

2017 KCM Conference
Monday, March 6, 2017
Breakout Session #1: 8:00am-9:00am

Mathematical Routine – Opening Doors for ALL Students to Learn (6-8)

Presented By: Anne Burgunder (New York University), Jenny Donnelly (Berea Independent Schools) & Krista Hall (Kentucky Department of Education)

Room: Salon AB

Description: In this session, teachers will learn to use routines and tools to increase student-engagement and improve student-access to even the most challenging mathematics. Students with a negative disposition towards the learning of mathematics can get their first taste of success, and success breeds success! The techniques shared, when used frequently and appropriately, will help to develop mathematical habits of mind, fill in gaps for students who chronically lag behind while allowing students who are currently successful in mathematics to continue to grow.

How Young is Too Young: 14 Yr-Olds Achieving Success in the College Classroom (6 to Postsecondary)

Presented By: Karen Heavin, Kristina Waddell & Michael Johnson (Kentucky State University)

Room: Salon C

Description: Kentucky State University has partnered with Franklin County Schools to create a STEM Academy, where students access the college-level rigor of STEM education as early as possible. This pilot has students as young as 14 years old achieving meaningful learning and academic success at the college level. Students engage in project development and student-directed instruction embedded within their daily mathematics/science classes. Students teach/explain concepts to their peers. This has provided preliminary results of 100% student engagement and enjoyment, as well as a 100% pass rate. This session will share the STEM Academy design and student-driven data gathered from the course.

QUANTITY=QUALITY (K-3)

Presented By: Dawn Wheeler (Toliver Elementary) & Amy Kellem (Bardstown Primary School)

Room: Salon D

Description: To make meaningful connections, students need to master the "quantity" aspect of number. From simple addition and subtraction to multiplication and division, the relationship between the operations, as well as place value concepts; when numbers are seen and visualized as quantities then students can more efficiently and effectively manipulate them to solve problems accurately.

Developing Special Strategies: Multiplication and Division (3-5)

Presented By: Darek Naglak (ORIGO Education)

Room: Salon E

Description: This session shows participants how computational fluency develops from a deep understanding of the concepts of multiplication and division. It includes a demonstration of important visual aids for developing powerful mental strategies that begin with number facts and broaden as they extend to greater numbers. This interactive workshop will be 'hands on' as much as it is "minds on." Participants will leave with a range of practical activities and games to use immediately in the classroom.

~~Every Operation Tells a Story (Pre-K to 2)~~

~~Presented By: Lynn Rule (MathRack)~~

~~Room: Salon F~~

CANCELLED

Taking a Closer Look at the Eight Teaching Practices from Principles to Actions (K-12)

Presented By: Robin Hill (Kentucky Department of Education)

Room: Salon HG

Description: Using an observation tool created by the Kentucky Mathematics Academy, participants will engage in discussions and share resources on the eight effective mathematics teaching and learning practices. For continuous learning opportunities participants may choose to identify one or more of the practices on which to focus their instruction.

Discourse that Leads to Deeper Mathematical Understanding (K-5)

Presented By: Robyn Marcum & Bindu Sunil (Shelby County Public Schools)

Room: Darby Dan/Calumet

Description: Discourse That Leads to Deeper Mathematical Understanding reveals the power of discourse in the elementary mathematics classroom. Participants will experience discourse first hand in a variety of ways during the session, and they will walk away with a variety of ready-to-implement ideas for beginning to build a community of mathematical discourse in their own classrooms. This session would be helpful for teachers of elementary mathematics as well as for instructional coaches who work with elementary math teachers.

Common Sense Percents (6-8 & Adult Education)

Presented By: Jerra Wood (Independent Consultant)

Room: Dixiana

Description: Break away from procedures! As you participate in activities focused on connections and sense making, you will learn how to build a deep, conceptual understanding of percentages within your students. Through the intentional use of ratio tables and double number lines, your students will increase their flexibility and fluency in working percent problems, thereby making the math meaningful.

Math Recovery Intervention Specialist Refresher - Determining Stages of Early Arithmetical Learning (SEAL) (K-2)

Presented By: Jean Bingham (Central Elementary) & Lisa Riggs (Kentucky Center for Mathematics)

Room: Lane's End

Description: This K-2 session is for Math Recovery Intervention Specialists ONLY and will involve watching 1.1 video clips and determining the SEAL based on evidence. Time will be given for participants to share video clips of assessment or instruction to meet the USMRC MRIS renewal requirements.

WE ARE FAMILY! Engaging Families in Mathematics (K-2)

Presented By: Julie Adams (Kentucky Center for Mathematics), Kelli Hager (Eden Elementary), Rebecca Martin (Isonville Elementary), Angie Lewis (Lakeside Elementary), Rita Bledsoe (Heritage Elementary) & Rachel Harper (Prichard Elementary)

Room: Terrace Ballroom

Description: Research has shown that family involvement can have a positive impact on the performance of a child in mathematics. This session will focus on ways that you can be intentional in getting your school's families involved in children's mathematical learning. We will demonstrate and describe innovative ways in which we were able to connect with families in order to enrich children's mathematical development as well as strengthen the home to school connections!

Using Children's Literature to Teach Mathematics (K-5)

Presented By: Pamela Pickens, Lori Shephard & Jarrod Slone (Kentucky Department of Education)

Room: Bluegrass Pavilion

Description: How many times do you say "There just isn't enough time to get it all done?" As teachers, we know time is valuable. We are constantly looking for ways to effectively teach a variety of content throughout the day. In this session, participants will learn how to effectively use children's literature to teach mathematics. Presenters will model and provide example lessons ready to use in the classroom.

Monday, March 6, 2017
Breakout Session #2: 9:15am-10:15am

Making Absolute Value Equations Meaningful (6-8)

Presented By: Twyla Harris & Callie Montgomery (Eastern Kentucky University)

Room: Salon AB

Description: Absolute value is a topic generally covered in middle grades. Traditional approaches tend to be abstract in nature, resulting in confusion and a disconnect to the usefulness of this function. In addition, misconceptions are numerous through these methods. This presentation serves to address many of these misconceptions and will begin with a discussion about the nature of the absolute value function in the real world. An interactive approach to solve simple algebraic equations involving absolute values will be demonstrated and practiced to strengthen conceptual understanding of absolute values, intentionally showing connections to real world applications.

Using Pattern Talks to Show Multiple Approaches (6-12)

Presented By: Kelly Boles (Betsy Layne High School, Teach for America) & Christina Crase (Betsy Layne High School, Hope Street Fellow)

Room: Salon C

Description: Utilizing pattern talks in the classroom aids students in linking visual representations to algebraic, geometric, and graphical methods - helping instructors and students alike to truly make math meaningful. This interactive session will ask attendees to participate in sense-making and pattern analysis activities. Topics explored will include expressions, linear equations, quadratics, arithmetic sequences, and 3D modeling. Session goals include exploring the basics of a pattern talk, discussing strategies to make thinking visual, and reviewing methods to make connections between a problem's algebraic and geometric frameworks. Attendees will leave with strategies and resources to conduct pattern talks in their classrooms.

Getting Physical with Mathematics: Learn How to Become Actively Engaged with Physical Activity and Math (K-2)

Presented By: Lisa Price & Lindsey Moran (Flemingsburg Elementary)

Room: Salon D

Description: The purpose of this session will give you amazing and easy ideas for activities on how to get students up and out of their seats while they enjoy learning about math. All activities will be connected to math standards and work with a wide variety of grade levels. Many activities will integrate SPARK's physical education and Kagan learning strategies within the lessons. Everyone attending this session will be able to use and implement the activities presented quickly into their daily classroom routines and lessons. Additional ideas will be provided for materials that are available in most classrooms.

Catch a Thief: Making Data Analysis Meaningful and Engaging in a Middle School Pre-Algebra Class (6-8)

Presented By: Sarah Antle & Adam Cox (Adair County Middle School)

Room: Salon E

Description: Session participants will leave with a ready-made lesson to take back to their students in a fun filled crime mystery of "Who Stole Justin Bieber's Hair." Students use technology, Google Apps and data rich evidence in various forms to expand their knowledge of proportions, linear functions, direct and indirect variation, linear regression, two-way tables and scatter plots to logically solve a fun crime mystery. Session teachers will provide you with an experience of a Google Classroom and how they make math meaningful, purposeful and Common Core aligned in their Pre-algebra classroom. Participants are encouraged to bring their own device.

Take the Number Sense Journey (Pre-K to 2)

Presented By: Lynn Rule (MathRack)

Room: Salon F

Description: Participants will identify, experience, assess, and reflect the interrelated aspects of early numerical knowledge, the learning trajectory for counting, and the number relationships which will establish a strong foundation for number operations through deep understanding. Participants will be able to: identify the four interrelated aspects of early numerical knowledge and be able to assess their student's understanding; sequence the learning trajectory for counting and be able to design instructional tasks that are targeted to move students from one level to the next; identify, experience, and assess the number relationships to deepen children's understanding of number.

March Math Madness (K-5)

Presented By: Cecilia Goh & Kim Brockman (Warner Elementary)

Room: Salon HG

Description: One of our initiatives at Warner Elementary School is equipping parents to be actively and meaningfully involved in their children's education. Last year we organized an evening designed to explain Common Core math standards and provide parents with enrichment activities they could utilize with their children. Participants in this session will be provided with information regarding how the evening was organized as well as have opportunities to play and make games that can be incorporated into a math night. The target audience will primarily include elementary educators; however, the content can easily be adapted to benefit other age groups.

What's the Point? Making Sense of the Quantity of Decimals and Their Relationship to Fractions (3-5)

Presented By: Bonnie Humphries (Gallatin County Elementary)

Room: Darby Dan/Calumet

Description: When working with decimals, it is important to remember the 3 aspects of number: quantity, symbol, and word name. In 5th grade, particularly, there is much decimal content to cover. Being intentional by relating the decimals to money and fractions as often as possible will make math meaningful to students. There will be many anchor chart displays, journal ideas, Kagan structures for engagement, math stations with hands-on experiences, as well as ideas for formative assessment created by teachers. Math Literature titles integrating decimal concepts will be available as door prizes.

Appealing To Structure to Make Mathematics Meaningful (6 to Postsecondary)

Presented By: Jay Schiffman (Rowan University)

Room: Dixiana

Description: Among the most vital mathematical practices articulated in the Eight Standards for Mathematical Practice in The Common Core focuses on Appealing to Structure. Structure aids in one discovering mathematical insights in a meaningful manner. In this hands-on workshop, participants will seek patterns and form conjectures based on the analysis of such patterns in number sequences and attempt to substantiate or refute their conjectures in the spirit of engaging mathematics. In addition, we will examine structures in algebra and discrete mathematics and determine when these structures which appear different visually are actually different structurally. Handouts will be furnished for all participants.

KYFAME: Another Path to Success (9-12 & Adult Education)

Presented By: Kelly Lindsey (Boone County High School)

Room: Lane's End

Description: How many students need an alternate education/career path that does not include a liberal arts degree? To fill that need and the need for trained employees in the manufacturing sector, KY-FAME was developed. KY-FAME is a state-wide program that partners manufacturing companies with the community college network to train and educate the kind of employees needed by corporations. As manufacturing expands in Kentucky, employment opportunities in manufacturing are also expanding. Come hear how high school students and post-secondary workers can enter this path to success and prosperity.

Not Your Mama's Math (K-5)

Presented By: Julie Teague, Toddie Adams (Marshall County School District) & Diana Shadowen (Sharpe Elementary)

Room: Terrace Ballroom

Description: Current educational research indicates that learning by rote does not produce mathematical thinkers. In order for students to grow and learn, they must be cognitively engaged. Teaching to the rigor of the standards, bringing authentic meaning to mathematics, and incorporating essential 21st century skills, can be achieved by implementing project-based learning and personalized learning through researched-based strategies. Learn how Marshall County stepped out of the box to create Discovery Model classrooms and incorporate PBL in their Legacy classrooms where the teacher is the facilitator of learning and lessons and projects are student led.

Featured Presentation: Best Practices & Best Ways to Practice! (K-5)

****2 HOUR PRESENTATION: 9:15am-11:30am****

Presented By: Greg Tang (GregTangMath.com)

Room: Bluegrass Pavilion

Description: Join us as we use visual models to make sense of difficult concepts and algorithms, including place value, number sense, facts, fractions, decimals and word problems. We will also explore the best ways to practice, especially puzzles and games that develop both fluency and reasoning skills at the same time. Math – and you – will never be the same!

NOTE: We kindly ask that you do not enter the presentation room during the 10:30am-11:30am session. If you should wish to attend this session, please plan to be there for the entire duration of the 2-hour presentation, beginning at 9:15am.

Monday, March 6, 2017
Breakout Session #3: 10:30am-11:30am

Intentional Problem-Solving to Promote Higher-Order Thinking (3-5)

Presented By: Jana Mayer & Krista Althaus (EKU Model Laboratory School)

Room: Salon AB

Description: Are you looking to engage your students in problem-solving strategies to promote higher-order thinking? Are your students not receiving the challenge they deserve in math centers? In this hands-on session we will introduce you to a website that is research-based and teaches students how to build models to solve word problems. In addition, math journal activities targeted for collaboration between students will be shared. Attendees will participate in Kagan strategies that promote higher-order thinking.

Developing Special Strategies: Addition and Subtraction (K-2)

Presented By: Darek Naglak (ORIGO Education)

Room: Salon HG

Description: This session demonstrates the importance of visual aids for developing powerful mental strategies that begin with number facts and broaden as they extend to greater numbers. This interactive workshop will be 'hands-on' as much as it is "minds on." Participants will leave with a range of practical activities and games to use immediately in the classroom.

Reasoning Quantitatively with Units and the Giant One (6-8)

Presented By: Kathryn Williams (CPM Educational Program)

Room: Darby Dan/Calumet

Description: Join us in exploring the clout of the Multiplicative Identity! Come experience how the power of 1 is "sense making" from fractions to simplifying rational expressions. The power of the Giant One can be used to find equivalent fractions, GCF and common denominators. It can be used to simplify fractions and for all operations (including division) of fractions. The Giant One can be used to model Multiplicative Identity as well percents. Ratios, similarity, unit conversions and solving proportions can be done efficiently with the Giant One. It doesn't matter if you are using rational expressions; the Giant One is powerful.

Exploring Interconnectivity Among Disciplines Through Rich Problem Solving Activities to Foster Meaningful and Productive Experiences (6 to Postsecondary)

Presented By: Jay Schiffman (Rowan University)

Room: Dixiana

Description: Exemplary mathematical experiences arise from problem solving activities that are rich in both content and context, explore interconnections among various mathematical disciplines, and are engaging and fun. Such problems furnish relevancy across academic disciplines and provide meaning and understanding through the use of various strategies and representations. In this workshop, participants engage in solving neat problems selected from algebra, geometry, pre-calculus, calculus, discrete mathematics and number theory designed to connect at least two of the branches, utilize many of The Common Core Standards For Mathematical Practice and promote productive discussion. Complete solutions will be furnished to all participants. Join us!

Making Connections: Children's Literature and Mathematics (K-5)

Presented By: Kris Jarboe (Kentucky Center for Mathematics)

Room: Lane's End

Description: From fairy tales to swashbuckling adventures, children's books engage students in meaningful ways. Using these beloved stories as an opportunity to explore mathematics is a winning combination! Join us as we dig into some great books and find ways to make connections between the text and the mathematical world around us. Participants will be invited to contribute to the SMART Books! website (<http://kcm.nku.edu/smartbooks/>) which features outstanding lesson plans that use children's literature to launch mathematical investigations.

Rigor & Vocabulary: Achieving Vertical Alignment in the Math Curriculum (K-5)

Presented By: Cheyenne Mills (Woodlawn Elementary)

Room: Terrace Ballroom

Description: How does the math vocabulary that we use, and the rigor that we embed into our math curriculum affect our students years down the road? This session will focus on how we, as elementary teachers, can prepare our students for success in middle school and high school mathematics through vertical alignment in our curriculum. Particular focuses will be mapping and connecting the Common Core Standards; using accurate, high-level math vocabulary (even with our youngest students); and maintaining a highly rigorous classroom (even with our lowest students).

Monday, March 6, 2017
Breakout Session #4: 1:15pm-2:15pm

Three Important High-Yield Strategies for the Mathematics Classroom (K-5)

Presented By: Katie Gissing (Paris Elementary)

Room: Salon AB

Description: Find out how you can make mathematics instruction more meaningful through practicing three specific high-yield instructional strategies for the classroom! These proven strategies are: identifying similarities and differences, summarizing and note taking; and, reinforcing effort and providing recognition. The discussions and materials of this session will serve as an introduction to these particular strategies and provide an overview of the research behind them. Several supporting activities for the mathematics classroom and examples of successes will be shared.

How to Transition from Manipulatives to Images to Symbolic Representations in Multiplication and Division! (3-5)

Presented By: Tina Silvestri Gagliano, William LaRicca & Mary Cris Koenig (Solon City Schools)

Room: Salon C

Description: Our goal is for participants to learn to use instructional techniques incorporating various models and procedures which develop multiplicative understanding. They will have the opportunity to become familiar with activities that develop a strong sense of imagery through a variety of representations that promote mathematical discussions in multiplication and division. This is aligned with state and common core standards in grades 3-5.

Creatively Integrate Algebra, Geometry, and Cryptography into an Interactive Engaging Activity via Technology: Grades 7-12 (6-12)

Presented By: Tom Reardon (Fitch High School/Youngstown State University)

Room: Salon D

Description: Get hands-on experience with this brand-new activity that incorporates writing equations of lines, solving systems of linear equations, using midpoints and perpendicular bisectors, and performing simple rotations, along with FUNDamentals of encryption and decryption of ciphers - STEM! These free activities include student worksheets and detailed teacher notes and solutions in pdf, and they utilize either TI-84 or TI-Nspire technology - your choice! You will see how to easily obtain and use these materials in your classroom immediately. Written to accommodate students in grades 7 through 12. Solve algebraically, verify geometrically. Or solve geometrically, verify algebraically. Again - your choice! Lots of options.

Subtraction with Regrouping: Intentional Instructional Decisions to Build Students' Conceptual Knowledge and Procedural Skills (K-2)

Presented By: Bindu Sunil (Shelby County Schools)

Room: Salon E

Description: Research shows that when students engage in problem solving they build deeper understanding of the pattern underlying the structure of a mathematical idea and also use numbers flexibly in their solution. Participants will explore different problem structures within addition and subtraction problem situations. They will experience the hierarchical nature of students' solution strategies, from modeling to counting to using number sense when engaging in problem solving. When teachers have a conceptual understanding of the knowledge package for subtraction with regrouping, students will engage in experiences that will contribute to their learning.

A Sort of Sorts - Analyzing and Sorting Graphs through Collaboration and Discussion (6-12)

Presented By: Katie Ruff (Carnegie Learning)

Room: Salon F

Description: In this session, teachers will walk through a lesson on sorting graphs of various functions. They will have the opportunity to experience the lesson from a student perspective, and discuss the lesson from a teachers' point of view. Throughout the lesson teachers will compare and contrast different types of graphs, analyze their work and the work of others, and strengthen their own knowledge of different types of functions. This lesson will allow teachers to experience mathematics collaboratively. Participants will leave with a digital copy of lesson they can share with their students and colleagues.

Students Take the Lead! Data Notebooks and Student Led Conferences (General)

Presented By: Michele Hawkins & Julie Gay (Hillsboro Elementary)

Room: Salon HG

Description: What would it look like if students took power of their learning? Through student-led conferences and data notebooks, student take charge of their own learning in the classroom and beyond. Every subject becomes meaningful as students learn to identify their strengths, weaknesses, and become reflective in the process. Leave this session with the basics to begin data notebooks in your own classroom. Once students become comfortable talking about their learning, they can talk about it with people that are important to them, such as parents, other teachers, and even their peers through meaningful conversations that move their learning forward.

Featured Presentation: Teaching Mathematics for Reluctant Learners (Adult Education)

****2 HOUR PRESENTATION: 1:15pm-3:30pm****

Presented By: Cynthia Bell (Literacy Assistance Center)

Room: Darby Dan/Calumet

Description: Have you ever heard a student say, "I'm not good at math," or dealt with students who hate learning mathematics? Teaching and learning mathematics can, sometimes, be both challenging and present classroom management issues. In this session, we will discuss how students can and should learn mathematics in an effective and meaningful manner, keeping them engaged. You will be given concrete tips and tools for helping learners to see that math can and does make sense.

NOTE: We kindly ask that you do not enter the presentation room during the 2:30pm-3:30pm session. If you should wish to attend this session, please plan to be there for the entire duration of the 2-hour presentation, beginning at 1:15pm.

Much More than Math: Increasing Student Success at Any Age Through Relationship Centered Classrooms (General)

Presented By: Karen Heavin, Vince Mattox, Matt Skaggs & Kristina Waddell (Kentucky State University)

Room: Dixiana

Description: Research shows that teacher-student relatedness is a significant predictor of student engagement and success. The question is not how do we teach math to struggling students, but instead how do we create a classroom culture where students can learn math, take risks and safely engage in productive struggle. This session will explore the results of two pilot programs (high school and college) in which inquiry-based learning and culturally responsive teaching were foundational elements in creating a classroom community which fostered mastery, critical thinking, conceptual understanding, productive failure and student leadership.

Enrichment = Response to Intervention Time for ALL! (K-8)

Presented By: Sarah Shaffer (EKU Model Laboratory School)

Room: Terrace Ballroom

Description: Is your school struggling to cover the content, reach gifted learners, and still allow time for students to show their love learning? During this interactive discussion come to hear, and see, what one school has done to change their schedule to meet student needs of the K-8 students using the 30-minutes each day to reach all students in making their learning meaningful during RtI time. Participants will receive a copy of the daily schedule, as well as a list of topics and resources that could be used to implement in their own schools. Your students will love this school-wide model!

Featured Presentation: Academic Rigor in the Primary Classroom: Making Sure It's Meaningful (K-2)

****2 HOUR PRESENTATION: 1:15pm-3:30pm****

Presented By: Kathy Richardson (Math Perspectives Teacher Development Center)

Room: Bluegrass Pavilion

Description: The subject of rigor brings up lots of questions that need to be examined. What makes a task rigorous? Is harder always better? How do we know when struggling is productive and when it is harmful? We will look at what we need to consider in order to provide rigorous, appropriate, and meaningful tasks for young children.

NOTE: We kindly ask that you do not enter the presentation room during the 2:30pm-3:30pm session. If you should wish to attend this session, please plan to be there for the entire duration of the 2-hour presentation, beginning at 1:15pm.

Monday, March 6, 2017
Breakout Session #5: 2:30pm-3:30pm

Connecting the Dots (of Data): Mean, Median, and Standard Deviation (3 to Postsecondary)

Presented By: Jacqueline Wroughton (Northern Kentucky University)

Room: Salon AB

Description: From a given set of data, three of the most commonly calculated values are mean, median, and standard deviation. Although many of us as teachers focus on the arithmetic involved in the calculation of these values, do our students conceptually understand what these values represent? Do our students know how these statistics are affected by a change in a single observation? This presentation will demonstrate how to look at these statistics from a conceptual level as well as asking what-if questions that help students more deeply understand the calculation behind these statistics.

The Impact of Technology and Games in Teaching Conceptual Fluency (K-2)

Presented By: Krissy Klouda & Tina Silvestri Gagliano (DCF Mathematics, Inc.)

Room: Salon C

Description: This is an interactive session which will focus on guiding teachers to move students forward in their ability to structure number. Our goal is for participants to leave our session knowing how to extend students learning and rehearsal of skill through the use of integrating technology and games into learning routines, partner work, and discourse, in order to meet and/or exceed the proficiency levels outlined in the mathematical practices and fluency within the common core. Participants need to bring laptops and/or iPads.

Beyond One Right Answer (6-8)

Presented By: MIDDLE SCHOOL COACHES

Room: Salon D

Description: Do your students think like mathematicians? Do they look for patterns, visualize mathematics, do they “play” with math? Come join a cohort of Kentucky middle school mathematics coaches as they share concrete strategies that can transform thinking and learning in middle school mathematics. We will explore effective ways to engage students in mathematical habits of mind with open questions.

Adventures in Bottle Flipping: A Lesson Study in Engagement and Relevance for Middle School Students (6-8)

Presented By: Elizabeth Hubbard (Clay County Middle School) & Jennifer McDaniel (SESC Educational Coop)

Room: Salon E

Description: You do not have to look too far to find a middle school student that has not discovered the internet sensation of water bottle flipping. Follow a middle school math teacher's plan to engage her math support block in turning this craze into a task worthy of exploration.

Notable Children's Books for the English Language Arts (NCBLA): Integrating Mathematical Connections for Meaningful Learning (K-5)

Presented By: Diana Porter & Krista Althausen (Eastern Kentucky University)

Room: Salon F

Description: Increased demands on the teaching profession can threaten best practices through expectations to cover abundances of content within limited timeframes. Thus, two professors teamed to investigate the effectiveness of using Notable Children's Books in the Language Arts (NCBLA) as tools for integrating English language arts (ELA) and mathematics within their elementary ELA and math methods courses. They will share lessons learned and invite a lively exchange of ideas around the topic of integrative learning to avoid duplication of efforts. Participants will experience the NCBLA books and pedagogical approaches intentionally selected to build connections between these seemingly disparate fields.

Intentional Engagement: Developing Meaningful Engagement Environments that Lead to Student Leadership in Student-Directed Mathematics Classrooms (General)

Presented By: April Pilcher, Ethan Coats & Roderick Mozee (Kentucky State University)

Room: Salon HG

Description: Engaging students in meaningful interaction in classrooms takes more than asking creative questions. For long-term, deep learning to take place, students must have ownership of content. This session will unpack some of the joys and challenges of guiding students to be change agents of their own learning in a student-directed mathematics classroom, rather than recipients of a teacher's knowledge in a teacher-centered class. Video will be shown of students directing their own classroom through a mathematics lesson, with teacher facilitation. The strengths and challenges of this design will be shared from the perspectives of instructor, instructional counselor, and student.

Reflection State of Mind (3-5)

Presented By: Shawnda Fizer & Samantha Franke (Ewing Elementary)

Room: Dixiana

Description: The purpose of a Reflection State of Mind is the intentionality of teacher and student reflection on daily lessons. With this reflective outlook teachers develop engaging lessons which immerse students in learning. Students reflect and set goals in their data notebooks. Teachers use a daily reflective lesson plan to inform and enhance cooperative learning. Teachers will engage in a collaborative group formative assessment activity. We will model using Reflective Lesson Plan template how to group students based on formative assessment. Teachers will develop a plan for student data notebooks that will enhance the reflective process of student and teacher.

Personalized Learning Stations: Using Data to Differentiate (3-12)

Presented By: Michelle Scott (Pikeville Jr. High)

Room: Lane's End

Description: How are you supposed to teach every student at the same time when they are on different levels with different interests? It's personalized learning stations to the rescue! See the proof in classroom data that differentiation through personalized learning groups works to raise achievement as well as the secrets behind making it work without a lot of extra work on you. You will also be immersed in the process of personalized learning groups to understand the role of the student as well as the teacher. Make math class more meaningful by meeting each student where they are.

Spatial Relations: The Key to Math Competence (Pre-K)

Presented By: Mary M. West (Kids Korner)

Room: Terrace Ballroom

Description: This highly interactive session is designed to engage the participants in large and small group activities that develop an understanding of spatial relationships throughout the children's day. Be prepared to expand your math tool box with fresh spatial relationship ideas including vocabulary development, movement, construction materials, obstacle courses, mapping activities, puzzles, art, outdoor climbing structures, and, of course, a little literacy, music and dance.

Tuesday, March 7, 2017
Breakout Session #6: 8:00am-9:00am

Fostering a Growth Mindset for ALL Students (6-12)

Presented By: Joanna Stevens (Lincoln County High School)

Room: Salon AB

Description: In this presentation, a high school mathematics teacher and 2014 Kentucky High School Teacher-of-the-Year will share how she develops and maintains a growth mindset to help make math meaningful for all students. Strategies will vary from student engagement to standards-based grading to teacher growth.

Content Coaching That Works! (K-5)

Presented By: Elementary School Coaches

Room: Salon C

Description: Supported by KDE and KCM, Kentucky elementary instructional coaches from multiple school districts spent the past year exploring mathematics content coaching using a student-centered approach. Participants will learn through a hands-on process, how our journey working with a 4th grade teacher supported teacher and student growth. Participants will be driven through the Student-Centered Coaching model and will leave with a better understanding of how to effectively implement mathematics content coaching using this approach.

"Let's Get Gritty" - The Power of "stick-with-it-ness" in the Mathematics Classroom (General)

Presented By: Marsha R. Maupin & Tolene Pitts (PIMSER)

Room: Salon D

Description: Teachers recognize the power that effort, persistence, and resilience plays in empowering students to take greater ownership of their learning, but how do we get our students to value those traits? What is that elusive "something" that keeps students engaged and challenged? What does it look like in the mathematics classroom?

From years of extensive research, Carol Dweck, Jo Bolar, Angela Duckworth, and others offer powerful insights for transforming the classroom and instructional practices. Join us as we share practical tips, techniques, and strategies designed to help students develop a growth mindset, dig deep, and get "gritty"!

Early Childhood Development: Games, Technology and More! (Pre-K)

Presented By: Krissy Klouda & Tina Silvestri Gagliano (DCF Mathematics, Inc.)

Room: Salon E

Description: Participants will learn how to leverage digital technology and utilize games to enhance playful instruction in development of early number including early counting strategies, 1-1 correspondence and verbal counting. There will be whole group and small group activities as well as a back channel to ensure the participation of all involved in the session. Participants will be asked to bring iPhones and/or iPads.

Talk Like a Mathematician: Engaging Students in Mathematical Discourse (K-2)

Presented By: Nick Harris & Bethany Neel (Daniel Boone Elementary)

Room: Salon F

Description: Talk like a mathematician? But math is mostly numbers, right? Wrong! In order to communicate their ideas and strategies, students need to be able to speak precisely. A working mathematical vocabulary also strengthens the ability to think deeply. Teachers will be provided with questioning techniques and instructional strategies that intentionally facilitate mathematical discourse throughout the classroom. Come find out how to get your students talking like mathematicians while playing math games, doing number talks, writing in math journals, and much more!

Ready, SET, Go: Using the Game of SET to Teach Meaningful Mathematics (3-12)

Presented By: Cheryll E. Crowe (Asbury University)

Room: Salon HG

Description: The game of SET is an interactive card game that enables students to engage in meaningful mathematics. SET can be used in elementary, middle, and high school to facilitate exploration of a variety of topics in mathematics. Participants in this session will learn the basics of SET and engage in a few games with their colleagues. Applications of the game will be shared including percentages, probability, combinations, exponents, geometry, and vector spaces. Participants will leave the session prepared to implement SET in their classroom to encourage the exploration of the meaningful mathematics.

Passion Based Learning: From Volume to Reality (3-5)

Presented By: Tammy Pidgeon & Kathy Gutzwiller (Charles H. Kelly Elementary)

Room: Darby Dab/Calumet

Description: PBL...Problem/Passion/Project Based Learning in today's mathematics classroom. Learn how a 5th grade classroom turned a small volume project into a PBL that incorporated all grade levels, multiple content areas and intentionally made math meaningful with a huge outcome. Let us put the 'why' back in the math classroom with a real-world problem that engaged learners to make math significant in their everyday lives.

Math Recovery Champion and Leader Questions and Answers (K-5)

Presented By: Petey MacCarty (U.S. Math Recovery Council)

Room: Dixiana

Description: This session will allow Math Recovery Champions and Leaders the chance to discuss questions related to Math Recovery, AVMR, and SNAP professional development, coaching, on-going support, and new developments within the USMRC. This is an opportunity to reconnect, share ideas and strategies, and have a focused discussion around the Learning Framework in Number and its impact upon making math meaningful in our schools.

Turning the Tables: Viewing Students as a Content Resource (6 to Postsecondary)

Presented By: April Pilcher, Cory Johnson, Traci Nash & Raven Robinson (Kentucky State University)

Room: Lane's End

Description: Traditional models that place the teacher as the lead in classrooms downplay/discount students' voices and initiatives. Students in these models are viewed as recipients of information rather than content owners/creators.

Teachers guess at what will engage students instead of allowing students to take the lead. This session will provide ways to change classroom dynamics, placing students in front of the class. This requires intentional planning and much deeper student interaction with the content. This session will explore several different models which utilize students as resources for classroom content and assessment, such as student-authored problems/assignments and student-developed rubrics.

I Can't Do This Math Problem-YET! Math Success through Growth Mindset (K-8)

Presented By: Paul Schwarz (Symphony Learning)

Room: Terrace Ballroom

Description: Growth Mindset is an overwhelmingly positive framework for learning. Our ability to learn is boundless, and our brains can physically grow over time. We can persevere and work through challenges using new strategies, and we can accept mistakes as a critical component of the learning process. What's not to love? So why is growth mindset so hard? Why doesn't it just happen naturally? This session will focus on the challenges of implementing growth mindset in your math classroom. By highlighting the shared responsibility between educators, students, and community, we will offer a glimpse into the hard work that is necessary when we work towards improving the way we think about mathematics and learning.

This Ain't Your Mama's Math Class! (3-12)

Presented By: Cindy White (Ballard County Middle School)

Room: Bluegrass Pavilion

Description: This training focuses on deviating from the traditional teaching methods you may have grown up with. With the PGES focus on student engagement and initiation of content, a more hands-approach to learning often helps students to make connections they cannot get in a "sit-at-your-desk-and-do-these-problems" classroom. Presented will be ways to formatively assess your kids (even if they don't know they're being assessed!) by student modeling of concepts (like the Human Coordinate Grid), physical activities to get minds and bodies involved (Sort & Sprint), and active learning to stimulate continual learning of content. Students will look forward to math class!

Tuesday, March 7, 2017
Breakout Session #7: 9:15am-10:15am

Multiple Pathways to Quantitative Reasoning (9 to Postsecondary)

Presented By: Jay Morgan (CPE), Paul Blankenship & Rhonda Tracy (KCTCS)

Room: Salon AB

Description: For many university students, college algebra may not be the appropriate path for the development of those quantitative reasoning (QR) skills needed for their given program. As the primary entry point for students transitioning into postsecondary education in Kentucky, KCTCS is taking the lead in exploring various QR pathways. This discussion focuses on the importance of considering innovative ways for students to meet quantitative reasoning needs. It will include an update on the current status of these KCTCS initiatives, KCTCS plans going forward and how the Council on Postsecondary Education plans to support these efforts.

Tiers without Tears, Wash, Rinse and Don't Repeat (Pre-K to 5)

Presented By: Melissa Dicken & Emily Tipton (Conkwright Elementary)

Room: Salon C

Description: Our all natural RTI framework gently helps students move from Tier 1, 2 and 3 and nourishes students with research-based math strategies, while specific instruction. Apply the Tier 1 curriculum to all students and gently treat students that are not successful in Tier 1 with a more intense Tier 2 status. Rinse thoroughly again with regular progress monitoring and if not successful apply a third tier for students who need a more intense program. For best results use in conjunction with classroom teachers, interventionist and PLC members. Follow with regular meetings for best results. Guaranteed not to cause tears!!!

RtI Math Intervention Roundtable (K-12)

Presented By: Donna Logan (Boone County Schools) & Lisa Freking (Florence Elementary)

Room: Salon D

Description: Have you ever wondered what math RtI looks like at other schools around the state? Join us for a round table discussion on strategies for delivering math intervention. We will group by grade levels. Be sure to bring your questions as well as your success stories and great ideas. We will wrap up our time together with a whole group debriefing. After the conference we will share with you a document of ideas and strategies from the session.

Meaningful Math with MathRacks (K-2)

Presented By: Lynn Patterson, Adriana Estrada, Elizabeth Hunter, Savana Jones, Morgan Mayer, & Mason Robinson (Murray State University)

Room: Salon E

Description: Participants will experience an interactive mathematical tool called the MathRack. Five amazing Murray State University students and their professor will share and present. The MathRack provides a way to intentionally bring meaningful understanding of numbers and to build mathematical minds. To really understand addition and subtraction, children must understand how they are related. By composing and decomposing parts with math racks, math becomes more meaningful as the basic facts become automatic. Math racks support children's understanding of the relationship between facts thus making the math meaningful. Participants will enjoy the interactive format provided by five pre-service elementary education students!

PBS LearningMedia: Free Math Resources & How to Use Them (General)

Presented By: Lynn Shaffer (Kentucky Educational Television – KET)

Room: Salon F

Description: PBS LearningMedia offers more than 1,000 educational resources in math alone, all aligned to state and national standards, including collections such as Math + Arts, Math at the Core: Middle School, and Math Mess. Types of resources include engaging videos, interactive games, animations, and documents. PBSLM offers educators easy, efficient, and creative ways to implement, organize and assign content, and share with others. Many teaching materials are available, including lesson plans. Session will address how to research resources, organize in Folders, and share assignments and resources quickly and easily with others.

Putting the Practices into Play (3-5)

Presented By: Kristie Manley (Kenwood Elementary)

Room: Salon HG

Description: The Standards for Mathematical Practices (SMPs) creates a climate for student success when it comes to high quality mathematical tasks. The marriage of SMPs and tasks allows students to critically think about the world around them. This session will involve participants in sample tasks and highlight numerous SMPs.

Student Experiences in Solving Equations: Improve Student Understanding of Solving Equations Within and Between Representations (6-8)

Presented By: Jennifer McDaniel & Angie Keene (SESC Educational Cooperative)

Room: Darby Dan/Calumet

Description: Experience the instructional sequence, Concrete-Semi-Concrete, Abstract (CSA), with a focus on solving two step equations. Participants will engage with algebra tiles and flow charts while participating in cooperative learning activities. Leaving with a variety of strategies that can easily be adapted for use in any level of the RTI process will make this session foundational for every middle school math teacher.

Making Math Meaningful Through Introductory Activities in High School Math Class (9-12)

Presented By: Ronni Tallent (Henry Clay High School)

Room: Dixiana

Description: Students often wonder why they are learning certain material. In this session we will work through engaging activities that can be used to introduce units in high school math classes. Session participants will work through activities that can be used to introduce quadratics, linear programming, polynomials and other topics. Participants will leave with classroom ready materials for classroom implementation. Come join us as we make math meaningful.

Making Math Meaningful for Struggling Learners (6-8)

Presented By: L. Brooke Powers (Beaumont Middle School)

Room: Lane's End

Description: Experience ways to truly engage and make math meaningful for struggling learners in your classroom utilizing the 8 Mathematical Practices. Participants will leave with ready to implement activities and strategies to use in the classroom immediately from a practicing middle school teacher. My classroom is alive with excitement about numbers and yours can be too!

Featured Presentation: The Surprising Importance of Early Math (General)

****2 HOUR PRESENTATION: 9:15am-11:30am****

Presented By: Douglas Clements

Room: Terrace Ballroom

Description: Young children have a surprising capacity to learn substantial mathematics, but most children in the U.S. have a discouraging lack of opportunities to do so. Too many children not only start behind, but they also begin a negative and immutable trajectory in mathematics, with insidious long-term effects. These negative effects are in one of the most important subjects of academic life and also affect children's overall life course. The good news is that programs and curricula designed to facilitate mathematical learning from the earlier years, continued through elementary school, have a strong positive effect on these children's lives for many years thereafter. Starting early—in preschool—with high-quality mathematics education, creates an opportunity for substantial mathematical learning in the primary years that builds on these foundational competencies. Learn about five surprising research findings about early mathematics, including its predictive power, children's math potential, educators' understanding of that potential, the need for interventions, and what we know about effective interventions.

NOTE: We kindly ask that you do not enter the presentation room during the 10:30am-11:30am session. If you should wish to attend this session, please plan to be there for the entire duration of the 2-hour presentation, beginning at 9:15am.

Featured Presentation: Fraction Number Talks: Moving Beyond Telling (K-5)

****2 HOUR PRESENTATION: 9:15am-11:30am****

Presented By: Sherry Parrish

Room: Bluegrass Pavilion

Description: We will explore Fraction Number Talks as a vehicle for shifting beliefs about teaching and learning from a procedural approach to one that focuses on making relationships to build conceptual understanding. Classroom video will be used to analyze student reasoning and misconceptions.

NOTE: We kindly ask that you do not enter the presentation room during the 10:30am-11:30am session. If you should wish to attend this session, please plan to be there for the entire duration of the 2-hour presentation, beginning at 9:15am.

Tuesday, March 7, 2017
Breakout Session #8: 10:30am-11:30am

Transformational Geometry - Immediate Interactive Investigations - Grades 7-11 - Students Discover the Geometry in 15 Seconds! (6 to Postsecondary)

Presented By: Tom Reardon (Fitch High School/Youngstown State University)

Room: Salon AB

Description: Creatively integrate discovery, reasoning, technology, and pedagogy: Play Investigate Explore Discover reflections, translations, rotations, and dilations. Your students will become engaged quickly (15 seconds or less) and deeply by interacting with the geometry. Obtain all free materials. Each participant will be given a handheld with the interactive activities pre-loaded. We will do as many of these activities as possible in the time we have. We will simulate what students would do in the classroom. Very interactive and lots of discussion. Each participant will receive the software that runs these amazing activities for free. Works on handhelds, iPads, and software.

Math Centers, Does One Size Fit All? (K-5)

Presented By: Jamie Reagan & Tonda Thompson (Albany Elementary)

Room: Salon HG

Description: Math Centers provide an opportunity for students to practice and apply skills and strategies taught within the classroom. While students are engaged in purposeful centers, teachers have the opportunity to work individually or with small, flexible groups to meet the individual needs of students. During this session teachers will use the hands on approach to practice and develop engaging math centers to use during small group and Rti time. This will benefit teachers in K-3 grade levels. The outcome for this session will be help teachers to make Math Meaningful and fun for students.

Structure: Build It! DRAW IT! Write It! (K-2)

Presented By: Dottie Smith (Kirksville Elementary), Becky Miller (Silver Creek Elementary) & Rhonda Rule (Glenn Marshall Elementary)

Room: Darby Dan/Calumet

Description: This session focuses on the crucial steps of a child's need to recreate and draw structure of numbers. By using the built-in structure of the bead rack and drawing what they see, children begin to internalize the way numbers are structured so that numbers make sense to them. By incorporating the bead rack with literacy students develop a deeper understanding of how numbers work within authentic settings. Teachers will walk away with strategies and materials to use for whole group, small group, center activities, and to help bridge the gap for struggling students.

Diminish the Abstractness of Algebra by Using Algebra Tiles (6-8)

Presented By: Linda Montgomery (Kentucky Center for Mathematics)

Room: Dixiana

Description: Algebra Tiles can be used to provide visual understanding of operations with integers, simplifying linear expressions, combining like terms, understanding the distributive property, multiplying binomials, and factoring binomials and trinomials. Participants will be actively involved in hands-on experiences to see the power of using the tiles to help students make clear meaning of algebraic concepts.

Meet the Cognitive Challenge of Kentucky's Academic Standards for Mathematics Using Math Workshop (K-12)

Presented By: Jettie Payne (Christian County Public Schools) & Emily Chandler (Pembroke Elementary)

Room: Lane's End

Description: Many teachers are searching for innovative structures and processes to meet the diverse needs of their students, all within the traditional school schedule. The presenters for this session will share how their use of Math Workshop (a learning structure) and Eureka Math (curriculum) have led to opportunities for "Intentionality and Making Math Meaningful." Attendees will engage in a model learning structure, participate in a discussion of the planning process, and ultimately leave with a plan to implement similar learning structures in their own school to support their specific curriculum.

Tuesday, March 7, 2017
Breakout Session #9: 1:15pm-2:15pm

Practical Ideas for Primary Classroom Teachers to Build Fluency in Structuring Numbers to 20 (K-2)

Presented By: Christy Coffey (Southern Elementary) & Brenda Adams (Lansdowne Elementary)

Room: Salon AB

Description: Join us to learn practical strategies to engage primary students structuring to twenty! K-2 teachers will leave with activities in hand and strategies in mind to take back to their classrooms and use with students.

Creating and Empowering Student Math Leaders - The 7 Habits for 'Highly Effective Math Students' (General)

Presented By: Alvia Littleton (Freedom Elementary)

Room: Salon C

Description: Intentionality requires teaching beyond the textbook, and involves an educational change that strives to make a difference in our math students. Intentionality involves choices and decisions being made with the end in mind. Intentionality develops independent math students using their own academic shovels to dig deeper into the common core math standards while creating a firm foundation of mathematical practices. The development of the "7 Habits" for "Highly Effective Math Students," as adapted from Stephen Covey's "Leader in Me," empowers students by integrating The '7 Habits' with the Mathematical Practices embedded into classroom exercises and routines normally associated with mathematics.

Units Coordination: A Part of the Journey to Understanding Fractions as Numbers (3-8)

Presented By: Christina Miller (U.S. Math Recovery Council)

Room: Salon D

Description: From whole numbers to fractions, students engage in coordinating units to reason mathematically. Research suggests that the ways students coordinate units influences their work with whole numbers, fractions and algebra. This session draws upon Developing Fractions Knowledge by Amy Hackenberg and Anderson Norton. To be intentional prior to, during and while reflecting upon teaching, we need to learn about how children develop fractions knowledge. Video of students thinking and working with fraction tasks will be shared. Come to engage in professional dialogue with colleagues as we explore this idea of coordinating units as it relates to reasoning with fractions.

Making Math Meaningful: Culturally Responsive Mathematics Instruction (K-5)

Presented By: Kenya VanLeer (James Lane Allen Elementary)

Room: Salon E

Description: What is culturally responsive math instruction? Does culture matter in math instruction? Mathematics is a gatekeeper to student success in the 21st century. It is crucial that all students develop mathematics literacy. As the achievement gap widens, it is imperative that teachers bridge the cultural gap that has made mathematical success unattainable for many students of color. In this session, teachers will explore how culture impacts learning mathematical concepts and ways to increase student engagement. Research-based pedagogical practices that foster culturally responsive environments will also be discussed. Participants will interact to develop strategies for classroom use.

Formative Assessment within Math Workshop (K-5)

Presented By: Michelle Walden & Toni Fincham (Indian Hills Elementary)

Room: Salon F

Description: Every student needs differentiated instruction to meet his or her individual needs. We all know this is true, but how do you do that in a classroom of 25 students? By combining the principals of formative assessment within a math workshop structured classroom, teachers are able to intentionally plan instruction that ensures students are able to show growth and master common core standards. This session provides a step-by-step guide of how to manage, monitor, and implement formative assessment within a workshop structured environment so that teachers and students become partners in learning.

Digging Deep into BVSD Screeners (K-5)

Presented By: Scotty Bratcher (Lawler Elementary), Amanda Brown (H.W. Wilkey Elementary), Laura Grant (Caneyville Elementary) & Brandy Dermitt (Clarkson Elementary)

Room: Salon HG

Description: This session will intentionally focus on making BVSD math screeners meaningful to regular education and math intervention teachers. BVSD screeners will be analyzed question by question with explanations of student thinking and professional noticing required to differentiate and narrow instruction to further mathematical thinking and strategies. Participants will leave with a clear understanding and purpose of the use of BVSD screeners that can be used in any K-5 mathematics classroom.

Hip To Be Square (Pre-K)

Presented By: Amanda Davis & Michelle Arnold (Central City Elementary)

Room: Darby Dan/Calumet

Description: Come join us as we share how to use literature and technology to intentionally make math more meaningful to our students. We will shape up our geometry skills and show how to build a strong math foundation at this important age!

Introducing the Kentucky Association of Mathematics Teacher Educators! (Postsecondary)

Presented By: Bethany Noblitt (Northern Kentucky University), Cheryll Crowe (Asbury University), Twyla Harris (Eastern Kentucky University), Funda Gonulates (Northern Kentucky University/Kentucky Center for Mathematics), Susan A. Peters (University of Louisville) & Jonathan Thomas (University of Kentucky/Kentucky Center for Mathematics)

Room: Dixiana

Description: Kentucky has a new Affiliate of the Association of Mathematics Teacher Educators (AMTE). The Kentucky Association of Mathematics Teacher Educators (KAMTE) would like to invite all Kentucky mathematics teacher educators to this session to learn more about KAMTE and its mission, which includes promoting excellence in the preparation and continuing development of teachers of mathematics and establishing collaborative working groups of mathematics teacher education professionals. The KAMTE Executive Board will facilitate a discussion with participants in order to learn more about how KAMTE can best serve them. Participants will leave feeling excited about this new Kentucky affiliation with AMTE.

When I MetIMET - Become Critical Consumers of Materials in Mathematics (K-12)

Presented By: Erin Chavez & Brandy Beasley (Kentucky Department of Education)

Room: Lane's End

Description: Instructional resources can be an important guide for teaching the Kentucky Academic Standards (KAS), especially for new teachers, but also for more experienced teachers. That's why it's so important that our classroom resources get it right! Come engage with the Instructional Materials Evaluation Tool (IMET) and learn how to review material that truly meets the depth of the standards. Participants will review material based on the shifts of the Kentucky Academic Standards using card sorts and mathematical discussions.

Teaching Mathematics for a Growth Mindset (K-8)

Presented By: Jana Bryant (Daviess County Public Schools)

Room: Terrace Ballroom

Description: This session will provide a set of teaching ideas that can help you create and maintain a growth mindset mathematics classroom. Participants will leave with sample mathematics tasks that given students rich opportunities to extend problems and explore mathematics in depth.

Featured Presentation: Math is Figure-Out-Able! (6-12)

****2 HOUR PRESENTATION: 1:15pm-3:30pm****

Presented By: Pamela Weber Harris

Room: Bluegrass Pavilion

Description: Is math a set of rules, procedures, and facts to rote-memorize or a set of relationships and connections? Don't kids need to memorize their facts? If we don't tell kids the math, how will they learn it? What does it mean to construct mathematics? Come and engage in real mathematics and join the conversation about how to teach real math.

NOTE: We kindly ask that you do not enter the presentation room during the 2:30pm-3:30pm session. If you should wish to attend this session, please plan to be there for the entire duration of the 2-hour presentation, beginning at 1:15pm.

Tuesday, March 7, 2017
Breakout Session #10: 2:30pm-3:30pm

From Blocks to Tiles: Progression in Algebraic Modeling (3-8)

Presented By: Rachel Bishop-Ross & Kari Everett (Eastern Kentucky University)

Room: Salon AB

Description: Solving equations plays a major role in the study of mathematics. Manipulatives are an excellent tool for introducing and advancing algebraic thinking, especially for students who struggle with abstract equations. We begin with blocks in the K-2 setting and walk through how these early models for representing unknown quantities progress to the use of algebra tiles in middle grades. We discuss appropriate and meaningful questions for use with the blocks and tiles and show how tiles can be used for solving systems of equations and factoring.

Making Center Based Math Instruction Work for YOU! (General)

Presented By: Shannon Wells & Mary Ann Adams (Robert B. Turner Elementary)

Room: Salon C

Description: Have you ever wanted to run math centers in your classroom, but don't know where to start? This session will provide information on how to run successful, high level, meaningful instructional math centers and how to successfully manage centers. Ideas will be given for center activities teachers can prepare and computer based activities that will make math meaningful.

Intentionality: Making Math Meaningful Through Games (K-5)

Presented By: Tolene Pitts & Marsha Maupin (PIMSER)

Room: Salon D

Description: Participants will experience how skill building and fluency can be accomplished through the implementation of games. Attendees will gain an understanding of purposeful construction and how to facilitate game time to enhance student's mathematical fluency. Participants will have hands-on opportunities to play a variety of games and leave with resources to use in the classroom.

Number Gym (Pre-K to 2)

Presented By: Jennifer Martin & David Brumley (Madison Kindergarten Academy)

Room: Salon E

Description: Come learn activities and ideas that are based in brain research and movement-based learning! Participants will learn about the collaboration between P.E. teacher and Math Interventionist from Madison Kindergarten Academy and how they made math and movement a valuable learning environment. We will play together, talk math, and leave with active ideas on how to teach Number Words and Numerals and basic counting strategies. No gym shoes required, just an open mind to help make math more vigorous and rigorous!

Micro-base-ten-ology (K-5)

Presented By: Petey MacCarty (U.S. Math Recovery Council)

Room: Salon F

Description: Micro-base-ten-ology: a study of learning trajectories for addition and subtraction to 100. Often students' classroom experiences ask them to jump directly from fluency with addition and subtraction to 20 to multi-digit addition and subtraction. This can result in student frustration, lack of success, and lack of conceptual understanding. Dr. Bob Wright's research has illuminated a detailed learning trajectory for base-ten concepts and strategies that can significantly impact teaching. This session will delve into Dr. Wright's learning trajectory to focus on the micro-steps that cannot be forgotten along the pathway to developing proficiency with multi-digit addition and subtraction.

Innovation Collaboration (General)

Presented By: Hayley Kissick (Bourbon County Schools) & Jeryl Gozy (Bourbon County Middle School)

Room: Salon HG

Description: Effective. Equitable. Novel. Exciting. Intentional. Differentiated. Impactful. Fun. With millions of items on a teacher's agenda each day, it is a daunting, yet exciting task to create lessons that incorporate every educational buzzword with fidelity into a mathematics classroom.

Connecting Statistics and Science: Using Science to Engage Students in Statistical Inquiry (6 to Postsecondary)

Presented By: Marla Lemmon (Northern Kentucky University)

Room: Darby Dan/Calumet

Description: Statistics topics continue to gain attention at all levels of education. The GAISE framework urges that all students take part in statistical inquiry and defines the statistical problem solving process as formulating questions, collecting data, analyzing data, and interpreting results. Often students are not given opportunities for formulating questions and collecting their own data. In this session participants will experience ways in which their students can be involved in all aspects of statistical inquiry. The activities presented will connect CCSSM statistical content with NGSS science content.

Reviewing and Selecting Mathematics Instructional Materials for Grades K-12 (K-12)

Presented By: Tim Truitt, Chanda Johnson & Dana Cartier (EdReports.org)

Room: Dixiana

Description: How can instructional materials help teachers with 'Intentionality: Making Math Meaningful' in their classrooms? How can teachers supplement the materials they already have to make them more meaningful in their classrooms? Through an interactive discussion, this session will pose answers to these questions and other questions surrounding instructional materials. From teachers to building and district-level administrators, this session can help anyone that deals with mathematics instructional materials from selecting and purchasing to implementation with students. Participants will leave with where to find, and how to use, free reports on instructional materials and free tools to help with evaluating them.

Intentionally Differentiating Guided Math While Simply Managing It All (K-2)

Presented By: Kate Wintuska (Warren County Schools, The Brown Bag Teacher)

Room: Lane's End

Description: Guided Math is a small-group approach to learning mathematics, just like we meet with students daily during Guided Reading, we intentionally meet with students as mathematicians. Students are actively engaged in a number talk, a whole-group mini-lesson, a small-group lesson, and centers every day. In this session we will explore how to keep organized - teacher table lessons, informal assessments given to each group, planning for your week, finding and streamlining centers. Additionally, we'll answer the question - how do I sustainably maintain the level of differentiation guided math demands?

Arithmetic Racks and Number Facts: Using Rekenreks to Make Sense of Math (K-2)

Presented By: Emily Pinson (Julius Marks Elementary)

Room: Terrace Ballroom

Description: How do we help students in primary grades realize the meaning behind flashcard facts and develop strong number sense? Intentional instruction using appropriate tools is the key to guiding students to discover relationships between numbers and build a foundation for higher-level thinking. This presentation will include discussion and strategies for using Rekenreks (arithmetic bead racks) to support the development of number sense. Examples of classroom activities will be embedded throughout the presentation and attendees will leave with make-and-take materials to begin incorporating arithmetic racks in their own instruction. Appropriate audience members include elementary classroom teachers, intervention teachers, and math coaches.