well as an in-depth, conceptual understanding of mathematics. Come to this session to hear a teacher's first year journey on transitioning from teaching a traditional algorithm to teaching mathematics through real-life situations. You will have the opportunity to experience using mathematics to solve a real-world problem.

Teri Owens<br>Etowah High School

Tanya Barnes<br>AMSTI

## High School 9-12 Focused Sessions

## Teaching Math through ACCESS Distance Learning:

## 9:00-9:50a

# Lunch Area, Room A 

 Lower LevelHow does the math and digital world collide? ACCESS (Alabama Connecting Classrooms, Educators, and Students Statewide) is an online distance-learning platform provided free to all public high schools in the state of Alabama. ACCESS offers over 70 courses, 11 of which are math courses. In this session teachers will discover various methods of teaching mathematics online through the digital platforms offered by ACCESS Distance Learning. Would you like to expand your subject knowledge and teaching experience by teaching for ACCESS part time? Or, are you confused about what ACCESS really is and how the classes work? If so, this session is for you!

## Keri Flowers

AMSTI-Troy

## 9:00-10:15a <br> Do I have to be Rational? Rational Functions in the <br> Ticketed High School Curriculum <br> Explore Lab Level 2

Participants will take a look at how rational functions show up in the high school curriculum courses from Algebra I to Precalculus. The focus of the session will be on the Algebra II and Precalculus content and discussing characteristics that rational functions have that let us sketch them without plotting a lot of points. Can you give the equation of the rational function graphed? Let's find out! Bring your graphing calculator or graphing app to check your work.

Kitty Morgan

A+ College Ready

## 10:30-11:50a Ticketed <br> 304 <br> Level 3

During this session participants will take a closer look at linear functions and its characteristics. Utilizing tables and graphs, they will also explore the relationships between linear functions and quadratic functions that build conceptual understanding. Participants will have the opportunity to experience this lesson and discuss the implications it will have on student's learning. Also, participants will examine the ACCRS content standards and mathematical practices that this lesson addresses. Attendees will receive two versions of this ready to use lesson plus an application of a quadratic task that they can use in the classroom.

John Abby Khalilian<br>AMSTI Math Specialist<br>University of Alabama

HIGH SCHOOL TEACHERS, Do you have a Math Team?
Participate in the Alabama Statewide High School Mathematics Contest!
Deadline for registration for next contest is February 10, 2016.
First round competition will be held on February 27, 2016.
Second round (at UNA) on April 9, 2016.
Check out the website: http://mcis.jsu.edu/mathcontest/
For information contact
Professor Cynthia Stenger, University of North Alabama, clstenger@una.edu

## ***Vendor Exhibits will be closing at 2:15 PM***

Before the closing session begins at 2:30 in the Banquet Hall

## Fall Forum Closing Session

Friday, October 23 ${ }^{\text {rd }}, 2: 30-2: 45$
Special Events Center, Level 3, Banquet Hall
Get a ticket when entering the room!
Door Prizes and Major Prize Give-away
Must be present to WIN!!!
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 a teacher grant, and for the application. The deadline is December 12, 2015.

## Special Interest Sessions - Post-Closing Session

| Session S1 | Association of Mathematics Teacher <br> Educators of Alabama <br> Annual Business Meeting | Classroom 301 <br> Grades K-16 |
| :--- | :--- | :--- |
| Level 3 |  |  |

Stefanie Livers
AMTEA President
The University of Alabama

# JOIN AMTEA, read up at http://amtea.net/ 

Please join us for a wonderful LUNCH!<br>12:00 PM - 1:00 PM<br>Events Center Banquet Room Level-3 by the VENDORS!<br>Included in your Friday registration

## Lead Speaker Index

| Lead Speaker | City, State | Preferred Email Address | Affiliation |
| :--- | :--- | :--- | :--- |
| Adam Coulter Johnson | Alabaster, AL | johnsonad@mtnbrook.k12.al.us | Mountain Brook Junior High |
| Amanda Haskins | Hartselle, AL. | alhaskins@morgank12.org | Priceville Elementary |
| Amber Trantham | Alexandria, AL | atrantham@jsu.edu | Jacksonville State University |
| Andrea Shane | fairhope AI | ashane@cainc.com | Curriculum associates |
| Athina Ryals | Oclectic, AL | athina.ryals@elmoreco.com | Eclectic Middle School |
| Basil Conway | Mobile, AL | bconway@jsu.edu | Jacksonville State University |
| Beverly Kubina | garymath@hotmail.com |  |  |
| Brenda Buckley | Auburn,AL | bayly10@earthlink.net | none |
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| Deedee Hendrix | Decatur, AL. | dthendrix@morgank12.org | Priceville Elementary |
| Denise Peppers | Salem, AL | peppers_denise@columbusstate.edu | Columbus Regional Mathematics Collaborative |
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| Jeremy Zelkowski | Hoover, AL | jzelkowski@ua.edu | The Univ. of Alabama |
| Jim Gleason | Northport, AL | jgleason@ua.edu | The University of Alabama |
| Joanne Wells | Eclectic, AL | joanne.wells@elmoreco.com | Eclectic Middle School |


| Lead Speaker | City, State | Preferred Email Address | Affiliation |
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| Kitty Morgan | Arley, AL | cowqlus@bellsouth.net | A+ College Ready |
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| Tina Rye Sloan | Hartselle, AL | tina.sloan@athens.edu | Athens State University |
| Zach Tubinis | Birmingham, AL | ztubinis@gmail.com | Highlands School |

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[^0]:    Vendor exhibits open from 12:00 Noon until 5:30.

