Welcome…

...to the 2014 KCM Conference!

Thank you for joining us as we learn from each other, formally and informally, sharing a contagious passion and growing expertise for improving mathematics education.

Considering that mathematics proficiency at every level, preschool to high school, is the greatest predictor of future success, your role in supporting or providing high-quality mathematics education is critical for preparing a citizenry ready for interesting and rewarding experiences in college and career. Our conference theme, Fluency Forward: The Path to Mathematical Success, was chosen to emphasize the importance of preparing students to obtain profound mathematical understanding and conceptual skills. We believe in ensuring that students are able to think and communicate mathematically in much the same way a person may become fluent with a foreign language.

We are honored to offer a rich and varied program of esteemed speakers from Kentucky and beyond, which assures every conference attendee will gain valuable knowledge, strategies, and tools. We will enjoy a Celebration Dinner on Monday evening as we connect and reflect on the progress of our outstanding community of mathematics educators and prepare to continue the momentum for greater success of Kentucky students in the coming year. On behalf of the KCM staff, we hope you enjoy your conference learning experience and we appreciate the opportunity to serve you.

Best,
Daniel McGee
KCM Executive Director

Connect With the KCM

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“Follow” us and “Tweet” us: @KYCenterforMath

Visit the KCM website: www.kymath.org

Having a great time? Received great ideas from a conference session? Had a favorite quote from the conference welcome? Tell us about it!

Leave us a Facebook wall post or comment, and/or Tweet us during the conference to tell us about your experience. Be sure to “tag” us when you do!
Door Prizes

We want to thank you for dedicating your time and talents to being with us at the 2014 KCM Conference! Thanks to our wonderful conference sponsors, we are excited to offer door prizes for our conference attendees.

How To Win:
Name tags of all present conference attendees will be collected before the last breakout session on Tuesday afternoon (3/11). Prize winners will be drawn from these name tags and will be announced immediately following the last breakout session via call board on the 2nd floor of The Hilton hotel, next to the registration table. Individuals must be present to win. Door prize winners will be required to fill out a tax form for their winnings.

What You Could Win:

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Includes...
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*Large Supply of Colored Pencils
*Even more classroom goodies!
Graciously Sponsored by Dreambox Learning, Inc.
### Conference Schedule at a Glance
#### Monday Morning (3/10)

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<tr>
<th>Session #1</th>
<th>8:00am-9:10am</th>
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<tr>
<td>K-8</td>
<td>Understanding, Assessing and Developing Children's Mathematical Thinking: Task-Based Interviews as Powerful Tools for Teacher Professional Learning - Clarke ★</td>
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<tr>
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<td>Fractions, Data, and Assessment, &quot;Oh My!&quot; - Hacker</td>
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<td>Resources for Conducting Family Math Nights - Morgan</td>
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<td>How Big is Big? Understanding the Big Ideas of Measurement - Sapoznick</td>
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#### Session #2 9:25am-10:35am

| 6-8        | Models to Facilitate Reasoning, Problem-Solving and Connect Number Sense to Algebra - Burgunder | Magnolia (1st Floor) |
| Pre-K      | Sowing the Seeds - Meiman | Salon A |
| K-3        | Learning to Love Math: Developing Mathematical Fluency Through Curiosity, Flexible Thinking and Creativity - Heavin | Salon B |
| 3-5        | The Importance of Mathematical Fluency in the Areas of Multiplication and Division - Elam | Salon C |
| 9-12       | From Algebra to PreCalculus, There is More to the Pythagorean Theorem Than First Encountered - Moore | Salon D |
| PreK-6     | Intelligent Adaptive Technology: Empowering Teachers to use Actionable Data - Dubois | Bluegrass |
| 13-16      | Limit - The Center of The Calculus - Schiffman | Crimson Clover |
| K-3        | Handling Hundreds - Barber | Triple Crown |

#### Session #3 10:50am-12:00pm

| 3-5        | Ideas + Tabs = Math Livebinder - Linder | Salon A |
| K-5        | Linear Measurement...It's Not Easy! - Blevins | Salon B |
| 3-5        | Developing Fraction Sense - Campbell | Salon C |
| K-5        | Building a Bridge to Fluency - Pierson | Salon D |
| K-8        | Instructional Design for Math Achievement: Practical Solutions for Transforming Mathematical Thinking in the World of the Common Core - Trow | Bluegrass |
| 9-12       | Constructions, Circles, Similarity, and Proofs with GeoGebra and Cabri Jr. - Truitt | Crimson Clover |
| 6-8        | Common Core 'A BUD-ing STEM' (Building, Understanding and Developing Science, Technology, Engineering and Mathematics) - Littleton | Blackberry Lilly |
| K-5        | Early Algebraic Thinking: Mathematical Glue - Olijnek | Triple Crown |
| K-2        | It's Story Time! (LEGO Story Time) - Engaging Students to Solve and Create Story Problems with Fluency & FUN! - Dickson | Magnolia (1st Floor) |

### Conference Schedule at a Glance
#### Monday Afternoon (3/10)

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<th>Session #4 1:15pm-2:25pm</th>
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<tr>
<td>13-16 Key Aspects of Mathematics Teacher Preparation - Spangler ★</td>
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<tr>
<td>3-5 Fractions, Decimals, Percents, Oh My! - Brock</td>
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<tr>
<td>K-3 Making Sense of Math: Using the Five Senses to Discover Mathematics - Adams</td>
</tr>
<tr>
<td>3-5 Fractional Fluency - More Than Speed - Campbell</td>
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<tr>
<td>6-9 How Can a Number Line Be Used to Develop Algebraic Thinking? - Hill</td>
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<tr>
<td>9-12 Creative Integration of CCSS Math Practices, Quality Activities, Excellent Questioning Techniques, Pertinent Technology - Reardon</td>
</tr>
<tr>
<td>K-5 Math Fluency=Original Children's Literature+Problem-Based Learning - Blevins</td>
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<tr>
<td>K-5 Show Me the Way - Farmer</td>
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#### Session #5 2:40pm-3:50pm

| 3-5 Moving Beyond Repeated Addition and Subtraction - MacCarty ★ | Magnolia (1st Floor) |
| 9-12 Nurturing Mathematical Behavior With Liu's Bingo - Pullin Lane | Salon A |
| K-3 I Disagree with Myself: My Journey with Number Talks - Harris | Salon B |
| General Teaching Mathematics with Technology - White | Salon C |
| 6-8 Ratios & Proportions - Leading to Function Fluency - Emmert | Salon D |
| K-3 Building Links Between Addition and Subtraction: Concepts and Number Facts - Nickerson | Bluegrass |
| General Problem-Based Learning + Exceptionality = Student Success - Woodruff | Crimson Clover |
| Pre-K I Spy with My Little Eye... Patterns All Around - Malcolm | Triple Crown |

#### Session #6 4:05pm-5:15pm

| 5-8 Making Fractions Come Alive and Make Sense in the Middle Years - Clarke ★ | Magnolia (1st Floor) |
| Pre-K Numeracy with Pizzazz! - Howard | Salon A |
| General Serious Fun in the Mathematics Classroom: Practical Strategies to Motivate and Engage Students - Loucks | Salon B |
| 6-8 The Statistics of the Hunger Games - Atwood | Salon C |
| 3-5 Be Fluent: Connecting Multiplication and Division - Nickerson | Blackberry Lilly |
| 9-16 Statistical Inference Based on Simulation - Buckley | Bluegrass |
| K-5 RTI 101: Discussing the Ins and Outs of Response to Intervention - Newton | Triple Crown |

#### Dinner 5:30pm

Join us for a “Celebration Dinner” at The Lexington Convention Center, free of charge to all conference attendees and speakers! Ticket must be in hand. Tickets can be found with each individual's check-in information.

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*Featured Speaker*
### Conference Schedule at a Glance
#### Tuesday Morning (3/11)

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<td>Look for and Make Use of Structure - Whitesides</td>
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<tr>
<td>K-3</td>
<td>Fun with Subitizing! A Critical Foundation for Developing Fluency in Number for Students - Prather</td>
</tr>
<tr>
<td>8:00am-10:35am</td>
<td>What Works for RTI: Models of Successful Elementary Grades Tiered Mathematics Intervention - Moderator: Alice Gabbard</td>
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<tr>
<td>K-5</td>
<td>The Art in Math - Owens</td>
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<tr>
<td>6-8</td>
<td>Adding and Subtracting Integers - More than a Negative Experience - Campbell</td>
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<tr>
<td>K-5</td>
<td>Mathematics Across the Curriculum: Making the Connection with Math and Economics - Yetter</td>
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<tr>
<td>6-8</td>
<td>Ethnomathematics: A Culturally Supportive Approach to Increase the Motivation and Engagement of Middle School AA Males - Forde</td>
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<tr>
<td>Pre-K</td>
<td>Investigate! Engaging Children in Real-World Mathematical Applications Using the Project Approach - McLaren</td>
</tr>
</tbody>
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#### Session #2 9:25am-10:35am

<table>
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<tr>
<th>Pre-K</th>
<th>Preschool Play-Based Math Assessment - Moojaw</th>
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<tbody>
<tr>
<td>3-5</td>
<td>10 Times the Fun and Half the Time.....THAT’S FLUENCY! - Thompson</td>
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<tr>
<td>8:00am-10:35am</td>
<td>What Works for RTI: Models of Successful Elementary Grades Tiered Mathematics Intervention Cont. - Moderator: Alice Gabbard</td>
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<tr>
<td>4-12</td>
<td>Fractions, Decimals, and Percents-RTI for Middle/High - Booth</td>
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<tr>
<td>K-3</td>
<td>Fun With Fluency - Davis</td>
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<td>K-3</td>
<td>Beyond Cookies: Understanding Various Division Models - Magruder</td>
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<tr>
<td>3-5</td>
<td>PAction: Purposeful Action Marks a Math-Minded School - Hunt</td>
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<tr>
<td>9-12</td>
<td>Fluency Forward: Intervention Success - Filhen</td>
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<tr>
<td>General</td>
<td>Inclusion Classroom Math? The Story Starts Here…. - Woolsey</td>
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#### Session #3 10:50am-11:50am

<table>
<thead>
<tr>
<th>9-12</th>
<th>Building Fluency Through the Use of Mathematical Models in Applied Contexts - Curtless</th>
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<td>K-3</td>
<td>Computation with Meaning-Addition and Subtraction Grades K-3 - Allen Burns</td>
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<tr>
<td>4-6</td>
<td>Computation with Fractions Grades 4-6 - Stamm</td>
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<tr>
<td>K-8</td>
<td>Building an Effective Tiered Model in Mathematics - Robertson</td>
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<tr>
<td>K-3</td>
<td>When Life Gives You Breads, String Em! - Harrison</td>
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<tr>
<td>K-5</td>
<td>AvMR Champions and Teachers: Updated Structuring Assessment - Anderson</td>
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<tr>
<td>9-12</td>
<td>Flipping the Classroom - Using Videos to Teach Algebra - Lindsey</td>
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<tr>
<td>3-5</td>
<td>Math Congress: Honoring Student Voice in the Math Classroom - Keene</td>
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<tr>
<td>K-5</td>
<td>Using Models and Representations to Support Learning - Clarke</td>
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### Conference Schedule at a Glance
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<td>K-5</td>
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</tbody>
</table>

#### Session #5 2:40pm-3:50pm

| K-5 | Professional Noticing: Expanding the Lens - Thomas |
| 3-5 | A Product of Fluency - Smith |
| 3-5 | Meeting the Common Core's Math Fact Fluency Challenge with Reflex - Owen |
| 4-8 | Strategies for Encouraging Students to Persist When Working on Cognitively-Demanding Tasks - Clarke |
| 6-8 | A Mastery Approach to Unit Tests - Kidder |
| General | "My Brain Is a Traffic Jam": Helping Students to Understand and Manage Test Anxiety - Phelps |
| 7-12 | Creatively Integrate iPad Math and Presentation Apps Into Your 7 - 12 Classroom - Reardon |

#### Door Prizes 4:00pm

Door prize winners will be drawn from collected name tags and will be announced immediately following the last breakout session via call board on the 2nd floor of The Hilton hotel, next to the registration table. Individuals must be present to win. Door prize winners will be required to fill out a tax form for their winnings.

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### Conference Registration & Continental Breakfast 2nd Floor of Hilton

7:00am-8:00am
Conference Sponsors

The KCM is proud to introduce our 2014 conference sponsors!

A huge “THANK YOU” goes out to each organization and the wonderful people who worked so hard to help the KCM have a successful 2014 conference. Your presence, support and overall dedication to mathematics education plays a major role in our continued growth.

Please be sure to visit our exhibiting sponsors, located conveniently on the 2nd floor of The Hilton hotel, right outside of the Grand Kentucky Ballroom.

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Featured Speakers

Anne Burgunder
New York University & Metamorphosis, Inc.

Anne Burgunder is widely regarded as a teacher’s teacher. She understands the dilemmas of teaching and has an assortment of tools to assist teachers in all aspects of the complex work of teaching. She is dedicated to helping teachers increase student achievement through improved instruction and the development of pedagogical content knowledge. Currently, Anne is a clinical faculty member of New York University’s Steinhardt School of Education where she teaches mathematics methods courses and mentors student teachers in the field. Anne’s work is not limited to pre-service education. She supports practicing teachers in the field in schools across the country as a math consultant for Metamorphosis Teaching Learning Communities. Before joining the Metamorphosis team, she worked as both a national and international consultant and mathematics curriculum specialist in a variety of school settings including public and private, urban and rural, religious and secular, and single sex environments. Anne originally began her career as a math teacher. A life-long scholar and researcher, Burgunder has many interests in math education. She is conducting research on the role of visual images in helping students learn mathematics. She studies the various methods and systems for teaching mathematics employed by other cultures, and she is exploring essential conditions for reducing math anxiety in pre-service elementary teachers. Publications early in her career and several national speaking engagements drew her out of her own classroom into consulting work for Pittsburgh Public Schools and several independent schools. This work was followed by an opportunity to create the curriculum for a new Jewish Day School under a half-million dollar grant from the Partnership for Jewish Education (PEJE). Anne facilitated a mathematics project for over one hundred schools in Northwest Ohio. Anne moved to the New York City suburbs in 1999 to serve as a math staff developer for Community School District 2, a district known nationally for its innovative and rigorous focus on instructional improvement. From 2002 though 2005, Anne lived in Sydney, Australia where her work was centered on the math education of females. Anne Burgunder received her M.S. in math leadership from Bank Street College and is currently working on her PhD dissertation at the University of Plymouth Centre for Teaching Mathematics in Devon, England.

Doug Clarke
Australian Catholic University (Melbourne)

Doug is a Professor of Mathematics Education at the Australian Catholic University (Melbourne), where he directs the Mathematics Teaching and Learning Centre. In 1991 and 1992, while undertaking doctoral studies at the University of Wisconsin, Doug worked as part of the Mathematics in Context writing and professional development team. In Melbourne, Doug directed the Early Numeracy Research Project, exploring effective approaches to numeracy learning in the early years in 70 Victorian elementary schools from 1999-2002. Doug’s professional interests include the use of task-based, one-on-one assessment interviews with young children, strategies for developing persistence on cognitively demanding tasks, problem solving and investigations, manageable and meaningful assessment, and the professional growth of mathematics teachers. Doug enjoys working alongside teachers and students, as they seek to make mathematics relevant, challenging and enjoyable.
Kurt Kinsey  
Mountain States Mathematics  
Kurt Kinsey is co-owner and consultant for Mountain States Mathematics, working together with schools and school systems to improve the mathematics educational experience for students. With a B.S. and M.Ed. in mathematics education, his teaching background includes secondary mathematics, mathematics intervention at the early and middle levels, and teacher in-service and graduate-level coursework. Kurt was a founding member of US Math Recovery Council (USMRC), served on the USMRC Board of Directors, and worked as a member of the USMRC Instructional Strategy Group and as faculty for the USMRC Summer Institute. He is co-author of the Add+VantageMR professional development program and a contributing author for the Math Recovery Intervention Specialist (MRIS) and MRIS Leadership courses. Current projects include on-going development of the Strength in Number professional development programs, providing leadership and program development for the First People’s Center for Education, a non-profit organization supporting schools serving Indigenous children, and project collaboration with the Kentucky Center for Mathematics.

Lucinda “Petey” MacCarty  
Mountain State Mathematics  
Lucinda “Petey” MacCarty, M.Ed., of Sheridan, Wyoming, is co-owner of Mountain States Mathematics, an educational consulting organization. Petey has a passion for mathematics teaching and learning. Her career began as a middle school math teacher and expanded to intervention specialist and district leadership as a Math Recovery Interventionist and K-12 mathematics coordinator. This district leadership role included curriculum development, assessment design and alignment, interventions, and professional development for mathematics content and pedagogy. Beginning in 1999 Petey helped to design the professional development programs for Math Recovery Intervention Specialists and Math Recovery Leaders. In 2003 Petey along with the original developers of Math Recovery helped to establish the non-profit US Math Recovery Council (USMRC). Petey continued to help the USMRC expand and evolve by co-authoring the Add+VantageMR professional development programs and taking leadership roles within the USMRC. As a contributor to Dr. Wright’s publication, Teaching Number in the Classroom with 4-8 Year-olds (Sage, 2006) she collaborated with Math Recovery Leaders from across the world to share key principles and practices of Math Recovery to improve mathematics teaching and learning. A large part of her work today is focused on supporting mathematics teaching and learning within Indigenous communities. Petey co-designed the systemic approach for elementary mathematics and professional development programs used by the non-profit First People’s Center for Education. Petey is currently a lead developer for the organization and works directly with schools and school systems to improve the educational experiences for students and teachers.

Sally Moomaw  
University of Cincinnati  
Sally Moomaw, EdD, is an Assistant Professor of Early Childhood Education at the University of Cincinnati. Much of her research and teaching is in the area of early childhood education (science, technology, engineering, and math). Sally received her doctoral degree in special education from the University of Cincinnati in 2008 following a long career as a preschool and kindergarten teacher and as the Associate Director for Professional Development at the college’s Artill Center. She is the author of the textbook Teaching Mathematics in Early Childhood (2011, Brookes), 13 books on early childhood curriculum, and numerous journal articles, and is the Associate Editor for the Journal of School Science and Mathematics.

Denise Spangler  
University of Georgia  
Denise A. Spangler is the Bebe Aderhold Professor in Early Childhood Education, Professor of Mathematics Education, and Head of the Department of Mathematics & Science Education at the University of Georgia. She is also a member of the Graduate Faculty at UGA and holds an appointment as an Adjunct Research Scientist at the Kaput Center for Research and Innovation in STEM Education at University of Massachusetts Dartmouth. Her primary area of research expertise is the development of preservice elementary school teachers’ mathematical knowledge for teaching, both in their pre-service and induction years. She has published her work extensively and has garnered grants from both the National Science Foundation and the Spencer Foundation. She has presented her work throughout the US and abroad. She has twice chaired the editorial panel for the Journal for Research in Mathematics Education and is currently serving her second term as chair of the editorial panel for Mathematics Teacher Educator. In her spare time, Denise is in her third term as an elected member of the Clarke County School District Board of Education.

Jonathan Thomas  
Northern Kentucky University  
Jonathan Thomas is an assistant professor of mathematics education at Northern Kentucky University and a Kentucky Center for Mathematics faculty associate. Formerly an elementary school teacher and intervention specialist in the greater-Cincinnati area, Jonathan has a strong interest in the mathematical development of children. His current research, funded by the National Science Foundation, is focused on finding innovative ways to help pre-service and in-service elementary school teachers develop responsive mathematics teaching practices.

Ellen Whitesides  
Institute for Mathematics & Education (IM&E), University of Arizona  
Ellen Whitesides works on projects related to the Common Core State Standards in Mathematics in the Institute for Mathematics & Education (IM&E) at the University of Arizona. As part of lead standards writer William McCallum’s team, she spearheads professional learning efforts related to the Common Core in Mathematics, works as a co-advisor to the CCSSO’s MATH SCASS, and as director of community building for the Illustrative Mathematics Project. She also runs the IM&E professional development consortium for teachers across the country related to the Common Core in Mathematics. Ellen has spoken at many national conferences including the annual NCTM, NCSM, AMTE, and JMM conferences. After earning her master’s degree, Ellen continued at Harvard as part of the summer faculty where she teaches a quantitative reasoning course for master’s degree students starting a Public Administration degree. Ellen worked for three years as a high school geometry teacher in Greater New Orleans, originally through Teach For America, and also as a teacher trainer and community resource in rural South Africa for two years with the US Peace Corps. Ellen holds a BA in Economics with a Math concentration from Colby College in Waterville, Maine, as well as a Masters degree in Public Administration and International Development from Harvard’s Kennedy School of Government where she focused on education and innovation in the education space, both nationally and internationally, and was the recipient of the Dean’s Award for Excellence in Student Teaching.
Understanding, Assessing and Developing Children’s Mathematical Thinking: Task-Based Interviews as Powerful Tools for Teacher Professional Learning (K-8)

Presented By: Doug Clarke
Room: Magnolia (1st Floor)
Description: Drawing upon a series of assessment tasks and related video clips of students’ work on these tasks, I will share our Australian experience and insights in using task-based interviews to find out what students know and can do, and thereby to inform planning and teaching.

Fractions, Data, and Assessment, ‘Oh My!’ (3-5)

Presented By: Tracie Hacker, Tracey Evans, Jamie Gilliam & Elizabeth Cupp
Room: Salon A
Description: No longer will you fear the Common Core Standards! Participants will receive proven, research-based strategies and assessments that will: ensure mastery of the standards, maximize instructional time, and demonstrate how to teach fractions conceptually.

Mathematics is all around us! Come and discover how these eight interactive sessions address the Big Ideas necessary to nurture the numeracy foundation for successful mathematical growth.

Sowing the Seeds (Pre-K)

Presented By: Gwen Morgan, Angela Miller, Bereda Weddle, Dianna Hollen, Jaclyn Carroll, Kim Smith, Priscilla Clay, Suzanne Maynard, Tamara Stephens & Tonya Fox
Room: Salon B
Description: Math Intervention Teachers from around the state will display activities from their family math nights in a gallery walk format. Please come and browse through their exciting displays, obtain ideas on conducting your own family math night, and receive valuable handouts with family math night activities from each Math Intervention Teacher. You will leave with a wealth of ideas!

Life Without Regrouping (K-5)

Presented By: Melissa Dicken & Amanda Pasley Terry
Room: Salon C
Description: Do your students struggle with regrouping? If they do this session is for you! Many students struggle with regrouping but do they have to do the problems that way, we don’t think so! Come to find different strategies to ease the stress of regrouping for both the student and the teacher in a life without regrouping!

Fabulous, Friendly, Fun (9-12)

Presented By: Pam Wilson
Room: Salon D
Description: Getting students engaged in discussions, asking their own questions, wondering about the math before them can be tough. Join this session to experience classroom-tested strategies involving growth-mindset, music, movement, powerful problem-solving and reflections on learning to keep students moving forward. Return to class with student-ready tasks for developing conceptual understanding.

Personalizing Learning using the Flipped Classroom and Standards Based Grading (6-12)

Presented By: Natalie McCutchen
Room: Bluegrass
Description: In this session, participants will learn how to personalize learning using the flipped classroom and standards based grading. By using these initiatives together, teachers will be able to create personalized, differentiated learning that will help their students become fluent mathematical thinkers.

Functions - The Heart of Mathematics (9-12)

Presented By: Jay Schiffman
Room: Crimson Clover
Description: This presentation focuses on participants obtaining a deeper understanding of the function concept central to work in higher mathematics. The arrowed diagram, ordered pairs, and graph models will be discussed including special functions such as one-to-one, onto and bijective functions. The graphing calculator and group work will be included.

How Big is Big? Understanding the Big Ideas of Measurement (Pre-K)

Presented By: Jill Sapoznick
Room: Triple Crown
Description: This interactive session explores the big ideas of measurement. Participants engage with these ideas through activities using themselves and objects they have with them. We will discuss how to recognize when these ideas arise in everyday life and how to amplify the math talk in these teachable moments.

Models to Facilitate Reasoning, Problem-Solving and Connect Number Sense to Algebra (6-8)

Presented By: Anne Burgunder
Room: Magnolia (1st Floor)
Description: Number sense was described by Howden (1989) as “good intuition about numbers and their relationships. It develops gradually as a result of exploring numbers, visualizing them in a variety of contexts, and relating them in ways that are not limited by traditional algorithms.” (p. 11) The methods many teachers learned in school are not the only ways of computing. We will build on basics using new tools (the open number line, area model and ratio table) to build number sense and lay a solid foundation for rational numbers and algebra.

Sowing the Seeds (Pre-K)

Presented By: Beth Meiman, Selisa Adams & Mary Helen Hodges
Room: Salon A
Description: Sowing the Seeds of Mathematical Fluency begins in Preschool with helping our students discover that mathematics is all around us! Come and discover how these eight interactive sessions address the Big Ideas necessary to nurture the numeracy foundation for successful mathematical growth.

Learning to Love Math: Developing Mathematical Fluency Through Curiosity, Flexible Thinking and Creativity (K-3)

Presented By: Karen Heavin & Chris Leverenze
Room: Salon B
Description: How can a teacher become comfortable teaching deep mathematical concepts through flexible thinking, curiosity and exploration? Children inherently approach learning with these very qualities but are eventually programmed to see mathematics as a system of rules and algorithms, fear of getting the wrong answer as well as confusion and a lack of confidence in their own reasoning processes. Math can become “fun” again if teachers allow themselves to rediscover their “inner child” enthusiasm and love of discovery for the unknown.

The Importance of Mathematical Fluency in the Areas of Multiplication and Division (3-5)

Presented By: Kim Elam
Room: Salon C
Description: Mathematical Fluency is of utmost importance in all grade levels but is especially important in the intermediate grade levels in the areas of multiplication and division. This session will explore developing a conceptual understanding in the early grades and building on this to aid students in becoming fluent in these areas.

From Algebra to PreCalculus, There is More to the Pythagorean Theorem than First Encountered (9-12)

Presented By: Jim Moore
Room: Salon D
Description: How does starting with the overly familiar Pythagorean Theorem help deepen the understanding of several other mathematical concepts? What is its connection to the Fibonacci Sequence, the area of any planar region, the diagonal of a rectangular solid and its three dimensions, trigonometric functions or the British Flag Theorem? Let’s explore!
Intelligent Adaptive Technology: Empowering Teachers to use Actionable Data (PreK-6)
Presented By: Kimberleigh Dubois
Room: Bluegrass
Description: During this presentation we will discuss various scenarios for a blended classroom environment, as well as discuss the impact it can have on our students. As we explore a blended classroom, we will also discuss different types of technology we can incorporate into the classroom for increasing personalized learning, as well as how that technology can provide relevant and actionable student data. As we review data itself, we will discuss various scenarios for increasing differentiated instruction, as well as preparing our students for CCSS assessments.

Limit - The Center of The Calculus (13-16)
Presented By: Jay Schiffman
Room: Crimson Clover
Description: The concept of limit is often misunderstood by both high school and undergraduate students and requires a fair degree of mathematical sophistication. This hands-on presentation will enable participants to achieve an understanding of limit via multiple representations connecting limits with precalculus ideas such as asymptotes and end behavior.

Handling Hundreds (K-3)
Presented By: Mary Beth Barber & Cindy Aossey
Room: Triple Crown
Description: Have you ever heard a child counting say ‘107, 108, 109, ..1000’. Numbers beyond 100 are often a mystery for children. During this hands-on session, we will explore activities and games targeting counting, sequencing and other work with numbers within 1000. Standards targeted include 2.NBT.1 through 2.NBT.4, 2.NBT.8 & 3.NBT.1.

Intelligent Adaptive Technology: Empowering Teachers to use Actionable Data (PreK-6)
Presented By: Kimberleigh Dubois
Room: Bluegrass
Description: During this presentation we will discuss various scenarios for a blended classroom environment, as well as discuss the impact it can have on our students. As we explore a blended classroom, we will also discuss different types of technology we can incorporate into the classroom for increasing personalized learning, as well as how that technology can provide relevant and actionable student data. As we review data itself, we will discuss various scenarios for increasing differentiated instruction, as well as preparing our students for CCSS assessments.

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Handling Thousands (K-3)
Presented By: Mary Beth Barber & Cindy Aossey
Room: Triple Crown
Description: Have you ever heard a child counting say ‘107, 108, 109, ..1000’. Numbers beyond 100 are often a mystery for children. During this hands-on session, we will explore activities and games targeting counting, sequencing and other work with numbers within 1000. Standards targeted include 2.NBT.1 through 2.NBT.4, 2.NBT.8 & 3.NBT.1.

Linear Measurement…It’s Not Easy! (K-5)
Presented By: Elaine Linder
Room: Salon A
Description: We will view and discuss a Livebinder full of resources, links, and tutorials for Elementary Math. All math teachers have those backburner activities and ideas to pull out just when needed. Wouldn't it be great if they were all in one place and easy to access? This Livebinder has a variety of resources and internet sites to use at that teachable moment. Math apps for the iPad will also be discussed. I would love for this to be a share session as well. Let's all learn from each other.

Developing Fraction Sense (3-5)
Presented By: Karen Campbell
Room: Salon C
Description: Developing fraction sense is a key precursor to fraction fluency. This session will provide simple suggestions that can make a big impact on student learning. This session is a discussion/lecture, demonstration/hands on opportunity so come prepared to watch and participate.

Common Core State Standards for Mathematics, grades 9 through 12.
Constructions, Circles, Similarity, and Proofs with GeoGebra and Cabri Jr. (9-12)
Presented By: Tim Truitt
Room: Crimson Clover
Description: Mathematical fluency occurs when learning goes from the concrete to the abstract. A'BUD-ing STEM' provides a natural integration of Science, Technology, and Engineering into Mathematical lessons to facilitate fluency. This presentation supports the mathematical practices through real-world connections and hand-on teaching strategies incorporating expressions, equations, geometry and statistics standards.

Common Core 'A BUD-ing STEM' (Building, Understanding and Developing- Science, Technology, Engineering and Mathematics) (6-8)
Presented By: Alvia Littleton
Room: Blackberry Lilly
Description: Children’s natural powers of imagery, noticing, conjecturing and convincing, classifying and characterizing require being exercised and made explicit to improve mathematical thinking. Participants will engage in adult learning opportunities and explore K-5 activities that facilitate early algebraic thinking while building on children’s natural powers.

It’s Story Time! (LEGO Story Time) - Engaging Students to Solve and Create Story Problems with Fluency & FUN! (K-2)
Presented By: Shelley Dickson
Room: Magnolia (1st Floor)
Description: Fluency doesn’t mean ‘FAST’! Yes, automatically is important, but Problem Solving Practice also leads to Fluency! In this session, you will learn about the 12 types of addition & subtraction situations in the CCSS, then... WE GET TO PLAY!!! Using LEGO mini-figures and props you will learn how to create your own story problems. Come play with us!
Conference Session Details
Session #4
Monday at 1:15pm-2:25pm

Key Aspects of Mathematics Teacher Preparation (13-16)
Presented By: Denise Spangler
Room: Magnolia (1st Floor)
Description: We will consider essential elements of teacher preparation if teachers are to set a course for mathematical success for their students. Topics will include innovative activities or formats for teacher education, what research tells us and where we need more research.

Fractions, Decimals, Percents, Oh My!! (3-5)
Presented By: Misty Brock & Jodi Winchester
Room: Salon A
Description: Do your students struggle with fractions and decimals, and can’t quite figure out the percents? There’s hope. Their struggles can be addressed by simplifying the concepts with manipulatives. Let the students learn while they play.

Making Sense of Math: Using the Five Senses to Discover Mathematics (K-3)
Presented By: Selisa Adams, Beth Meiman & Toni Newton
Room: Salon B
Description: Imagine a world without sights, sounds, tastes, feelings of objects, and the aromas of our environment. This is what math is like in some classrooms. In this presentation participants will discover how the five senses can empower the whole child through math centers. Please join us and discover math in a whole new sense.

Fractional Fluency - More Than Speed (3-5)
Presented By: Karen Campbell
Room: Salon C
Description: You know the students multiplied and divided fractions last year, so why are they staring at you like they’ve never seen this before? Conceptual understanding of multiplication and division of fractions (yes, more than following an algorithm) impacts fractional fluency. Come look at fractions differently. Session appropriate for MS, too.

How Can a Number Line Be Used to Develop Algebraic Thinking? (6-9)
Presented By: Robin Hill
Room: Salon D
Description: Participants will walkthrough how students in elementary grades use the number line to begin to build an understanding of the number system. Then, participants will explore how to use an open number line (register tape) as a concrete model to build conceptual understanding of expressions, rational numbers and equations. Key concepts in developing algebraic thinking.

Creative Integration of CCSS Math Practices, Quality Activities, Excellent Questioning Techniques, Pertinent Technology (9-12)
Presented By: Tom Reardon
Room: Bluegrass
Description: Incorporate CCSS Mathematical Practices into your students’ learning with these rich activities that can be used at various grade levels. Questioning techniques that create more engaging discussions will be illustrated. Get hands-on experience with graphing calculators and also see with an iPad app. Walk away with all the activities demonstrated.

Math Fluency=Original Children’s Literature+Problem-Based Learning (K-5)
Presented By: Susan Blevins, Olivia Clarkson & Kelsie Doss
Room: Blackberry Lilly
Description: Presentation based on student teachers sharing their experiences of writing their own math children’s stories and using those stories to teach problem-based lessons during their clinical experience. Research indicates that math skills can be supported with children’s stories.

Conference Session Details
Session #5
Monday at 2:40pm-3:50pm

Moving Beyond Repeated Addition and Subtraction (3-5)
Presented By: Lucinda “Peyto” MacCarty & Kurt Kinsey
Room: Magnolia (1st Floor)
Description: Why is it many students are often limited to a strategy of repeated addition or subtraction for multiplication and division? How can we design instruction to help them move beyond these strategies? We will examine answers to these questions, as we explore developing efficacy with multiplication and division tasks.

Nurturing Mathematical Behavior With Liar’s Bingo (9-12)
Presented By: Catharine Pullin Lane, Shelly Harkness & Jonathan Thomas
Room: Salon A
Description: In this interactive presentation, participants will engage in “Liar’s Bingo”, an activity that encourages students to engage in mathematical reasoning and creativity. This activity is accessible to students ranging from 9 – 16. Presenters will also share their experiences of using the activity in their own classrooms.

I Disagree with Myself: My Journey with Number Talks (K-3)
Presented By: Nick Harris
Room: Salon B
Description: Have you ever done a number talk? Come to this session to experience a number talk, see video from my classroom number talks, and find out how I have adapted them to encourage deep strategy-based thinking in my second grade classroom.

Teaching Mathematics with Technology (General)
Presented By: Leah White & Shannon Stone
Room: Salon C
Description: This presentation will communicate core ideas of integrating technology into mathematics. Session leaders will discuss various practical and realistic ways to integrate technology into mathematics. Demonstrating various technologies will help participants gain understanding how to apply technologies into their own classroom. Participants will then work within their own grade-groups to look at grade appropriate standards and align which technologies could work successfully.

Ratios & Proportions - Leading to Function Fluency (6-8)
Presented By: Teresa Emmert, Debbie Waggoner & Krista Hall
Room: Salon D
Description: How are our traditional ratio & proportion resources holding us back? What opportunities are students missing when we only use these types? Proportional reasoning has been referred to as the capstone of elementary and the cornerstone of algebra. This session will explore ratio & proportion resources to build a foundation for functions.

Building Links Between Addition and Subtraction: Concepts and Number Facts (K-3)
Presented By: Rob Nickerson
Room: Bluegrass
Description: Addition and subtraction are closely linked. This session will demonstrate strategies that can be used to reinforce the connection between these operations and to develop flexible thinking. In particular, the session will show practical ways to develop number facts for both operations through the use of visual materials and games.
Conference Session Details
Session #5 Continued
Monday at 2:40pm-3:50pm

Problem-Based Learning + Exceptionality = Student Success (General)
Presented By: Jennifer Woodruff & Lynn Woolsey
Room: Crimson Clover
Description: Students with exceptionalities often struggle with solving problems in math. Teachers often search for successful strategies to support student learning. Presenters will begin with an overview of problem-based instruction integrated with children’s literature. Sample lessons, demonstrations and data will be shared. Struggling math students can succeed!

I Spy with My Little Eye... Patterns All Around (Pre-K)
Presented By: Chad Malcolm & Jennifer Powell
Room: Triple Crown
Description: This workshop will be presented by Chad Malcolm, Ed.D. from St. Catharine College in Kentucky and Jennifer Powell, from the Pittsburgh Public Schools, and explore the intricate web of patterns that fill our world and our curriculums. Patterns are the foundation of algebra and should begin in infancy and spiral through the curriculum to kindergarten and beyond.

Conference Session Details
Session #6
Monday at 4:05pm-5:15pm

Making Fractions Come Alive and Make Sense in the Middle Years (5-8)
Presented By: Doug Clarke
Room: Magnolia (1st Floor)
Description: Fractions is one of the most difficult topics to teach and to learn in the middle years, but it doesn’t have to be that way. In this workshop, we’ll explore the “big ideas” of fractions, and look at some very helpful assessment tasks for gauging what students know and can do in this area. We will then focus on a range of powerful classroom activities that build confidence and capability with fractions. We’ll eat chocolate (in the interests of science!) and we’ll have fun too.

Numeracy with Pizazz! (Pre-K)
Presented By: Donna Howard
Room: Salon A
Description: This presentation will focus on mathematical strategies that will provide preschool students with a good foundation in early numeracy which will enable them to fluently add and subtract to 5, which is the fluency benchmark for kindergarten. Participants will explore ways to provide a deep understanding of quantities to 5 through subitizing regular and irregular dot patterns, using finger patterns and bead racks, and using familiar children’s literature books to enhance mathematics instruction.

Serious Fun in the Mathematics Classroom: Practical Strategies to Motivate and Engage Students (General)
Presented By: Kim Loucks & Carolyn Hirst-Loucks
Room: Salon B
Description: Attendees will explore instructional strategies that make learning math motivating, more productive and enjoyable for students (and their teachers) Students will be more actively engaged because of the brain compatibility of these learning activities, which build fluency, academic success and social skills at the same time. Join us and make mathematics more fun and effective.
Introducing Revolutionary Math Intervention for the Common Core

MATH 180 is the only program that addresses the needs of struggling students and their teachers equally. Designed for struggling students in Grades 6 and up, MATH 180 builds students’ confidence and competence in mathematics, while providing teachers with an ecosystem of support to ensure success.

Stacy Muir, Account Executive
Tel: (859) 319–6263
E-mail: SMuir@Scholastic.com

Don’t take their word for it – you be the judge. Take the ORIGO 60-day challenge. 
https://www.origoeducation.com/60-day-challenge/

DAA WINNER
2013 AEP AWARD
You!'
Kentucky Council of Teachers of Mathematics

http://www.kctm.org

The mission of KCTM is to provide support and professional development for teachers of mathematics and students from kindergarten and beyond.

Local Chapter Affiliates
- Big Blue Council of Teachers of Mathematics (BBCTM)
- Cumberland Council of Teachers of Mathematics (CCTM)
- Eastern Kentucky Council of Teachers of Mathematics (EKCTM)
- Greater Louisville Council of Teachers of Mathematics (GLCTM)
- Kentucky Mathematical Association of Two-Year Colleges (KYMATYC)
- Lexington Council of Teachers of Mathematics (LCCTM)
- Northern Kentucky Council of Teachers of Mathematics (NKCTM)
- Western Kentucky Council of Teachers of Mathematics (WKCTM)

Membership in KCTM provides:
- Access to online resources via the KCTM website
- Annual Fall Conference
- Mathematics Education Service and Achievement (M.E.S.A.) awards and banquet
- Classroom Teacher Support Grants
- Newsletter (on website) twice a year
- Email blasts of what’s new in math education
- Access to National Council of Teachers of Mathematics (NCTM) resources

It is easy to join or renew your membership—as well as register for the annual conference via the KCTM website!

Classroom Teacher Support Grants
Purpose: to encourage and support the efforts of classroom teachers in the development and implementation of innovative teaching strategies in the field of mathematics:
- Maximum of three grants per year
- Maximum of $1000 per grant awarded
- Awarded at the MESA Banquet during Fall Conference
- Grant recipients will either present their project at next Fall Conference or write an article for the KCTM Newsletter.
- Additional information and applications are available on the KCTM website.
Conference Session Details
Session #1 & #2 (Open Forum)
Tuesday at 8:00am-10:35am

What Works for RTI: Models of Successful Elementary Grades Tiered Mathematics Intervention (8:00am-10:35am)
Moderated By: Alice Gabbard
Room: Salon B
Description: Hear from a panel of distinguished principals, mathematics intervention teachers, and classroom teachers from high-achieving Kentucky mathematics elementary schools in Murray Independent, Scott County, and Anderson County about their successful implementation of tiered mathematics intervention. Learn about strategies and structures that support sustained professional learning and collaboration allowing teachers to effectively provide differentiated instruction at all tiers of RTI (Response to Intervention), based on student need and readiness.

Conference Session Details
Session #1
Tuesday at 8:00am-9:10am

Look For and Make Use of Structure (9-12)
Presented By: Ellen Whitesides
Room: Magnolia (1st Floor)
Description: It’s one of the eight standards for mathematical practice and a domain in the Algebra conceptual category (seeing structure in expressions), so what is it exactly? What does it mean and how can we foster this practice in our students? We will look at example tasks for the classroom from illustrativemathematics.org as well as trace ideas as they emerge from the middle grades into high school. Our primary focus will be the high school classes of Algebra and Geometry.

Fun with Subitizing!! A Critical Foundation for Developing Fluency in Number for Students (K-3)
Presented By: Beth Prather & Sharon Hurt
Room: Salon A
Description: Participants will discover ideas on how to incorporate subitizing activities during calendar time, transitions, and morning meeting. A strong foundation in conceptual subitizing help young children achieve mastery in spacial patterns and develop number knowledge for arithmetic processes. This will be a ‘Make and Take’ workshop so participants will be able to quickly make and take back materials ready to use with their students!!!

The Art in Math (K-5)
Presented By: JoLin Owens & Selisa Adams
Room: Salon C
Description: We will explore ways that you can include arts and humanities into your math lessons. We will explore areas of visual arts, music, dance, and drama.

Adding and Subtracting Integers - More than a Negative Experience (6-8)
Presented By: Karen Campbell
Room: Salon D
Description: Operations with positive and negative integers is a foundational skill for algebra. Together we will explore number lines, games and manipulatives that will help you build your students’ confidence and fluency with integers. Session may be appropriate for HS too.

Presented By: Charlene Ruble
Room: Bluegrass
Description: Why does the Common Core keep suggesting we use number lines to teach basic fraction operations over and over? What’s the BIG DEAL? It must be the accessibility and versatility of this quick-to-draw and dependable model. Join the fun as we practice developing fraction number sense and intuitions using the number line. Sharp pencils are encouraged.

Mathematics Across the Curriculum: Making the Connection with Math and Economics (K-5)
Presented By: Erin Yetter
Room: Crimson Clover
Description: Mathematics and economics go together like peanut butter and jelly, but they are often taught as exclusive subjects—why? This session will show how to add application and ‘real world’ learning to your math classroom by integrating economics. All participants will receive printed curriculum materials with whiteboard applications.

Ethnomathematics: A Culturally Supportive Approach to Increase the Motivation and Engagement of Middle School AA Males (6-8)
Presented By: Timothy Forde
Room: Blackberry Lilly
Description: This paper explores the use of an ethnomathematical approach to build mathematical fluency to middle school African American males. Through culturally supportive activities students are taught to interpret their environment using real world numbers that show school, state or national community statistics detailing differences by race and socioeconomic status.

Investigate! Engaging Children in Real-World Mathematical Applications Using the Project Approach (Pre-K)
Presented By: Elizabeth McLaren
Room: Triple Crown
Description: Want to engage preschool children and help them truly understand and apply mathematical concepts rather than learn rote skills? This presentation will illustrate the fundamentals of using the Project Approach and how to embed real-world application of math concepts into in-depth investigations.

Conference Session Details
Session #2
Tuesday at 9:25am-10:35am

Preschool Play-Based Math Assessment (Pre-K)
Presented By: Sally Moonaw
Room: Magnolia (1st Floor)
Description: This presentation examines a play-based, validated measure of number sense that was used to evaluate a preschool math intervention program. Math coaches worked weekly with teachers and families to implement a game-based curriculum that focused on quantification, counting, comparing sets, understanding numerals, and emergent addition. Techniques and results will be shared.

10 Times the Fun and Half the Time.....THAT’S FLUENCY! (3-5)
Presented By: Tonda Thompson & Jean Bingham
Room: Salon A
Description: Participants will learn different strategies that enhance multiplication and division. Some of the strategies include using known facts to multiply and divide, array models, and equal groups. Everyone will enjoy the make and take ready to use as they return back to their classrooms.
Conference Session Details
Session #2 Continued
Tuesday at 9:25am-10:35am

Fractions, Decimals, and Percents-RTI for Middle/High (4-12)
Presented By: Ann Booth & Vonda Stamm
Room: Salon C
Description: Students who do not understand the relationships between Fractions, Decimals, and Percents continue to struggle with their application throughout secondary math courses even though they have been repeatedly exposed to their algorithmic manipulation. This session will focus on physically representing the relationships between Fractions, Decimals, and Percents so students have visual models and strategies for working with these numbers.

Fun With Fluency (K-3)
Presented By: Amanda Davis & Barbara Heitsley
Room: Salon D
Description: Come experience how important fluency is in teaching students critical common core math content. Create make-it take-it made manipulatives that will be ready to use when you return to the classroom after the conference.

Beyond Cookies: Understanding Various Division Models (K-3)
Moderated By: Robin Magruder
Room: Bluegrass
Description: Through an interactive approach involving manipulatives, we will build teachers’ understanding of division, emphasizing partitive and measurement models. We will offer a rationale for examining division, describe the models, and provide an opportunity to increase understanding of the models. We will also provide strategies for writing high-quality division story problems.

PAction: Purposeful Action Marks a Math-Minded School (3-5)
Presented By: Jane Hunt
Room: Crimson Clover
Description: The session will mainly be a discussion of the philosophy and activities associated with becoming a Math-Minded School. We will explore the “purposeful actions” (PAction) that can be taken to infuse mathematics throughout the school day in meaningful ways. (Based on my NCTM regional presentation in Louisville).

Fluency Forward: Intervention Success (9-12)
Presented By: Kelly Fitthen, Maggie Doyle, Kris Ann Creteau & Christy Williams
Room: Blackberry Lilly
Abstract: Intervention Success will thoroughly explain our trials, errors, successes and events that are leading us to pushing the envelope of fluency forward. At GRC, we are continually striving to prepare students so that they are College and/or Career Ready. Intervening at every level is proving to be our key to unlocking the doors that prevent fluency forward. Join us as we share our successes into pushing fluency forward.

Inclusion Classroom Math? The Story Starts Here…. (General)
Presented By: Lynn Woolsey, Shannon Gibson & Jennifer Woodruff
Room: Triple Crown
Description: Incorporating story problems as a foundation to teaching math problem-solving to students with intellectual disabilities challenges many general education teachers. Presenters will provide video, story problem-based strategies and examples to adapt lessons to meet the needs of the students and support them as they attempt to meet KCAS.

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Building Fluency Through the Use of Mathematical Models in Applied Contexts (9-12)
Presented By: Mindy Curless & Leslie Texas
Room: Salon A
Description: Modeling is integral to CCSSM as well as NGSS because it is fundamental to STEM as reflected in the practices for each discipline. Varied modeling experiences with typical relationships (linear, power, exponential) develops fluency. Fluency in developing and interpreting models develops highly valued STEM dispositions.

Computation with Meaning-Addition and Subtraction (K-3)
Presented By: Rhonda Allen Bums & Tami Pickett
Room: Salon C
Description: This session will emphasis developing conceptual understanding of Computation with Fractions. Multiple experiences in physically modeling and sense-making with fraction computation problems will give students strategies for problem solving and transferring their understanding to symbolic notation.

Building an Effective Tiered Model in Mathematics (K-8)
Presented By: Susan Robertson & Melissa Wainwright
Room: Salon D
Description: During this session, participants will be provided a framework to help analyze a tiered model for math. Through tiering of instruction, schools can then identify gaps in learning and implement various strategies to ensure all students are receiving quality math instruction.

When Life Gives You Beads, String ‘Em! (K-3)
Presented By: Regina Harrison & Mary Helen Hodges
Room: Bluegrass
Description: “I would like to use empty number lines, but my kids just don’t get it.” Sound familiar? This session will show you how to lay a foundation for the empty number line progressing from the bead string to the number line, and finally, the empty number line.

AVMR Champions and Teachers: Updated Structuring Assessment (K-5)
Presented By: Lucy Anderson & Kelly Livers
Room: Crimson Clover
Description: The US Math Recovery Council updated the Structuring Assessment in 2013. The levels have been aligned with the Math Recovery Intervention levels. Tasks and questions that involve beadracks and bare numbers to 20 have also been added.

Flipping the Classroom - Using Videos to Teach Algebra (9-12)
Presented By: Kelly Lindsey, Linda Pletl, Theodore Hodgson & TJ Murphy
Room: Blackberry Lilly
Description: As part of a project at Northern Kentucky University, we are using video podcasts to help teach Algebra. We will explain how we made our videos and how we use them as homework to introduce concepts that are later explored in depth in class. With the help of Theodore Hodgson and TJ Murphy, professors at NKU, we will show how anyone who is a little brave can use this technique to enhance learning.
Conference Session Details
Session #3 Continued
Tuesday at 10:50am-12:00pm

Math Congress: Honoring Student Voice in the Math Classroom (3-5)
Presented By: Angie Keene & Jamie Keene
Room: Triple Crown
Description: Integrate the mathematical practices into your math classroom by using the Math Congress teaching strategy. Promote meaningful discourse to develop deep understanding and build mathematical fluency.

Using Models and Representations to Support Learning (K-5)
Presented By: Barbara Clarke
Room: Magnolia (1st Floor)
Description: Models and representations provide important opportunities to support children's learning in mathematics. In this workshop a number of classroom activities from the Australian context that use models or representations will be shared.

Conference Session Details
Session #4
Tuesday at 1:15pm-2:25pm

It's Not Too Late: Number Intervention with Students (5-8)
Presented By: Kurt Kinsey & Lucinda “Petey” MacCart
Room: Magnolia (1st Floor)
Description: When middle grades students continue to struggle with basic facts and arithmetic, is there still hope? The answer we are finding is yes! Our recent work to address the underlying issues through developing middle school interventionists helps students unravel the mystery of number and gain access to grade-level content.

KY STEMX Network; The STEMX Performance Guide; Does STEMX Accurately Reflect the Role of Mathematics in STEM Education? (General)
Presented By: Mindy Curless & Eve Proffitt
Room: Salon A
Description: This session will share strategies of the KY STEMX Network for improving KY STEM education, as well as a draft Performance Guide intended to help all stakeholders systematically increase their impact on STEM education. Input from the KY mathematics education community is a critical need as KY STEMX moves forward.

Algorithm or Strategy? What do the Standards Say? A Focus on Teaching Addition (K-3)
Presented By: Melissa Buchanan & Cindy Aossey
Room: Salon B
Description: What is the difference between an addition strategy and an algorithm? How are these terms used in the standards? How are both related to place value understanding and computational fluency? Join the discussion, then stay for great instructional activities using linear settings targeting standards 1.OA.6, 1.NBT.4, 2.OA.2, 2.NBT.5 and 2.MD.6.

Understanding Fractions (3-4)
Presented By: Tami Pickett, Rhonda Allen Burns, Ann Booth & Vonda Stamm
Room: Salon C
Description: This session focuses on the conceptual understanding of fractions by first making sense of fraction names, representations, and relationships. Strategies and examples for modeling, composing/decomposing, and reasoning about fractions (part-whole and whole-to-part perspectives, equivalency, comparisons, etc.) are shared as students are given opportunities to communicate their understanding of fractions in a variety of experiences.

Independent Fluency Work in the Math Classroom (K-5)
Presented By: Emily Ellsworth & Sarah Smorstad
Room: Salon D
Description: Learn strategies to teach your students to work independently at their own math levels to increase fluency in the classroom. Come and see how to organize your materials and even implement technology into your math fluency program.

Using Blended Learning to Drive Math Fluency (6-8)
Presented By: Brad Hilton
Room: Bluegrass
Description: This presentation will be a highly participatory experience. First, the full group will try out some technology-enabled learning experiences for both students and teachers (using School 21 as an example). Then each small group will work together to develop 2-3 Blended Learning Classroom models, and report back to the full group. Throughout, the facilitator will engage participants to promote a dialogue that generates creative ideas from the audience.

When is an Octagon a Circle? In Chinese Checkers Geometry! (9-12)
Presented By: Karolyn Keeler & Bethary Noblitt
Room: Crimson Clover
Description: Chinese Checkers (CC) Geometry is a non-Euclidean geometry that is accessible to secondary students. Participants will explore the CC metric, its consequences, and how CC geometry can be explored in the classroom. Questions addressed include: What is pi in CC geometry? What do conic sections look like? What about right triangles?

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Let's Talk About It! (K-5)
Presented By: Emily Wisher
Room: Triple Crown
Description: This session will be an overview of Number Talks in the elementary classroom. We will review hand signals, strategies, and the importance of student discussion in the math classroom.

KY STEMx Network; The STEMx Performance Guide; Does STEMx Accurately Reflect the Role of Mathematics in STEM Education? (General)
Presented By: Mindy Curless & Eve Proffitt
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Room: Salon C
Description: This session focuses on the conceptual understanding of fractions by first making sense of fraction names, representations, and relationships. Strategies and examples for modeling, composing/decomposing, and reasoning about fractions (part-whole and whole-to-part perspectives, equivalency, comparisons, etc.) are shared as students are given opportunities to communicate their understanding of fractions in a variety of experiences.

Independent Fluency Work in the Math Classroom (K-5)
Presented By: Emily Ellsworth & Sarah Smorstad
Room: Salon D
Description: Learn strategies to teach your students to work independently at their own math levels to increase fluency in the classroom. Come and see how to organize your materials and even implement technology into your math fluency program.

Using Blended Learning to Drive Math Fluency (6-8)
Presented By: Brad Hilton
Room: Bluegrass
Description: This presentation will be a highly participatory experience. First, the full group will try out some technology-enabled learning experiences for both students and teachers (using School 21 as an example). Then each small group will work together to develop 2-3 Blended Learning Classroom models, and report back to the full group. Throughout, the facilitator will engage participants to promote a dialogue that generates creative ideas from the audience.

When is an Octagon a Circle? In Chinese Checkers Geometry! (9-12)
Presented By: Karolyn Keeler & Bethary Noblitt
Room: Crimson Clover
Description: Chinese Checkers (CC) Geometry is a non-Euclidean geometry that is accessible to secondary students. Participants will explore the CC metric, its consequences, and how CC geometry can be explored in the classroom. Questions addressed include: What is pi in CC geometry? What do conic sections look like? What about right triangles?

Let's Talk About It! (K-5)
Presented By: Emily Wisher
Room: Triple Crown
Description: This session will be an overview of Number Talks in the elementary classroom. We will review hand signals, strategies, and the importance of student discussion in the math classroom.

Conference Session Details
Session #5
Tuesday at 2:40pm-3:50pm

Professional Noticing: Expanding the Lens (K-5)
Presented By: Jonathan Thomas
Room: Magnolia (1st Floor)
Description: Professional Noticing is an emerging framework which describes responsive teaching practices including teachers' ability to attend to, interpret, and respond appropriately to the mathematical thinking of children. Although professional noticing is typically theorized at the level of the individual student, this framework may also influence small group and whole-class instruction. The goal of this session is to consider the applications of professional noticing across a variety of contexts (1-1, small group, and whole class). Specifically, participants will practice attending to the nuances of children's actions and words as they solve mathematical tasks, interpreting this information in the context of the mathematics, and making targeted instructional decisions to scaffold children along the common progressions of learning.

A Product of Fluency (3-5)
Presented By: Laura Smith, Katrina Brown, Kim Warford & Lauren Case
Room: Salon A
Description: School Growth was achieved with a focus on fluency. Through the use of sprints, skip counting, word problems, and small group hands on activities the presenters will demonstrate strategies used to increase student achievement.
Conference Session Details
Session #5 Continued
Tuesday at 2:40pm-3:50pm

Meeting the Common Core’s Math Fact Fluency Challenge with Reflex (3-5)
Presented By: Jane Owen
Room: Salon B
Description: What is math fact fluency? What method for developing fluency will promote automaticity across a broad range of students? What if we could solve the problem of math fact fluency in just 10 minutes per day? Come and see Reflex – a new online product from ExploreLearning, makers of Gizmos.

Strategies for Encouraging Students to Persist When Working on Cognitively-Demanding Tasks (4-8)
Presented By: Doug Clarke
Room: Salon C
Description: We have been working alongside teachers and students as they use cognitively demanding tasks in mathematics. In this workshop, I will share examples of such tasks, and insights from teachers on how to support student persistence during their work on these.

A Mastery Approach to Unit Tests (6-8)
Presented By: Jill Kidder, Kegan Nall & Sammy Hall
Room: Salon D
Description: We will share how we use a cover page for unit tests to help analyze assessment results and drive student opportunities for reassessment. The development and use of this cover page includes linking the test to learning targets, analyzing assessment results, and creating additional opportunities to reach mastery.

“My Brain Is a Traffic Jam”: Helping Students to Understand and Manage Test Anxiety (General)
Presented By: Bill Phelps
Room: Bluegrass
Description: Test anxiety is a major problem that many students face. This session will discuss what we know about test anxiety and will be an opportunity to talk about effective strategies that we can teach our students to help improve their performance on exams.

Creatively Integrate iPad Math and Presentation Apps Into Your 7 - 12 Classroom (7-12)
Presented By: Tom Reardon
Room: Triple Crown
Description: Take photos with your iPad and immediately model the curves with an equation or a geometric figure! Obtain and “play” over 1000 FREE interactive classroom ready activities – including teacher notes & solutions for grades 7 – 12. Learn how to cleverly utilize and integrate these apps for student success: Reflector, Splashtop, Dropbox, and TI-Nspire.

Conference Surveys
One of the most important parts of our annual conference each year is receiving the incredibly valuable feedback of the attendees. It is because of your comments and evaluations that we are able to continue to improve how we serve you each and every year.

We encourage you to fill out a brief evaluation form concluding each of the breakout session presentations you attend. Evaluation forms can be found in the back of each presentation room. Completed forms can either be turned in to the room monitor or to the conference registration table, located at the top of the escalators.

In addition, each conference attendee will receive a survey link to evaluate their overall conference experience via email after the conference is over. Interested participants will be entered into a drawing for a Barnes & Noble gift card as a thank you for their participation in the survey process. We look forward to receiving your feedback.
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Thank you!

-The KCM Staff